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Occupations, Habits and Routines: A Case Study of an African-American Woman

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OCCUPATIONS, HABITS, AND ROUTINES

OCCUPATIONS, HABITS AND ROUTINES:
A CASE STUDY OF AN AFRICAN-AMERICAN WOMAN

by

Michelle Leigh Velting

MASTER'S THESIS
Submitted to the
Graduate Faculty of the School of Health Sciences
At Grand Valley State University
In partial fulfillment of the
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THESIS

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Abstract

Obesity is a growing problem in the United States. African-American women make up a large portion of the obese population in the United States, however, the treatment techniques available have had limited success with this group. Although many health professionals are involved with the treatment of obesity, literature involving the value of occupational therapy with this population is limited. This mixed-methods case study identified the daily occupations, habits, and routines of a middle-class obese African-American woman. The participant was selected via a health care professional in the area of Grand Rapids, MI. The Occupational Questionnaire (OQ), Model of Human Occupation Screening Tool (MOHOST), and a follow-up interview were used to gather data. Quantitative data was analyzed utilizing SPSS and Excel computer software while qualitative data was analyzed using a notecard system. This analysis was conducted with the intention of identifying themes of occupations, habits, and routines that may contribute to her obesity. The findings of this study regarding uncovered themes in comparison to findings within the literature, as well as suggestions for future research and implications for occupational therapy as a profession were then discussed.
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INTRODUCTION

Background to Problem

The weight of the average American has been increasing by about one to two pounds per year since 2001, as found by James O. Hill, Director of the Center for Human Nutrition at the University of Colorado Health Sciences Center (Fighting Obesity Through the Built Environment, 2004). However, obesity does not affect all ethnic groups equally. As Hedley (2004) points out, 49% of African-American women are overweight and/or obese whereas only 30.7% of white women have this classification. As the weight of Americans continues to increase, the number of obesity-related health conditions is increasing as well. This is one reason why the World Health Organization (WHO, 2004) added overweight/obesity to the “top 10” list of preventable health risks across the world. Issues surrounding the increasing rate of obesity influence the type of lives that people live, limiting physical and social behaviors, as well as affecting cognitive components such as self-esteem and self-efficacy. In addition, secondary conditions related to obesity can compound the health problems that individuals already face (Puska, Nishida, & Porter, 2003).

As a large part of the growing obesity population in the United States has been identified to consist of African-American women, it has also been found that typical obesity interventions have had poor success rates among this group (Bronner & Boyington, 2002). Also of importance is the fact that the African-American population in the United States has grown from 12.3% in 2000 to 13.3% in 2003 (U.S. Census Bureau, 2006). Because the growing number of African-American people in the United States is likely to continue, the number of people with obesity is also likely to increase. It is
imperative that effective treatments for this growing population be found and
implemented in order to combat the obesity with which many struggle.

Researching the influences of obesity is necessary in order for health
professionals to tackle the problems with which so many people contend. In this study,
the researcher sought to identify the occupations, habits, and routines of one African-
American woman that may influence her development of obesity. Occupational therapists
have the opportunity to help clients develop specific occupations, habits, and routines that
promote health and well-being. This study was designed to identify these health-
promoting activities. A healthy weight and lifestyle can affect the overall wellness of
clients as they may be more apt to engage in other health-promoting behaviors such as
socializing, physical activity, and spiritual activities. Self-efficacy and self- esteem may
also improve as the clients feel more in control of their lives, body, and health (Gavin,

Obesity affects a person’s entire life and lifestyle. Physically and emotionally,
obese people are affected by their weight. The importance of uncovering the occupations,
habits, and routines that influence obesity is essential to slow the rapid increase of obesity
in the United States. Much research has been found to exist regarding obesity and its
causes, thus providing evidence of the significance of this country’s obesity “epidemic”.
In addition, the literature has revealed information regarding the significant problem of
obesity among African-American women (Sbrocco et al., 2005; Sharma, Seargent, &
Stacey, 2005; Sanchez, 2004; Davis, Rovi, & Johnson, 2005; Martin, Dutton, & Brantley,
The majority of research related to the causes of obesity revolved around several topics including the influences of physical activity, psychology, and environmental barriers (Summerfield, 1998; Welk & Blair, 2000; Bar-Or, 2000; Booth & Chakravarthy, 2002; Netz & Raviv, 2004; Smith, 2004; Dzewaltowski, 1989; Gavin, 2004; Shephard, 1999, Duffy, 2000; Krahnstoever, Cutting, & Birch, 2002; Calamaro, 2004; & Welk, 1999). Social, socioeconomic, and physical influences/barriers were also noted within the literature (Welk, 1999; Krahnstoever et al., 2002; Calamaro, 2004; Eberstadt, 2003; Gorin, Tate, Sherwood, Jeffrey, & Wing, 2005; Duffy, 2000; Summerfield, 1998; Bar-Or, 2000; & Wardle, Waller, & Martin, 2002). Interestingly, the topics interrelate with one another when considering its effects on obesity. Therefore, the relevance of each factor was important in view of this study, which focused on the occupations, habits, and routines of an African-American obese woman.

Physical activity as it relates to the obese population was discussed thoroughly within the literature. In fact, physical inactivity has been noted to greatly influence the consequence of obesity (Welk, 2000). In addition, Summerfield (1998) noted that people learn to be inactive at early ages. Thus, the greater part of literature focused on the promotion of physical activity in young children. As children are “more overweight or obese than ever before” (Summerfield, 1998, p.2), it is essential to uncover the occupations, habits, and routines that influence obesity in order to engage individuals in health-promoting lifestyles. The lifestyles and factors between children and adults relative to physical activity were also discussed within the literature, providing an opportunity to view possible differences in lifestyle within these populations. Furthermore, as more individuals are becoming obese, studies have found that the
Obesity

country’s health care budget from conditions due to physically inactive lifestyles has skyrocketed (Booth & Chakravarthy, 2002).

Physical activity, as mentioned previously, is not the only factor involved in obesity. Psychological influences also have the ability to influence each individual’s activity level in a positive or negative way. Psychological influences found to affect each individual’s behavior include motivation, self-esteem, and self-efficacy (Dzewaltowski, 1989; Summerfield, 1998; Booth et al., 2002; & Gavin, 2004). Children and adults were referenced in the literature as having their level of physical activity affected by psychological factors. For instance, a child with low self-efficacy may lack the motivation to engage in healthy and active activities. In addition, emotional issues arising in overweight children were also noted to play a role in the engagement of healthy or unhealthy behaviors (Sharma, 2005). In turn, these childhood behaviors were suggested to influence behaviors and lifestyles in adulthood (Summerfield, 1998 & Dzewaltowski, 1989).

Psychological influences related to physical activity are also influenced by each individual’s environment. Environmental barriers can greatly interfere with an individual’s ability to be physically active. Research has been conducted with children to understand how the school, neighborhood, gender, age, and peers affect physical activity levels (Krahnstoever et al, 2003; Calamaro, 2004; & Pangrazi, Beighle, Vehige, & Vack, 2003).

The environment in which people live is also related to the socioeconomic status (SES) of the family. In theory, environmental barriers to physical activity may exist to a lesser extent in a family of higher SES. Other environmental aspects that research has
found to be of importance are the influences of the media, the price of "healthy" foods, as well as the increase in food portion sizes (Calamaro, 2004; Smith, 2004; Gortmaker, Must, Sobol, Peterson, Colditz, & Dietz, 1996; & Fighting obesity through the built environment, 2004). Therefore, consideration of these factors when attempting to understand the causes of obesity among children may be essential.

As overweight children are associated with more severe obesity as adults (Dietz, 2005), understanding factors linked with childhood obesity is important. Research involving the social influences of obese children was extensive. Many research articles discussed parental involvement and influence in a child's development of obesity (Welk, 1999; Krahnstoever et al., 2002; & Calamaro, 2004). Another consideration noted within the literature regarding the recent increase in childhood obesity was the concept that more mothers are returning to work (Eberstadt, 2003). It was hypothesized by researchers that more children are left unattended after school, resulting in poor food choices and less physical activity (Eberstadt, 2003). Nevertheless, reduced physical activity levels and a less healthy diet may not play the only role in the development of obesity.

Physical influences such as an individual's genetics and age may also be involved in obesity. However, research has been contradictory in this area. Some research has emphasized the idea that human genes are coordinated in such a way that some genes are designed to respond to food scarcity while others are designed to maintain weight (Fighting Obesity through the Built Environment, 2004). On the other hand, research challenges the explanation that genes alone influence obesity. Research has resulted in findings that provide evidence that suggests genetics may play a role, in addition to other
factors such as those mentioned (Eberstadt, 2003 & Fighting Obesity through the Built Environment, 2004).

Problem Statement

A large amount of research was found regarding obesity, its causes, and suggested interventions. However, the literature also noted that the interventions typically used were ineffective for those with the highest rates of obesity, namely, African-American women (Bronner & Boyington, 2002). In addition, there was a significant lack of research noted in the literature regarding the occupations, habits, and routines common of the obese population. The problem lies in the fact that obesity in African-American women is widespread while treatment success within this population is questionable.

Purpose of Research

This descriptive case study will examine occupations, habits, and routines as a means to identify factors that may lead to more effective treatment among obese African-American women. The factors identified may also open the doors for occupational therapy, as this profession emphasizes the use of occupations, habits, and routines as important foundations to building a balanced and healthy lifestyle. Furthermore, future research concerning effective interventions for obese African-American women can build on the findings of this study.

Significance of the Problem

Researching the lack of success of obesity interventions among African-American women is significant for several reasons. Changing society, secondary conditions associated with obesity, and the lack of opportunity for occupational therapy to work with the obese population are significant reasons as to why this research is important.
As mentioned previously, the demographics in the United States are shifting as African-Americans are increasing in percentage. Though the country has progressed in its health care regarding the multiplicity of available obesity treatment interventions, the growing number of African-Americans will contribute to an increasing portion of society whose health care needs are not being managed. The lack of effective obesity interventions for the growing African-American population will result in an even greater percentage of obese people in the United States. In addition, the progress that the country has made in the development of successful obesity interventions, such as behavior modification techniques (Robinson, 1999), in-school and after-school programs (Pangrazi et al., 2003), social marketing (American Journal of Health Promotion, 2001), work-site programs (Shephard, 1999), and matching of personality with activity (Gavin, 2004) will be lessened due to this change in society.

Furthermore, the secondary health conditions of obesity are especially significant for African-American women. This population is more susceptible to suffering a cerebrovascular accident and cardiovascular disease due to upper-body obesity (Seidell, Deurenberg, & Hautvast, 1987; Kumanyika, 1987; and Wing, Kuller, Bunker, Mathews, Meihlan, and Kelsey, 1989). Therefore, the findings of this study may contribute to the lengthening of African-American women’s lives by identifying factors that contribute to future research studying obesity interventions effective for this group.

Lastly, treatment of those with obesity has not been significant within the profession of occupational therapy. As this field greatly emphasizes the use of occupations, habits, and routines during intervention, the findings of this study may
provide a link for occupational therapy to provide effective interventions for those African-American women who suffer from obesity.

**Research Question**

The researcher sought to identify the occupations, habits, and routines engaged in by an obese African-American woman in the area of West Michigan. More specifically, this researcher attempted to answer the question “In what ways do the occupations, habits, and routines of an African-American woman contribute to her obesity?” Because African-American women are more at risk for obesity/overweight and related morbidities, “acceptable treatments must be developed for this population” (Shrocco, Carter, Lewis, Vaughn, Kalupa, King, Suchday, Osborn, & Cintron, 2005, p. 246). The themes of occupations, habits, and routines uncovered from this study can provide a basis from which future researchers can utilize while attempting to create obesity treatment interventions that may be more successful for the population of African-American women.
**REVIEW OF THE LITERATURE**

*Introduction*

The researcher of the present study seeks to answer the question: In what ways occupations, habits, and routines of an African-American woman contribute to her obesity? The findings of this study may assist future research in identifying the factors associated with more effective obesity treatment among obese African-American women. The areas of literature relevant for review include those regarding the current facts, causes, and issues surrounding the topic of obesity. The obesity treatments available in the United States are also of importance for this study’s topic. The role(s) that physical activity plays in obesity, potential influences and barriers to obesity, and habits that contribute to obesity were also considered important areas to review.

Information was gathered from articles obtained from various databases. The databases used include ERIC, CINAHL, PsycINFO, PsycARTICLES, ProQuest, and Scopus. Numerous articles were found on obesity and its causes, effects, and costs. Each of the articles mentioned one or some of the various influences and/or barriers relating to the development of obesity such as physical, environmental, social, socioeconomic, and psychological influences. Approximately 75% of the articles read also related the importance of physical activity when helping individuals treat or overcome obesity. About 25% of the articles obtained focused on the suggestion of possible treatments for obesity and/or preventing obesity from occurring, while only 15% of the articles focused on the role of habits such as work and leisure as influencing the risk of obesity.

As the majority of research has centered itself on understanding obesity and its significance in today’s society, this was discussed first. Major facts and statistics, as well as the effects of this condition on the U.S. population, were discussed and addressed.
Since this study emphasizes the role of occupations, habits, and routines with obesity treatment success, the possible interventions that some authors researched were reviewed. Following discussion of interventions, the theoretical model from which this study is based, the Model of Human Occupation (MOHO) was mentioned. In addition, a major focus of the literature included the impact of physical activity and how its frequency, duration, and type positively and/or negatively affect obesity. The importance of physical activity was discussed first, while the other possible causes, influences, and barriers leading to obesity were then acknowledged. Lastly, the topic of occupations, habits, and routines which has great significance for this study despite having the least amount of research was mentioned. Thus, the organization of this literature review will initially discussed the areas with the most abundant research, and followed with those topics most relevant to the study, which have also been found to have less research.

**Obesity**

Obesity is a chronic condition that involves an excessive amount of body fat, and has its definition typically based on one’s body mass index (BMI) or body fat percentage. The World Health Organization (WHO, 2005) defines BMI as “the weight in kilograms divided by the square of the height in meters (kg/m2)” (www.who.int). Health professionals typically classify a BMI over 30 kg/m2 as obese. Slightly different, one’s body fat percentage is measured by a variety of methods such as by skin-fold measurements or bioelectrical impedance. The American Council on Exercise (2006) classified those with 32% body fat or above as obese. WHO also noted that over one billion adults worldwide are considered overweight, with a minimum of 300 million classified as obese (www.who.int, 2006). Of the obese population, 50% are African-
American women, whereas Caucasian women constitute 30% of this group (Martin, Dutton, & Brantley, 2004). Also noteworthy is the fact that if the obesity trend continues, “75% of the U.S. population will be overweight within the next five years, and 40% will be obese” (Fighting Obesity through the Built Environment, 2004, p. 616). These facts were based on the National Institute of Environmental Health Science’s (NIEHS) Deputy Director Samuel Wilson’s citing of figures from the Centers for Disease Control and Prevention’s National Heath and Nutrition Exam Survey in 2004. Wilson’s (2004) description gives emphasis to the significance of the problem of obesity in this country. Furthermore, the National Institute of Health (2005) noted that obesity can result in many secondary health conditions, such as Type II diabetes, heart disease, stroke, cancer, sleep apnea, osteoarthritis, gallbladder disease, fatty liver disease, and others (www.nih.gov). The significance of these conditions is supported as Oden (2005) noted heart disease to be the leading cause of mortality among women in all ethnic groups. With the number of women dying from heart disease each year exceeding 370,000, as well as the other possible health risks considered, it is not surprising to note that chronic conditions, such as obesity, have been found to account for “about 96% of home care visits, 83% of prescription drug use, 66% of physician visits, 55% of emergency room visits, and 69% of hospital admissions” (Hoffman, Rice, & Sung, 1996, p. 4).

An important public health issue surrounds the reality that the occurrence of childhood obesity has doubled in the last thirty years, (Center for Disease Control, 1996) and the fact that “early childhood overweight persisting into adulthood is associated with more severe obesity among adults” (Dietz, 2005, p. 855). Since obesity increases with age, and as the “Baby Boomers” are aging, a drastic increase in the obese population is
likely to occur (Welk & Blair, 2000). A massive number of people with chronic conditions and secondary conditions resulting from obesity are likely to need health care. With the “direct economic costs of obesity in the United States nearing $70 billion annually, a great toll will be placed on the country’s health care budget” (Welk & Blair, 2000, p.3).

As noted previously, a disproportionate number of African-Americans are obese in the United States. It is estimated that 71% of non-Hispanic Blacks are overweight compared to over 63% of non-Hispanic Whites (Flegal, Carroll, & Ogden, 2002). Additionally, “among Blacks, overweight prevalence varies by a range of demographic characteristics, particularly gender” (Bennett, Wolin, Goodman, Samplin-Salgado, Carter, Dutton, Hill, & Emmons, 2005, p. 246). More specifically, African-American women constitute a large percentage of the 34 million obese adults in the United States (Van Itallie, 1985). In fact “36% of black women are overweight compared with 21% of white women; 60% of middle-aged black women are notably overweight compared with 28% of middle-aged white women” (Health Promotion and Disease Prevention, 1985; Kanders, Ullman-Joy, Foreyt, Heymsfield, Heber, Elashoff, Ashley, Reeves, & Blackburn, 1994, p. 311).

Furthermore, African-American women are more likely than white women to experience death from cardiovascular disease, diabetes, and cancer likely due to upper-body obesity (Seidell, Deurenberg, & Hautvast, 1987; Kumanyika, 1987; and Wing, Kuller, Bunker, Mathews, Meihlan, and Kelsey, 1989). These statistics signify the magnitude of obesity among African-American women. The factors influencing obesity
Obesity within the United States and more specifically within the African-American culture are discussed in the following sections.

As the bulk of information regarding obesity and its epidemic were obtained from national health-related organizations, the facts are considered highly credible. However, these resources did not go in depth as to the various causes of the obesity condition. The largest determinant of obesity noted within the research literature involved the engagement in physical activity. Other influences/barriers of obesity were mentioned within the literature, but to a much lesser extent.

Obesity Interventions

Treating people who are overweight and/or obese can take on many different forms. Several ways to increase activity levels in children and adults have been noted throughout the literature, including behavior modification techniques (Robinson, 1999), in-school and after-school programs (Pangrazi et al., 2003), social marketing (American Journal of Health Promotion, 2001), work-site programs (Shephard, 1999), and matching of personality with activity (Gavin, 2004). In addition, a common factor found throughout the research revolves around the importance of motivation in children and adults when engaging in an activity (Bar-Or, 2000; Pangrazi et al., 2003; Gavin, 2004; Shephard, 1999; and Stamford, 2000). With a lack of motivation, the inner drive needed to actively and successfully engage in a healthy activity or behavior is unlikely to continue.

Behavior modification.

Behavior modification techniques used to overcome the sedentary influence of television watching have been found by Robinson (1999) to result in better weight
control of children than simply engaging the children in an exercise program. Although this study only used children from two elementary schools, techniques using rewards for healthy behaviors may prove beneficial for children. Evidence to support the use of behavior modification techniques to reduce obesity rates, however, was not found for adults. This may be due to the fact that behavior modification is used most often in classroom settings in which adults are usually not a part. In fact, most of the obesity interventions identified in the literature focused on treatment for children.

School interventions.

With childhood obesity doubling in the last thirty years and because childhood overweight is associated with more severe obesity among adults (Center for Disease Control, 1996 & Dietz, 2005, p.855), it is important to consider interventions geared towards school activities. Children need to be taught how to live a healthy lifestyle. This learning process can occur within the school setting. Physical education needs to be an emphasis as this class and recess are likely the only times during the school day that the children can be active. Researchers have acknowledged the importance of interventions within the school setting and have suggested providing environments that encourage physical activity, five-ten minute “fitness” breaks during the school day (Summerfield, 1998), and after-school programs that teach kids how to live active, healthy lifestyles (Pangrazi et al., 2003). Some support has been given for the effects of in-school and after-school programs improving the physical activity level of children (Pangrazi et al., 2003); however, research is limited regarding the effects that such in-school and after-school programs have on childhood obesity rates. Perhaps the environment outside of the school setting limits the benefit of the school programs. For example, children may be

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more physically active at school, but then return home only to engage in sedentary activities, such as watching television while eating snacks.

*Social marketing.*

Children's choices are greatly affected by marketing strategies on television that target children as potential consumers of the unhealthy snacks advertised (Calamaro, 2004). This may be a reason as to why social marketing, which has been described as advertising approaches to promote behavioral change in certain populations, has been suggested as a way to intervene on the unhealthy messages aimed towards both children and adults. *Fighting Obesity Through the Built Environment* (2004) included two suggestions provided by *The American Journal of Health Promotion* (2001) to use social marketing to alter the populations' behaviors. The first approach is to provide better food labels, thus allowing consumers to understand exactly what type of product is being purchased, and the second is to decrease the cost of healthier foods so that consumers are more willing and apt to buy them. The proposal of social marketing seems rational; however, the likelihood of manufacturers and a majority of stores reducing the prices of healthy foods seems unrealistic.

Marketing can also promote healthy lifestyles in adults. One example of this is by targeting the working population to participate in work-site programs. Such programs may provide a viable option for busy adults to conveniently increase their physical activity before, during, and/or after their work day.

*Work-site programs.*

Work-site programs, which involve health and exercise opportunities while at work, include strength and endurance training, nutrition advice, fitness classes, fitness
outings, and other health-related activities. Such programs have been attempted throughout the country with hopes of improving the well-being of employees. Many benefits can be derived from a business standpoint regarding the affects of work-site programs including reduced absenteeism, decreased healthcare costs, greater work productivity, and improved mood at work (Shephard, 1999). Despite the positive gains that can result in work-site programs, the average employee does not appear to improve in adopting a lifestyle of physical activity and fitness (Shephard, 1999). Possible reasons for the lack of improvement include the idea that the employees most likely to engage in the work-site programs often already have an interest in maintaining a healthy lifestyle, the duration of exercise classes are often short due to time constraints, the intensity of the classes are reduced for safety reasons, and attendance in the program is sporadic (Peepre, 1978; Leatt, et al., 1988; and Cox and Shephard, 1981). There is great potential for work-site programs to be a valuable form of intervention for those at-risk for becoming obese; however, workers need to adhere to its use in order for such benefits to result (Shephard, 1999).

As many people tend to drop out of work-site programs and other exercise regimens early on, it has been suggested in the literature that the activity selected may be part of the problem. By matching one’s personality to certain activities, program and exercise adherence may be more likely to occur. This concept was proposed and researched by Gavin (2004) as a possible intervention for maintaining a healthy lifestyle.

*Fitness personality.*

Of the literature reviewed, the idea of matching one’s personality to certain activities has the most relevance to occupational therapy. Gavin (2004) discussed the
concept of engaging people in activities that match their personalities. By doing this, a person may be more motivated to engage in physical activity and be more likely to maintain this lifestyle. To understand the “fitness” personality of a client, he or she would initially take the “Fitness Personality Profile” which includes a Likert scale describing the seven personality dimensions of sociability, spontaneity, self-motivation, aggressiveness, competitiveness, mental focus, and risk-taking. Secondly, the client would choose an activity from a variety of pictures. This activity would correspond to a certain personality dimension (Gavin, 2004). The goal of these activities is to understand the personality of the client in order to identify an activity that best suits that personality. Preliminary findings of a survey of 206 members of a fitness center include: “(1) a significant trend was found between hours of exercise participation and the degree of match between individuals’ psychosocial profiles and preferred activities (the more the client preferred the activity, the longer he/she participated in that activity) and (2) higher degrees of personality-activity match were associated with higher degrees of self-esteem and positive mood states” (Gavin, 2004). The idea that motivated humans are more likely to engage in an activity for a longer period of time greatly ties to the philosophy of the Model of Human Occupation (MOHO), from which this study is based. One of the three main components of this model includes that of volition (motivation). As occupational therapists use this model often, therapists strive to engage a client in a motivating activity, which is thought to improve success in meeting therapy goals. Having the motivation to actively engage in activity is of great importance to the holistic viewpoint of occupational therapists, which is why Gavin’s findings add support to the use of the MOHO perspective in this field. More research needs to be done in order to improve the
reliability of these findings. Nevertheless, this support can provide another standpoint from which to attempt the treatment of obesity and/or its prevention.

*Intervention Success among African-Americans.*

Since African-American women have significantly high rates of obesity, it is important to understand the effectiveness of the available interventions with this population. Unfortunately, with a “disproportionate obesity burden among African-American and poor women, weight-management remains particularly difficult for these populations” (Davis, Clark, Carrese, Gary, and Cooper, 2005, p. 1539 & Sbrocco, 2005, p. 246). In fact, although “African-American women report dieting as frequently as Caucasian women, they are less likely to participate in weight-loss programs, are less likely to have weight-loss success, and more likely to drop out of traditional psychosocial treatments” (Davis, Clark, Carrese, Gary, and Cooper, 2005, p. 1539 & Sbrocco, 2005, p. 246). Currently, there are few effective intervention strategies that have been shown to treat and prevent obesity, especially when comparing African-American and Caucasian women (Bronner & Boyington, 2002). The number of African-Americans in the United States is continuing to increase. Moreover, African-American women make up the majority of the obese people in this country (Flegal, Carroll, & Ogden, 2002; Van Itallie, 1985; Health Promotion and Disease Prevention, 1985; and Kanders, Ullman-Joy, Foreyt, Heymsfield, Heber, Elashoff, Ashley, Reeves, & Blackburn, 1994, p. 311). Therefore, it is essential that researchers find interventions that are effective in combating obesity for the rising number of obese African-American women in the United States.
The Model of Human Occupation (MOHO)

The Model of Human Occupation is a model that occupational therapists commonly use to understand the nature of a client’s occupations. Current occupational therapy theory states that occupation "is everything people do to occupy themselves, including looking after themselves (self-care), enjoying life (leisure), and contributing to the social and economic fabric of their communities (productivity)" (CAOT, 2002, p.34). Concepts of this model provide the theoretical perspective from which assumptions of this study are based. According to the MOHO Clearinghouse (2006), the theory of MOHO attempts to explain the motivations, patterns, and performance of occupations in one’s life. MOHO conceptualizes humans as consisting of three interrelated elements: volition, habituation, and performance capacity (MOHO Clearinghouse, 2006). The motivation for occupation is considered in the volition component, whereas “habituation refers to the process by which occupation is organized into patterns and routines. Lastly, performance capacity refers to the physical and mental abilities that underlie skilled occupational performance” (http://www.moho.uic.edu/intro.html). Consideration of the physical and social environment in which one lives also needs to occur for one’s occupations to be most accurately understood, and is a concept that is emphasized within this model. The Model of Human Occupation Screening Tool used within this study will allow the researcher to assess the participant’s occupations, habits, and routines while considering the components of this model.

As a result, assessing volition, habituation, and performance capacity of any person experiencing problems in their occupational life may yield an intervention that incorporates personal meaning, routine, and current physical and mental abilities. As
there is a lack of effective obesity interventions for African-American women, the application of the Model of Human Occupation may provide an option for effective treatment among this population by tapping into the volitional and habituation factors in the lives of these women.

*Physical Activity*

A common supposition about the obese population discussed within the research literature is that they live sedentary lifestyles. This is one likely reason as to why many obesity interventions revolve around increasing physical activity levels. Engaging in physical activity can result in many health benefits such as stronger bones; muscles, and joints; improved flexibility and balance; reduced stress; reduced chances of depression; improved mood and sense of well-being; and reduced risk, or increased management, of chronic diseases including Type II diabetes, hypertension, heart disease, arthritis, and some cancers (www.nih.gov). Although the National Institute of Health (NIH) recommends that children and adults engage in “thirty minutes or more of moderate intensity physical activity per day” (Summerfield, 1998, p. 3), most Americans do not meet these standards.

The benefits of physical activity can be obtained at any age. Since people learn to live sedentary or active lives at an early age (Summerfield, 1998), it is thought to be important to emphasize the importance of physical activity at an early age. The literature reports that obese children tend to be more sedentary than non-obese peers. In addition to problematic health conditions, a poor self-image and decreased acceptance by peers plague children who are obese (Bar-Or, 2000).
With physical activity greatly influencing obesity, it is not shocking that research has estimated that “15% of the United States health care budget, a figure exceeding $150 billion per year, results from conditions due to physical inactivity” (Booth & Chakravarthy, 2002, p. 4). The extravagant amount of money spent on health care from obesity and secondary conditions is only one issue resulting from obesity. As obesity in the United States is increasing substantially, the number of deaths due to sedentary lifestyles is also increasing. Surprisingly, McGinnis & Foege (1993) stated that “the number of deaths from sedentary living is two times greater than the number of deaths from motor vehicle accidents” (p. 2210). This study examined about 2,148,000 causes of death which occurred in 1990, separating each cause of death into categories such as tobacco, diet and activity patterns, alcohol, microbial agents, toxic agents, firearms, sexual behavior, motor vehicle, illicit use of drugs, and other factors. Considering this extensive examination of categorical causes of death, it was found that diet and activity patterns caused death in approximately 300,000 cases. Bearing in mind that these causes were compared to alcohol, microbial and toxic agents, firearms, sexual behavior, motor vehicles, and illicit drugs which caused far fewer deaths, the consequences of physical inactivity and obesity can be put into perspective. With statistics relating the negative effects of sedentary living and their resulting effects on an individual’s health and well-being, as well as the effects on the health care budget, literature asserts that “if a larger percent of the population became physically active, the public health burden associated with obesity would be greatly reduced” (Welk, 2000, p.7).

Challenging the majority of research, which emphasizes the importance of being physically active in order to lose weight, Welk (2000) also noted that physical activity is
great for preventing weight gain, but alone is not consistent for losing weight. In fact, only two out of thirteen studies provided evidence that significant weight loss occurred from a diet and exercise program when compared to diet modifications alone. Because it takes more than simply increasing physical activity to lose weight, a person’s motivation may be affected when they struggle to lose weight even after becoming more active. The general public may also believe that physical activity needs to result in significant changes in body composition in order to be beneficial. However, Welk & Blair (2000) evaluated the health outcomes described in twenty-four articles across dimensions of physical activity and some indicator of body composition. The studies reviewed evaluated outcomes such as mortality rates, coronary heart disease, hypertension, type II diabetes, and cancer. The result was that “active obese individuals actually have lower morbidity and mortality than normal weight sedentary individuals (p. 646). This interesting finding suggests that health benefits can be derived through the engagement in physical activity by people of healthy weight and for those who are considered overweight. Therefore, the idea that overweight people are sedentary is an assumption that may be incorrect.

Since active children are typically of healthy weight, it is also assumed that these children expend more energy per day. However, using the doubly labeled water technique, which the medical community considers a “gold standard” for measuring energy expenditure, Bar-Or (2000) pointed out that when calculated in kilograms per twenty-four hours, “obese children may actually expend more energy per day than their non-obese peers” (p. 2). A possible explanation provided by Bar-Or (2000) was that moving the extra weight of an obese body may require extra effort by the child, thus
increasing the actual amount of expended energy. The results of this study are interesting to note; however, other factors resulting in obesity of children were not discussed. Consequently, the amount of energy expended by each individual per day by means of physical activity can not be the only factor determining one’s risk of becoming obese, but is likely to contribute to this condition in some way.

*Physical Activity among African-Americans.*

Despite all of the advantages that can be obtained from physical activity, a majority of the population in the United States does not engage in the recommended amounts. In fact, physical inactivity is hypothesized to play a larger role in obesity when compared to the influence of increased caloric intake (Welk, 2000). Whitt, Kumanyika, and Bellamy (2003) studied the physical activity level of African-American women as compared to the national recommendations for moderate physical activity. Their research concluded that few participants met the activity levels recommended for health benefits. The sample of African-American women in this study were noted to engage in physical activity on too few days per week and for an insufficient amount of time (Whitt et al., 2003). These findings were especially prevalent among the overweight/obese individuals within the sample, and indicate the major role that physical inactivity may have in obesity development.

Regardless of these findings, effective obesity treatment, which commonly emphasizes physical activity, is lacking among African-Americans. This is one reason why Ainsworth, Irwin, Addy, Whitt, and Stolarczyk (1999) suggested that other occupations should also be taken into consideration when assessing the physical activity level among women. In a study researching the physical activity levels of minority
women, Ainsworth et al. (1999) found that “most women performed household chores (24 minutes/day), walked for exercise (30 minutes/day), occupational activities (37 minutes/day), child care (32 minutes/day), and lawn and garden activities (43 minutes/day)” (p.805). Additionally, less than 25% of the sample reported engaging in sports or conditioning activities. Though Ainsworth et al. (1999) concluded that “definitions used to characterize physical activity should remain consistent throughout studies,” (p.805) it was identified that African-American women were more sedentary than the Latino minority participants in this study. Nonetheless, physical activity is important to engage in across ethnicities and throughout the lifespan.

Of the three quantitative studies and one qualitative study reviewed, it was suggested that physical activity plays a dominant role in obesity. However, a shortcoming of these studies, as pointed out by Bar-Or (2000), is the fact that each article detailed the importance of physical activity in obesity, but each described its importance only when looking at obese individuals after they had become obese. None of the authors mentioned the lives of the individuals as they were becoming obese. Therefore, the other barriers/influences affecting physical activity levels that may indirectly lead to obesity were not considered. Nevertheless, other variables have been found to relate to the development of obesity and are relevant to review.

*Influences/Barriers Leading to Obesity*

As obesity is a growing problem in the United States, especially among African-American women, it is important to understand the factors that may contribute to this condition before an effective intervention can occur. Researchers have acknowledged several influences and/or barriers that may lead one to obesity. Psychological,
Obesity

environmental, social, socioeconomic, and physical aspects of a person’s life can all play a dynamic role in the development of obesity. A total of thirteen studies were reviewed, nine of which were quantitative in nature. The psychological influences affecting one’s habits and lifestyle were presented with most abundance throughout this literature. Environmental, social, socioeconomic, and physical influences/barriers were also highlighted with more information provided on environmental factors, and less information on physical factors. Each factor is considered relevant for review due to the fact that each factor interrelates with the others, thus influencing the overall result of one’s lifestyle.

For instance, a family’s socioeconomic status may influence their living in a poor and unsafe neighborhood with a lack of play areas. In turn, a child may be forced to play inside, engaging in more sedentary behaviors and snacking on less expensive, unhealthy foods. As the child continues to live this sedentary lifestyle, he/she may slowly become overweight. Overweight children are often teased by peers (Summerfield, 1998), and this teasing can affect a child’s self-esteem. The low self-esteem resulting from the teasing at school may then contribute to poor coping skills, thus leading the child to socialize less, isolate oneself to his/her home, and continue living an unhealthy and sedentary lifestyle. This hypothetical example demonstrates how many factors may dynamically interact, influencing the life that one may live, whether healthy or unhealthy.

*Psychological influences.*

Psychological factors within a person can positively or negatively influence his/her activity level. Much research has emphasized the idea that a person can reduce his/her chances of becoming obese by engaging in physical activity. Once a person
becomes active, it is important to incorporate this as a routine in his/her daily life. However, about 50% of people who start an exercise program drop out within the first three to six months (Dishman, 1988). Psychological influences, such as motivation and self-esteem can play a large role in adherence to healthy routines and habits in people’s lives. Research has found that understanding one’s motivations behind certain behaviors and activities can greatly increase the likelihood of maintaining or adhering to healthy lifestyles. For example, an individual may attempt to adhere to a healthy active lifestyle for reasons varying from weight management, physical appearance, physical functioning, and/or stress reduction, all of which relate to obesity. Figuring out the most significant motivation for engaging or not engaging in certain behaviors may help a therapist gain insight “into reasons for certain eating patterns, physical activity levels, and self-perception,” (Smith, 2004, p. 475) which can help provide more beneficial treatment interventions.

As the engagement of physical activity is important for reducing the chances of obesity, it is essential to understand the psychological influences or barriers affecting each person’s performance. In fact, Dzewaltowski (1989) postulated that “the optimal motivation to engage in physical activity may occur when individuals have high self-efficacy, high outcome expectation, and are not satisfied with their current status compared to others of similar age and gender” (p. 46). Self-efficacy and outcome expectation have the tendency of declining as people age (Netz & Raviv, 2004). As these psychological elements decline, a reduction in physical activity or other healthy behaviors may also occur, possibly accounting for the inclination for adults to gain weight as they age.
As psychological influences have been noted to affect adults, children are also believed to be influenced by emotional issues that affect the living of a healthy lifestyle. Obesity in children has been increasing steadily in the United States. Therefore, it is imperative that therapists understand what is affecting and influencing a child's unhealthy lifestyle. Summerfield (1998) suggested that obese children often face social problems such as a lack of friends and lack of inclusion in activities. This exclusion from peers and activities may lead an obese child to become sad, embarrassed, and depressed. In accordance with Dzewaltowski’s (1989) postulate, these children are highly unlikely to have the motivation to engage in the physical activity and healthy lifestyle needed to become more fit. Consideration of the psychological status of obese children needs to occur in order for interventions to successfully build habitual healthy behaviors into their lives.

As Gavin (2004) explains the self-efficacy theory, a person may choose to engage or not engage in certain activities based on self-efficacy or feelings of competency. Self-efficacy is defined as “people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. One’s self-efficacy determines how a person feels, thinks, behaves, and motivates themselves” (Bandura, 1994, p. 71). For instance, an increase in self-efficacy is likely to lead to an increase in the engagement of physical activity. It is important to consider and understand each individual's level of self-efficacy as it can provide valuable information as to how to optimally initiate intervention.
Psychological Influences among African-Americans.

As African-American women greatly struggle with obesity in this country, it is essential to consider the psychological influences that have been noted to affect this population specifically. As volition, one of the main components of the Model of Human Occupation, is used as a basis for this study, literature regarding the motivation of African-American women is significant. Motivation to engage in physical activity has been suggested to be affected by one's body image. "Researchers hypothesize that those who internalize the Western culture's beauty ideal of a thin body, but fail to achieve that ideal may experience body dissatisfaction. Those who do not experience body dissatisfaction at extremely high weights may be more at risk for obesity" (Flynn, 1998, p.13). Therefore, those who do not experience body dissatisfaction may be lacking the motivation to control their weight. Interestingly, studies have found that African-American women do not report dissatisfaction with their bodies until they are already in the overweight range (Fitzgibbon, Blackman, & Avellone, 2000).

In addition, Latner, Stunkard, and Wilson (2005) found that African-American women were notably more fond of obese peers than were whites. This finding indicates that African-American women have a greater acceptance of obesity, resulting in less stigmatization of those who are obese. Latner et al. (2005) suggested that this "reduced stigmatization of obesity by African-American women may be related to their greater prevalence of obesity (49%) compared with white women (31%). Obesity may be less salient and, therefore, considered less deviant among American-American women" (p.1231).
Lastly, Dutton (2004) conducted a study describing the ideal weight goals of African-American women who participated in a weight management program. Of interest is the finding that African-American women expressed content when achieving an “ideal weight that was still classified as overweight” (p.305). The idea that African-American women are satisfied with themselves at a heavier weight may influence their motivation to engage in physical activity or other interventions to obtain a healthy weight. Consequently, psychological factors within each individual have the ability to greatly influence engagement in healthy behaviors. A dynamic interaction occurs between one’s psychological factors and the environment. As a result, the influences of the environment and its role in obesity are worth mentioning.

*Environmental influences.*

The environment can influence a person’s actions and behaviors in numerous contexts. When developing an effective obesity intervention, the environment may play a role in its success. As successful obesity interventions for African-American women have been negligible, it is necessary to consider all contexts that may influence treatment effectiveness. When considering obese children, for example, Krahnstoever, Cutting, & Birch (2003) noted that parents, peers, gender, age, the school environment, neighborhood play areas available, and the family’s socioeconomic status can greatly assist in determining the activities and behaviors in which a child may engage. Other aspects of the environment that research has revealed to influence the trend of obesity in America include the media, increased television viewing, parent-child eating habits, availability of vending machines, higher prices of “healthy” food, and increased food portion sizes. As increased rates of weight gain in African-American children and
adolescents as compared to other ethnic groups has been observed, interactions between
people and their environment that account for overweight and its complications are likely
to vary across ethnicities (Dietz, 2004). Therefore, it is important to recognize that each
environmental factor discussed may have varying effects on obesity among ethnic
groups.

Upon review of the literature, the media was noted as having a negative affect on
self-perception, especially that of women. Smith (2004) acknowledged that the media can
greatly influence one’s self-perception and/or choices for engaging in physical activity by
portraying and emphasizing the idea that attractive women have thin, lean bodies, and
attractive men are muscular. Many men and women may have the sense of imperfection
as they view these images continuously on television and other media sources. As a
result, the self-efficacy and self-image of individuals may decline. In turn, the motivation
to involve oneself in a healthy, active lifestyle may be reduced.

The media also advertises unhealthy food items geared toward children. Alex
Molnar, Director of the Education Policy Studies Laboratory at Arizona State University,
made clear that “the smartest people in the country are paid a lot of money to manipulate
kids into behaviors that may be harmful to their health” (Fighting Obesity Through the
Built Environment, 2004). With unhealthy food advertised extensively, the fact that this
food is less expensive than healthier choices compounds the issue of unhealthy eating
behaviors related to the problem of obesity.

A study conducted by Calamaro (2004) indicated that the prices of food influence
the purchase. In his study, Calamaro (2004) found that less expensive foods were
purchased more often by consumers. This result was consistent even when healthier food
was made less expensive than less healthy foods, suggesting that the price of food is a greater determinant of purchase than the quality of food itself. Cheaper food options are often available in fast-food restaurants. Additionally, a problem that is encountered with students is the fact that vending machines are readily available throughout the school. Cheaper items, often involving unhealthy food, are sold from these vending machines. Therefore, the options available for students to purchase healthy food at school are less than adequate.

After school is a time in which children have been known to exert their energy and play. However, there has been a surge in the amount of time children have been spending sedentarily watching television and/or playing video games. In fact, Calamaro (2004) stated that children in the United States now watch an average of two hours of television per day. Not only does television viewing engage children in sedentary behavior, research has also found that television viewing encourages snacking behaviors. As children watch television, they are also viewing commercials advertising unhealthy foods. The excessive snacking and sedentary behavior occurring as children watch television has been correlated with an increase in body fat. In a study conducted by Gortmaker, Must, Sobol, Peterson, Colditz, & Dietz (1996) results were found in which “60% of overweight incidence in a study of 746 ten to fifteen year olds could be linked to excess television watching” (p. 356). Sedentary lifestyles are also enhanced by the increase in the country’s technology. Welk (1999) explained that work that was previously manual in nature is now being completed by computers/technology. Because of this, working people are now engaging in less physical labor, thus contributing to less
energy expended per day. The technologies that many view as “luxuries” may be influencing the problem of obesity due to increased sedentary lifestyles.

In combination with more sedentary lifestyles, the literature reports that the country’s rise in obesity may also be related to food portions. A study of marketplace foods by Young and Nestle concluded that increased food portion sizes has paralleled the trend of increasing overweight people since the 1970’s (Calamaro, 2004). To state otherwise, the greater number of people becoming overweight in the United States has been associated with the increase in food portion sizes. With such drastic evidence of the increasing number of obese people, it is vital to educate and incorporate healthy eating portions into the daily routine of such individuals.

Environmental Influences among African-Americans.

As mentioned previously, environmental influences may not have the same effects on each race/ethnicity in this country. For instance, though the media may exhibit significant influences on the general American population, media influences seem to have less effect on the self-image and self-efficacy of African-American women. Despite the images that the media portrays as ideal, African-Americans “maintain a greater social acceptance of overweight, have high rates of body image satisfaction that are largely independent of body weight, and experience fewer within-group social pressures to lose weight” (Bennett, Wolin, Goodman, Samplin-Salgado, Carter, Dutton, Hill, & Emmons, 2005, p. 96).

As mentioned earlier, fast-food restaurants often provide inexpensive foods that are typically not healthy. Of interest is that these facilities were noted to be more abundant in the inner city neighborhoods in which African-Americans commonly live.
Therefore, the consumption of less healthy food is more likely to occur in this population (Diez-Roux, Nieto, Caulfield, Tyroler, Watson, & Szklo, 1999). However, an interesting perspective noted by Johnson and Broadnax (2003) in regards to the African-American population revolves around the symbolism of food consumption among African-American women.

The foods that obese African-Americans typically consume and/or cook are often considered to be plentiful and unhealthy. However, upon interacting with African-American women who have struggled with their weight, Johnson and Broadnax (2003) realized that the management of obesity among women of this ethnicity is more than simply managing the intake of food. “Obesity may be linked to the very essence of the women’s cultural, historical, and psychosocial well-being” (Johnson & Broadnax, 2003, p.69). In the African-American culture, food may have a symbolic meaning that dates back to times of slavery. Having a larger body during times of slavery represented a woman that may come from an affluent family during times when food was scarce (Johnson & Broadnax, 2003). For these reasons, obesity among African-American women may have meaning and symbolic value.

On the whole, the correlation between food portion sizes and the increased overweight population leads one to speculate that the environment, as well as other factors, plays a major role in our current obesity trend. As one’s psychological status can be affected by the interaction with the environment, social factors are also interacting with the environment, and are influential in the development of obesity.
Social influences.

Socialization is another focus of much research relating to obesity. Four quantitative studies focused on the social aspects affecting the engagement of children in active, healthy lifestyles. Of the articles, 50% focused on parental involvement and influence in a child's development of obesity. Five socialization factors influencing physical activity among children were found to include: (1) parental encouragement, (2) parental involvement, (3) parental facilitation, (4) parental funds, and (5) parental role-modeling (Welk, 1999; Krahnstoever et al., 2003). Each of these factors can affect the opportunities a child has to engage in an active, healthy lifestyle. For instance, a parent's encouragement can lead a child to feel more competent in a given activity. This is important because, as Welk (1999) stated, "parental efforts to build competence and a sense of mastery are likely to promote physical activity involvement" (p. 3).

Interestingly, a study of 180 nine year-old girls, conducted by Krahnstoever et al., 2003, discovered that "30% of girls reported high levels of physical activity when neither parent provided a high level of support, 56% reported high levels of physical activity when one parent provided a high level of support, and 70% of the girls reported high levels of physical activity when both parents provided a high level of support" (p. 1593). This study provides support for the idea that the social influence of parents can greatly affect the activity level and possibly other behaviors that may influence the development of obesity.

The researchers in the literature reviewed have also hypothesized that one possible reason for the increase in child obesity in recent years is due to mothers returning to work. As more mothers are returning to work, less time is spent with their
children. Because of this, children are not being “policed” when eating foods/snacks. Eberstadt (2003) also noted that as children take care of themselves after school, they are more likely to stay indoors, thus increasing sedentary behavior. In fact, a study conducted by Anderson, Butcher, & Levin (2002) concluded that “increased employment could explain 6-11% of growth in overall childhood overweight” (Eberstadt, 2003, p.10). Little research has been conducted on the influence of the working mother and childhood obesity. However, more research in this area may be beneficial for understanding the drastic increase in childhood obesity.

Parents are not the only social influences surrounding children; siblings and peers also play a role. Siblings and peers can influence a child’s lifestyle by role-modeling, encouraging, and sharing beliefs. In fact, Weiss, Ebbeck, & Horn, (1997) regarded peers as people who could drastically affect one’s feelings of competence and, in turn, level of physical activity and other behaviors of a child. The importance of friendship within a sport or activity has also been found to influence a child’s motivation to engage in physical activity in and out of school. A 1993 study examined middle school students’ perceptions of close friendships in relation to one’s self-esteem, motivation, and activity levels. The results of this study concluded that both males and females “felt better about themselves physically, liked physical activity and sports more, were motivated by challenging activities, and were more physically active” if they had a friend involved in a sport or activity (Weiss, 2000, p.4). Therefore, the literature supports the idea that social influences, including parents, siblings, and peers can positively or negatively affect the engagement in physical activity.
Social Influences among African-Americans.

The social influences specific to African-Americans are important to consider as these influences can impact the success of obesity treatment. A study assessing the process variables involved in a weight loss program for African-American adolescent girls found that family/parental variables exert a strong influence on weight loss efforts (White, Martin, Newton, Walden, York-Crowe, Gordon, Ryan, & Williamson, 2004). These results indicate the use of family support to elicit an increase in weight loss motivation during obesity intervention.

Additionally, focus on social support and its effect on the physical activity level among African-American women was researched in a study conducted by Sharma, Sargent, and Stacy (2005). Four types of social support were identified: emotional, informational, instrumental, and appraisal support. Emotional support involves "showing expressions of empathy, love, trust, and caring. Instrumental social support entails providing tangible aid and service. Informational social support includes giving advice, suggestions, and information. Lastly, appraisal social support helps in self-evaluation" (Sharma et al., 2005, p. 354). Researchers of this study concluded that emotional support was especially important for African-American women. It was further suggested that "physical activity promotion programs need to use and build emotional social support in this population" (Sharma, 2005, p. 356). This is a notion that can begin early in childhood.

As research has greatly focused on social influences that parents have on their children, the socioeconomic status of parents has also been noted to affect a family’s lifestyle. Socioeconomic influences in regards to obesity should be acknowledged in
order to understand possible barriers to a healthy lifestyle that many people may be facing.

_Socioeconomic influences._

Typically, opportunities to engage in physical activities and/or healthy behaviors involve some form of financial support. For instance, running shoes, gym memberships, healthy foods, and sporting programs all cost a certain amount of money. Therefore, financial status is indirectly related to the engagement in health-promoting lifestyles. In fact, families with a reduced income were noted within the literature to be more inactive than families of higher income (Drewnowski & Barrot-Fornell, 2003). In addition, obesity and increased body weight of lower-class families has been linked to the consumption of cheaper, energy-dense foods that are packed with sugar, fats, and calories (Drewnowski & Barrott-Fornell, 2003). Because low-income families may not be able to afford the more expensive, healthier foods, the consumption of cheaper, less nutritious food may be more feasible.

As people of lower income tend to work in less prestigious jobs, time restrictions and a lack of opportunities to engage in a healthy lifestyle may affect the risk of becoming obese. Interestingly, “the prevalence of obesity among women in the United States is above average for those of low socioeconomic status” (Sobal & Stunkard, 1989; Cawley & Danziger, 2005, p. 728). To compound this issue, obesity may be a potential barrier to employment as obese women have been found to earn less than healthy-weight women (Averett & Korenman, 1999; Cawley, 2004). Because of these limitations, a greater amount of stress has also been noted to occur in people of lower paying occupations. The greater amount of stress occurring at lower paying jobs could be due to
such things as less than ideal work shifts, long hours, less prestige, or even the type of work and work environment. Each of the factors associated with a lower occupational status presents an obesity risk (Wardle & Jarvis, 2002).

Several studies have found that a lack of education in both men and women across ethnicities to be associated with an increased risk for obesity (Wardle & Jarvis, 2002; Gutierrez-Fisac, Rigidor, Banegas, & Aralejo, 2002). Although research has shown a lower education level to be associated with a reduced income and obesity, Wardle & Jarvis (2002) suggested a positive twist to this element. They mentioned that education may be a variable that is easier to change compared to others. Because of this, the suggestion of educating lower-income families in regards to healthy lifestyles, may contribute to a greater initiative to obtain the healthiest lifestyle possible with the income available.

Socioeconomic Influences among African-Americans.

As mentioned, a certain amount of financial abilities is necessary to engage in a healthy lifestyle. In fact, Baltrus, Lynch, Everson-Rose, Raghunathan, and Kaplan (2005) found that a low socioeconomic status has been associated with obesity. Related to this finding, it has been found that obesity is especially relevant among low-income minority women, particularly in the African-American community” (Sharma, 2005, p. 352). Another study conducted by Bultres et al (2005) found that African-Americans were more disadvantaged than Caucasians for “each measure (childhood socioeconomic position (SEP), education, income, and occupation) of SEP. Therefore, it may be hypothesized that the weight differences observed between racial groups is in part due to socioeconomic disadvantage. Since effective obesity interventions are limited for this
population, it is necessary to take into consideration the socioeconomic status and financial abilities of the individual to ensure that the intervention is accessible and obtainable.

The factors influencing obesity including physical activity, environmental, social, and socioeconomic concerns are somewhat changeable. However, factors that influence each person are those of the physical domain. Assets or limitations that each human was either born with or acquired at some point in his/her life are less likely to be changed. However, if one understands the physical influences and/or barriers to a healthy lifestyle presented by each person, possible adaptations or modifications may be activated to reduce the risk of becoming obese and/or to enhance the effectiveness of obesity interventions.

*Physical influences.*

Physical influences that may affect a person’s ability to engage in certain health-promoting activities/behaviors include those such as genetics and age. Minimal research was found relating physical influences of a person to the development of obesity. However, the research that has been done has focused on the influences of genetics. For instance, NIH Director Elias Zerhouni notes: “Eighty percent of our genes are tuned to respond to food scarcity, but only 20% are designed to maintain weight in a normal range” *(Fighting Obesity through the Built Environment, 2004).*

However, since human genes have not changed in the past 50 years, there needs to be another explanation as to the sudden increase in overweight and obese people in the United States. For example, a study in the 2002 *Annals of Internal Medicine* stated that “people born in 1963 who became obese did so about 25-27% faster than those born in
It is doubtful that heredity alone could produce the significant changes found by this study. By understanding the relationship resulting from the interaction of a person's psychological status, social, socioeconomic, and environmental factors with obesity, it may be possible to create an environment and effective treatment interventions that promote healthier living.

With the several barriers and/or influences indicated to have an affect on obesity, each indirectly affect obesity by focusing on the significant factor of physical activity. For instance, environmental, social, socioeconomic, and psychological influences indirectly affect obesity through their effects on physical activity. Yet, there is more involved in becoming obese than purely through one's level of physical activity. As this study focuses on the occupations, habits, and routines of an obese individual, minimal research was found related to these topics.

*Occupations, Habits, and Routines*

Habits are defined by the American Heritage Dictionary (2005) as a “recurrent, often unconscious pattern of behavior that is acquired through frequent repetition”; whereas, routines are considered part of self-maintenance occupations. As quoted by Chapparo and Ranka (1996), self-maintenance occupations are “routines, tasks and subtasks done to preserve a person's health and well-being in the environment” (p.58). Erlandsson and Eklund (2003) noted that it is through occupation, habits, and routines that an individual can achieve occupational rhythm and balance to meet the needs of self-care, work, play, and rest. These researchers also mentioned that the uplifts and hassles associated with occupations, habits, and routines can influence one's state of health. “The relationships between such hassles and uplifts to health are important for understanding
more about the relationship between daily occupations and health. To understand such relationships is essential in order to prevent ill-health caused by detrimental patterns of daily occupations and to be able to support a client in altering her everyday life towards a healthier pattern” (Erlandsson & Eklund, 2003, p. 21). Obesity is a condition that is influenced by many factors. Identifying specific occupations, habits, and routines common of an obese woman that may influence this condition may assist health professionals in developing effective interventions for African-American women.

In regard to the work and leisure habits of the obese population, little research has been conducted. However, as noted within *Fighting Obesity Through the Built Environment* (2004), “absenteeism from work is two times more likely in obese people when compared to those who are not obese”(p. 618). These results are possibly due to the increase of secondary health conditions that can arise from obesity.

Leisure activities of United States children and adults are becoming increasingly sedentary. It is estimated that 28% of adults in the United States do not engage in any leisure-time activity at all (Booth, 2002). In fact, 30% of American women reported participating in no leisure physical activity, and this trend continued as they aged (Oden, 2005). In addition, it is important to recognize that many working women switched to full-time employment throughout the past decade (*The Economic Boom (1991-1997) and women: issues of race, education, and regionalism*, 2003). Furthermore, a woman’s total workload should be recognized as including more than paid employment. The total workload consists of “all daily chores such as self-care, care of children and home, remunerative work, and leisure occupations” (Erlandsson, 2003, p. 20). Therefore, the amount of time that women have to engage in leisure activities may be limited.
The occupations, habits, and routines of one African-American woman are the focus of this case study. For this reason, the limited occupations, habits, and routines of African-Americans found within the literature will be discussed. As stated previously, 28% of American adults do not engage in any leisure-time activity. Of this population, the Third National Health and Nutrition Examination Survey (2000) indicated that 35% of the American women reporting leisure time inactivity are of the African-American race. However, it is also important to recognize that many African-American men and women perform strenuous physical labor in their jobs. Because of this, many African-Americans voice the need to rest versus exercise during their time off of work (Airhihenbuwa, Kumanyika, Agurs, & Lowe, 1995). Such demanding lifestyles should be understood when considering the findings of sedentary leisure behavior.

Since sedentary behavior is known to influence one's chances of becoming overweight, the issue of sedentary leisure-time behavior needs to be acknowledged. Bar-Or (2000) found that simply watching one more hour of television per week can “increase one’s risk for obesity by 2%” (p.2). As mentioned, research has been minimal in regards to the occupations, habits, and routines in which obese individuals engage. Uncovering the occupations, habits, and routines of an African-American woman may assist therapists in developing effective interventions for this population in the form of habit training.

Conclusion

Overall, obesity is running rampant among the United States population, most notably among African-American women. To make matters worse, obesity interventions
used with African-Americans have been largely ineffective. Most of the research in obesity acknowledges and emphasizes the magnitude of the obesity epidemic and has suggested several possibilities as to what is causing such a drastic surplus of obese individuals. Of the possible causes, most research viewed physical activity as the largest determinant influencing the development of obesity. Numerous studies focused on the effects of sedentary behavior and its various consequences, including obesity and other health-related conditions. Additional factors mentioned by the literature to influence obesity included psychological, environmental, social, socioeconomic, and physical factors. Each dimension was found to positively or negatively influence the degree of physical activity in which individuals engage. Thus, these barriers/influences indirectly affect the likelihood of developing obesity. Research covered these topics to a great degree and portrayed consistent and reliable results among the studies.

The largest gap found within the literature was the lack of research involving the occupations, habits, and routines common of obese lifestyles. The impact of obesity and its effects are largely recognized throughout the literature, but little is known regarding the common occupations, habits, and routines of obese people that may unintentionally lead them to lives full of health concerns. Physical activity is simply one factor involved in obesity. However, many factors dynamically interact as each person’s life unfolds. Therefore, more research should focus on the dynamic interactions involved in leading some to wellness and others to obesity. The current study will attempt to fill this gap by examining occupations, habits, and routines that may contribute to the obesity of an African-American woman.
The significant problem of obesity among African-American women has been recognized as a continuing issue within the United States. Furthermore, obesity interventions commonly used have had negligible effects among this population (Bronner & Boyington, 2002). As mentioned previously, occupations, habits, and routines can influence one's well-being. Additionally, Kumanyika et al (1992) and Braithwaite & Lythcott (1989) have suggested that the attitudes and beliefs of African-Americans need to be incorporated into weight-control programs in order to succeed with this population. Therefore, identification of these concepts within the life of an obese African-American woman may assist future research in discovering successful obesity interventions among the larger African-American women population.

**Implications for this Study**

The current study utilized the information concerning the factors and influences of obesity that have been provided by the research conducted to date while attempting to fill the gap within the current research. Through understanding the influences of physical, environmental, social, socioeconomic, and psychological factors, the current study compared themes of occupations, habits, and routines. The findings of this study may be used for future research when attempting to identify factors that lead to more effective treatment among obese African-American women. With such little research available concerning the common occupations, habits, and routines of the obese population, this study attempted to begin the process of making known the effects associated with certain lifestyles.

The occupations, habits, and routines of one obese African-American woman were analyzed with the hope of identifying common themes. Future research may use the
identified themes of one obese African-American woman by acknowledging types of themes to be aware of when developing a study examining the occupations, habits, and routines among a larger population of obese African-American women. As future researchers begin to uncover common themes of lifestyle among this population, successful obesity intervention may develop. Occupational therapists can use this information in practice by recognizing the characteristics related to occupations, habits, and routines of the obese, and guiding these individuals to develop the characteristics and habits found within the literature to be considered healthy. Thus, more effective obesity interventions for the population of African-American women may indirectly result.
METHODOLOGY

Study Design

This study utilized a case study approach in order to identify themes of occupations, habits, and routines performed by one obese African American woman. Since effective treatment of obesity among African-American women is lacking, the findings were examined and used as a means to identify factors that future research can use to identify more effective treatment strategies. In general, "case studies are the preferred strategy when "how" or "why" questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context" (Yin, 1994, p. 1). In addition, case studies are also useful when significant behaviors can not be controlled, and when contextual conditions are sought to be covered (Yin, 1994). Also pointed out by Yin (1994) is that case studies can be "based on any mix of quantitative and qualitative evidence" (p. 14). A case study design is superior to other design methods since this research is studying a contemporary phenomenon that is hard to measure. Studying one's occupations, habits, and routines within a real-life context will also provide the rich, detailed information needed when triangulating the data. A more definitive picture of the participant's life occupations, habits, and routines can be gleaned from a case study design by analyzing information from a variety of methods.

As mentioned previously, the Model of Human Occupation provided a basis for this study. To date, more than twenty assessments have been developed based on this theory, two of which were used in this case study. The Occupational Questionnaire (OQ), MOHO Screening Tool (MOHOST), and the face-to-face interview used for data
collection in the current study provided data of both qualitative and quantitative nature. The mixed methods approach "employs strategies of inquiry that involve collecting data either simultaneously or sequentially to best understand research problems. Data collection in this type of approach also involves gathering both numeric information as well as text information so that the final database represents both quantitative and qualitative information" (Creswell, 2003, p. 20). The mixed methods approach was appropriate for this case study due to the fact that "the researcher can base her inquiry on the assumption that collecting diverse types of data best provides an understanding of the research problem" (Creswell, 2003, p. 21). The three part assessment battery allowed for the researcher to gather the depth of information necessary for data analysis.

The main advantage of using a mixed methods approach in this study was the ability to gather in depth and quality information. On the other hand, a mixed methods approach has its drawbacks. A mixed methods approach is a time-consuming process. Not only is the time needed to gather the various types of data extensive, but the analysis of the quantitative and qualitative data is also intensive. The researcher must also have a good understanding of both quantitative and qualitative styles of research, as well as common strategies used within each.

**Study site**

The participant for this study was identified and contacted by a local health professional. However, the actual data gathering occurred at the selected participant’s home and work environment for purposes of comfort and privacy for the participant. These environments were used in order for the researcher to gain insight and observation of the participant’s occupational behavior in the context in which it occurs. In addition,
the participant may be more apt to disclose information regarding her occupations, habits, and routines in a place that is more comfortable for her. To remain confidential, no name or identifying information was associated with the participant and her home/work environment.

Population

The selected participant was a 35-year-old woman of African-American ethnicity with a body fat percentage of 35.7%. She engaged in a supervisory position in her full-time career and was of middle-class status, married, and has two children, ages 20 and 14, as well as an 8-month-old grandchild. One dependent child continues to live with her, as does her grandson who typically stays with her four nights per week. The participant has normal tone and musculature, and is free of depression, diabetes, and other metabolic disorders. Furthermore, she is currently engaging in one college course per semester as she pursues her Master’s degree in Human Resources.

A middle-aged African-American woman was chosen based on the finding that the percentage of overweight middle-aged African-American women is significantly greater than middle-aged white women (Health Promotion and Disease Prevention, 1985). Since a body fat percentage of 32% or greater is considered by the American Council on Exercise (2006) to be obese, this is also used as a basis for inclusion criteria. Additionally, studying a middle-class, married and working mother provides the researcher with a variety of roles from which themes of occupations, habits, and routines could be based. Furthermore, the participant included in this study was to have normal tone and musculature, be free of depression, Type I diabetes, and other metabolic, movement, and cognitive disorders in order for the researcher to rule out the influences
these may have on performed occupations, habits, and routines. Lastly, those with Type II diabetes were not to be excluded from this study due to the fact that many obese individuals acquire this secondary condition (National Institute of Health, 2005). A list of inclusion and exclusion criteria is provided in Appendix A.

Equipment and Instruments

Occupational Questionnaire.

The first Model of Human Occupation instrument used in this study was the Occupational Questionnaire (OQ), developed by Riopel, Smith, Kielhofner, and Watts (1986). The questionnaire can be used by adolescents or adults, and provides a method for the participant to document her activities in thirty-minute intervals throughout the day. This shortened version of the NIH Activity Record allows the participant to classify her occupations as work, play, or leisure. In addition, the participant is able to document her perceived level of competence, value, and enjoyment for each activity (MOHO Clearinghouse, 2006). For its use in the current study, the participant was asked to complete this form of activity configuration for a period of one week. This provided a better interpretation of the participant’s daily occupations, habits, and routines, which is of focus in this study.

Validity/Reliability of the Occupational Questionnaire.

Although the precise validity and reliability of the Occupational Questionnaire has not been noted within the literature, the MOHO Clearinghouse (2006) provided a list of its use in evidence-based practice. Most important is the fact that the questionnaire has been regarded as valid within many of these studies. Berk & Berk’s (1979) data from the Household Work Study Diary that used the OQ was analyzed by Riopel et al. (1983)
using a sample of twenty undergraduate occupational therapy students. Results indicated that there was an 82% agreement between the two measures. Thus, reliability of the OQ may be greatest when raters have appropriate educational background pertaining to concepts of the model of human occupation. Based on this model, the Occupational Questionnaire was also determined to have content validity. Two other studies that compared the volition and habituation subsystems of adolescents also provided evidence of the OQ as a valid measure of adaptive occupational behavior (Riopel, Kielhofner, & Watts, 1983; Barris, Kielhofner, Burch, Gelinas, Klement, & Schultz, 1986). As the MOHO Clearinghouse is a well-established leader in occupational therapy research, it is understood that this instrument is sufficiently valid and reliable. A copy of the Occupational Questionnaire is located in Appendix B.

*Model of Human Occupation Screening Tool.*

The quantitative instrument of choice in this study is the survey/screening tool. As Creswell (2003) states, the purpose of a survey is to generalize from a sample of a population so that inferences can be made about some characteristic, attitude, or behavior of this population. The screening tool was administered within an interview format which will ensure adequate completion and the opportunity to explain meanings of assessment items if needed.

The newly revised Model of Human Occupation Screening Tool (MOHOST) Version 2.0 was used for the purpose of this case study. The MOHOST is an assessment tool that addresses volition, habituation, skills, and the environment. These concepts are fundamental components within the Model of Human Occupation which was created by Kielhofner. The MOHOST tool addresses one's "motivation for occupation, pattern of
occupation communication, process, motor skills, and environment which can then be used to help therapists gain an understanding of a client’s occupational functioning” (Parkinson, Forsyth, & Kielhofner, 2006, p.1). Other advantages of using the MOHOST is that is uses a “variety of data collection methods, is flexible enough to be used in a variety of intervention settings, and uses language that is easy to understand and communicate with clients” (Parkinson et al., 2006, p.1). Due to this flexibility in data collection, the researcher had the ability to use discussion with the participant in order to complete this screening tool. The researcher used probing questions when appropriate in order to most accurately rate the participant.

Two MOHOST forms are included with the instrument: 1) the Single MOHOST form; and 2) the Multiple MOHOST form. As the researcher attempted to gain insight into the participants overall daily occupations, habits, and routines, the researcher used the three Single MOHOST Rating forms (USA English) detailing one occupation from the work, self-care, and leisure domains that occupational therapy emphasizes. Upon review of the participant’s activity configuration, the researcher identified one occupation from each domain that was selected for use with the MOHOST.

In addition, the rating scale labels on the revised MOHOST have been changed to a letter rating scale. The letters F, A, I, and R are used to represent whether a client facilitates occupational participation, allows occupational participation, inhibits occupational facilitation, or restricts occupational participation. General examples for each letter and category are represented within the assessment itself. This reliability feature helps therapists to document the most accurate representation of the individual...
being assessed for each category. An example of the MOHOST form is located in Appendix C.

**Validity/Reliability of the MOHOST.**

This newly revised screening tool does not have any published data regarding its validity and reliability. However, the first psychometric study using 163 clients has been submitted for publication (Forsyth, unpublished). The purpose of this unpublished study was to empirically test the MOHOST instrument. Nine occupational therapists, five of whom were from the UK and four from the United States, completed a total of 171 MOHOST instruments on individuals ranging from 18-65 years of age. Data was collected using the Rasch analysis, which converted the obtained data into interval measures. Results of this study “provided evidence in support of the conclusion that the MOHOST (version 2.0) scale can function as a valid and reliable measure of occupational participation. Importantly, the items worked well together as a measure of occupational participation, clients were effectively categorized into different levels of occupational participation, and therapists were able to use the MOHOST in a valid manner” (Forsyth, K., unpublished, p. 18). Therefore, this unpublished article provides support that use of the MOHOST in the current study may assist in obtaining information of occupational participation.

**Procedures**

The current study began upon approval by the Human Research Review Committee. Four local health professionals were contacted and asked to refer obese African-American individuals with interest in participating in this study. A brief letter describing the study was initially given to each health professional. A sample of this
letter is located in Appendix D. The health professionals were then provided with a separate letter, located in Appendix E, to be given to each referred individual. Within a six month time frame, the researcher was contacted regarding two referred individuals. After each referred individual read and signed the study description, the health professional contacted the researcher informing her that the letter had been read and signed. The researcher retrieved the signed letter before initiating telephone contact to ensure participant permission had been granted. Once telephone contact was made, an explanation as to how the researcher gained access to each woman’s telephone number and a brief description of the study occurred. Upon each individual’s approval, the researcher screened each woman using the inclusion and exclusion criteria of this study. Though the first individual did not meet the study’s criteria, the second woman fully matched the criteria.

Body fat percentage as a means of assessing obesity status was used over BMI since one’s percent body fat has been noted to be a more accurate predictor of one’s body composition (Casey, 2006). For instance, Steven Heymsfield, MD, director of the Obesity Research Center at St. Luke's Roosevelt Hospital in New York mentioned that “If we think of BMI being a rough measure of body fatness, there are people — especially some highly trained athletes — who are overweight but not overfat. Likewise, there are people who are of a normal weight according to BMI scales but who are overfat. BMI is a broad, general measure of risk. Body-fat assessment is much more specific to your actual fat content and thus provides a more accurate picture” (Casey, 2006). Since the referring health professional did not have access to the participant’s body fat percentage, the researcher required the participant to have skin fold measurements taken at Grand Valley
State University's Wellness Center in Allendale, MI. The participant was reimbursed by the researcher for the Wellness Service fee as well as for travel expenses.

After the referred individual was found to meet all criteria for this study, the researcher set up a time to further discuss the study with her. As Seidman (1991) states, "a contact visit before the actual interview aids in selecting participants and helps build a foundation for the interview relationship. A contact visit may also convince an interviewer that a good interviewing relationship with a potential participant may not be likely to develop" (p.37). In addition to getting a feel of the participant’s work environment, the researcher was able to attend to the interest level of the potential participant during the contact visit. The contact visit was also a convenient time to go over the consent form. This way, the participant was not overwhelmed or surprised when the form is presented for signing. A copy of the consent form is provided in Appendix F.

Once the participant was selected for the study, the researcher made telephone contact with the individual to confirm study participation. A date and time was then scheduled to begin the assessment battery at the person’s work environment. Once the meeting began, the researcher verbalized the details of the study and ensured that the consent form was understood and signed. Since the case study involved a total of three weeks of commitment, it was important to inform the selected participant of the commitment required throughout the course of this study. However, if the selected participant withdrew prior to completion of the study, all confidential information would be destroyed, and a second participant would be chosen using the same methods. In addition, confidentiality was ensured as both the name of the participant and the facility
in which the participant was contacted was not used in the final paper, professional journals, and/or professional presentations. After further describing the process of the study, which included the Occupational Questionnaire (OQ), the Model of Human Occupation Screening Tool (MOHOST), and the follow-up interview, the participant began the activity configuration.

Activity configuration was accomplished by having the participant complete the Occupational Questionnaire for seven 24-hour periods. The participant documented the time of day each activity occurred, as well as her perception of competence, value, and enjoyment for the work, play, or leisure occupation. To ensure understanding of how to complete the form, the researcher practiced documenting activities that may occur in a typical day with the participant. After completing this activity configuration for the one week period, the researcher personally retrieved it from her work environment. Five days were allowed for the researcher to review the Occupational Questionnaire. Upon review of the OQ, the researcher selected one occupation from each occupational therapy domain of work, leisure, and self-care. Each occupation was selected based on its perceived significance in the participant's life as indicated by the activity configuration. The selection of one occupation from each occupational therapy domain provided the researcher with a holistic picture of the occupations, habits, and routines within the participant’s life as a whole.

In order to document the most accurate information regarding the three occupations selected, probing questions were asked while completing the screening tool based on applicability to the participant within the current study. The purpose of using the MOHOST was described to the participant in addition to an explanation as to how
ratings were to be obtained via discussion. Interview questions used to complete the MOHOST are located in Appendix G. The audio taped responses led the researcher to document the most appropriate rating for each MOHOST section. Completion of the MOHOST lasted approximately two and a half hours. Following the conclusion of the MOHOST, the researcher informed the participant of the interview process that would occur five days later.

The follow-up interview was the final contact between the participant and researcher. The purpose of this interview was to uncover more in-depth information regarding the participant’s lifestyle. Appropriate questions from the Occupational Circumstances Assessment Interview and Rating Scale (OCAIRS), located in Appendix H, included in the MOHOST manual and recommended for use in the mental health setting were extrapolated to help gather data during the interview. The selected OCAIRS questions and samples of areas in which probing questions were asked are located in Appendix I. Further exploration, clarification, and detail were sought regarding the participant’s occupations, habits, and routines through the use of probing questions.

Yin (1994) considers interviews to be one of the most important sources of case study information. As the participant discussed in-depth details of her life, this interaction lasted approximately one hour. Seidman (1991) suggested ninety minutes to be the optimal amount of time to interview a person because “an hour carries with it a consciousness of a standard unit of time that can have participants “watching the clock”, while two hours seems too long to sit at one time” (Seidman, 1991, p.13). However, though the follow-up interview lasted one hour, all responses were remained valid and were examined equally. The audio taped, follow-up interview was open-ended in nature,
and involved questions of the participant that related to her experience completing the
activity configuration.

Her thoughts, discoveries, and feelings were brought forth with the hope of
uncovering influences of her daily life. The researcher sought details regarding the
participant's context, as well as the psychological, environmental, social, socioeconomic,
physical, environmental, social, socioeconomic, and physical influences/factors that play
a role in the participant's daily occupations, habits, and routines. Motivation and roles
were also acknowledged in the follow-up interview. The participant was questioned
regarding her roles as a wife, mother, supervisor, and friend. Importance of these roles
and her motivations to engage in these roles were discussed to provide further
understanding of the occupations she chooses to engage in. As the participant was asked
to propose her own insights related to her obesity, occupations, habits, and routines, she
was considered more of an “informant” rather than a respondent. “Key informants are
often critical to the success of a case study” (Yin, 1994, p. 84). Once all forms of data
were collected and transcribed accordingly, the data analysis began.

Data Analysis

This study used quantitative and qualitative data analyses in addition to the
triangulation of the multiple sources of evidence. The use of multiple sources of evidence
is considered a “major strength of case study data collection” and advantageous due to
the “development of converging lines of inquiry” (Yin, 1994, pp 91-92). In addition, “any
finding or conclusion in the case study is likely to be much more convincing and accurate
if it is based on several sources of information” (Yin, 1994, p. 92). Each source of
information was placed within a case study database, which “substantially increases the
reliability of the entire case study” (Yin, 1994). The majority of database information was in the form of notes, which were stored according to major categories. This categorization of notes allowed for optimal retrieval ability by the researcher. Modified versions of interview questions and responses were also included within the database, which can “serve as a basis for the final case study report” (Yin, 1994, p.97).

The Explanation-Building strategy was used to analyze the data. The goal of this strategy is to develop ideas for further study (Yin, 1994). A set of causal links were offered in order to explain the causes of obesity and the lack of effective obesity interventions among African-American women. Typically, “explanation-building has occurred in narrative form, and results in a better case study when the explanations have reflected some theoretically significant propositions” (Yin, 1994, pp. 110-111). As the Model of Human Occupation is largely part of this study, the explanations reflected upon were based upon this model’s major concepts. A key thought to keep in mind with the Explanation-Building strategy is that “the final explanation may not have been fully stipulated at the beginning of a study” (Yin, 1994, p. 111). Instead, as Yin (1994) recommended, the researcher examined the case study information, revised the theoretical positions, and examined the data again to form a new perspective. Limitations of using this strategy include the fact that much intelligence is required by the researcher. In addition, as Yin (1994) suggested, the researcher referenced the original purpose of the case study in order to stay on track.

This research studying the occupations, habits, and routines of an obese African-American woman incorporated the Explanation-Building strategy by identifying themes, using the Model of Human Occupation (MOHO) as a theoretical basis, checking
assumptions, and comparing the findings with concepts from the MOHO as well as the literature. The themes that were identified involved the occupations, habits, and routines that appear to consume most of the obese participant’s time. As the MOHO focuses on the combination of volition, habituation, and performance capacity when addressing interventions based on client’s needs, the initial theoretical assumption was that the occupations, habits, and routines of this African-American woman are important contributing factors to her obesity. This assumption was checked, and the study’s findings were compared with the concepts of the MOHO in addition to the information within the literature regarding what is considered healthy.

Computer programs for data analysis included the use of SPSS and Excel programs for quantitative data analysis. The NUDIST program was originally going to be used for qualitative data analysis; however, a note card system was decided upon instead due to increased familiarity. A Microsoft Excel and SPSS spreadsheet was then set up to organize the responses of the Occupational Questionnaire and the MOHOST. Categories within the Excel and SPSS data files included habituation patterns, activity intensities among domains, volition, and performance capacity as gathered from the Occupational Questionnaire, as well as differences in MOHOST ratings among domains. All data entries were saved on a disk in addition to the computer’s hard drive. Following the completion of the data entries into the spreadsheets, the SPSS and Excel programs were instructed to gather appropriate data sets. Once data sets were retrieved, SPSS and Excel were instructed to run descriptive statistics, graphs, and charts. These results were analyzed in conjunction with the qualitative data analysis.
The case study resulted in nominal, ordinal, interval and ratio data, in addition to verbal and written descriptive data that were transcribed and analyzed. Types of data analysis conducted included measures of central tendency (mean, median, and mode), frequencies of responses, and frequency distributions as displayed in grouped bar graphs. Measures of central tendency were used to understand the average number of times a certain letter rating was used in each category of the MOHOST. The grouped bar graph provided a visual of the different occupational participation ratings among the various categories and subcategories within the screening tool. Findings from the Occupational Questionnaire were also displayed using grouped bar graphs and pie charts to help visualize recurring occupations, habits, and routines within the participant’s daily life.

In addition to the qualitative analysis through the use of a note card system, the transcribed qualitative data from the OQ and follow-up interview were analyzed by the researcher to form common themes of occupations, habits, and routines. Once themes were formed, results of the data analysis were documented. The participant was then contacted to set up a time to discuss the study results as they relate to her occupations, habits, and routines as compared to those considered within the literature to be common of a healthy lifestyle.

Limitations

A major limitation involving any case study is the inability to generalize to the larger population of obese African-American women. The willingness of the participant to share personal lifestyle information may also be limited based on her comfort level, thus possibly narrowing the information gathered regarding occupations, habits, and routines. Truthfulness on the part of the participant may have also been inaccurate and/or
unreliable for a variety of reasons, such as trying to appear more active or healthy than she is in actuality. Additionally, the researcher’s presence or voice inflection may unknowingly steer the participant into making a certain response, thus affecting quality and accuracy of responses.

In addition, it is important to recognize that obesity results from a multiplicity of factors that may vary in each person’s life. The results of this study may be significant and relate to many obese African-American women, but additional factors may also influence obesity in others. Since limitations may affect the results of the study, it is essential that they be considered when reviewing the study’s findings.
RESULTS

Techniques of Data Analysis

In order to answer the question “In what ways do the occupations, habits, and routines of an African-American woman contribute to her obesity?” data was obtained through three sources; the Occupational Questionnaire, the MOHOST completed in an interview format, and a final interview. The SPSS and Excel computer software were utilized in order to organize and graph quantitative information depicted from the Occupational Questionnaire and MOHOST as related to the focus of this study. The researcher made use of Grand Valley State University’s Statistical Consulting Center for assistance with quantitative data analysis. Charts and graphs were formed comparing the activity levels engaged in by the participant on typical workdays and weekend days, motivation for occupation, pattern of occupation, and process skills. Furthermore, qualitative data obtained from the Occupational Questionnaire and final interview was analyzed by means of the note card system which also assisted with formation of the literature review of this study.

Characteristics of Participant

The selected participant was a 35-year-old woman of African-American ethnicity with a body fat percentage of 35.7%. She engaged in a supervisory position in her full-time career and was of middle-class status, married, and has two children, ages 20 and 14, as well as an 8-month-old grandchild. One dependent child continues to live with her, as does her grandson who typically stays with her four nights per week. The participant has normal tone and musculature, and is free of depression, diabetes, and other metabolic
disorders. Furthermore, she is currently engaging in one college course per semester as she pursues her Master’s degree in Human Resources.

A unique picture of the participant was painted upon analysis of the qualitative and quantitative data obtained from the Occupational Questionnaire, MOHOST, and final interview. The participant’s work, leisure, and activities of daily living were examined from which specific topics began to emerge, including: motivation, nutrition/meal times, physical activity, leisure, roles, patterns and timing, and self-perceptions within the occupational therapy domains of work, leisure, and activities of daily living. Each of these topics interrelated with one another in regards to choosing activities, which assisted in discovering themes of occupations, habits, and routines as they related to the participant’s life. However, in order to better understand the findings of the study, a brief portrayal of the participants work, leisure, and activities of daily living will first be discussed, followed by a description of the MOHO’s relationship with the emerged topics. Next, each topic emerged upon the data analysis will be further explained. After explaining each topic, the uncovered themes among the participant’s occupations, habits, and routines as related to her obesity will be discussed.

Work.

The participant’s life within the domain of work consists of a full-time job as an insurance service manager in a company she has been with for eight years. She verbalizes enjoyment of her job, though she seeks a career with more challenge. Her job consists of one-on-one coaching with employees, meetings, telephone use, computer work, and “walking the floor” a few times a week for personal contact with employees. She
verbalized that one-on-one, face-to-face contact with employees is an aspect of her job that she enjoys and is compatible with her skills and abilities.

Leisure.

The participant’s leisure pursuits are typically engaged in with others as she reports to enjoy socializing. Though she mentioned a desire to have more hobbies, her current leisure activities consist of shopping at the mall, family time, visiting friends, watching television (minimally), and smoking (about one pack/day). Most leisure activities are engaged in on the weekend versus during the workweek.

Activities of daily living.

The activities of daily living in which the participant commonly engages include child care, meal preparation, getting ready for work, driving, eating, errands, and household chores. Child care consists of caring for her fourteen-year-old daughter and 8-month-old grandchild. She does not consider herself to be a high-maintenance woman in regards to self-care, therefore, does not require extensive time to prepare for the day.

Model of Human Occupation

Based on the Model of Human Occupations, the researcher speculated that the participant’s occupations, habits, and routines contribute to her obesity. Furthermore, motivation was indeed observed to be an important component among each of the participant’s chosen occupations. Additionally, the MOHO’s habituation component was incorporated within the study’s findings as the participant’s daily occupations, habits and routines were observed to contradict actions and behaviors considered healthy within the literature. Lastly, upon analyzing the OQ, the participant considered herself to perform 81% of occupations well or very well, 17% about average, and only 2% poorly. Thus, the
participant tends to engage in occupations that she believes she performs well versus those she does not. Provided this insight, the participant’s performance capacity appears to influence her motivation to engage in certain activities, which in turn affects her daily occupations, habits, and routines.

_Emerged Topics_

_Motivation._

Motivation, whether internal or external, is necessary in order to engage in any occupation. However, some occupations are more motivating to some than others. Motivation was one topic that emerged upon analyzing the study’s data whose influence on occupations within the domains of work, leisure, and activities of daily living (ADL), was extremely evident. Upon analyzing the MOHOST, a noticeable difference in the category of ‘Motivation’ was observed among domains. As portrayed on Figure 1.1, the selected ADL activity of meal preparation scored significantly lower in regards to her facilitation of this occupation as compared to the selected work and leisure activities. Thus, according to the “allows occupational participation” rating in which she scored in the subcategories of “expectation of success”, “interest”, and “choices”, there is hope for improving her choices when preparing meals, she may need more encouragement to consistently make healthier choices when preparing meals, she has some interest in improving nutrition despite her inaction, and she is only somewhat satisfied with her engagement in meal preparation. Additionally, she may be slightly impulsive, attaches some importance to chosen occupations and lifestyle, and she appears to be holding certain values in order to please others. In order to gain understanding of her motivation
 among domains, examples of her motivation within work, leisure, and activities of daily living will be briefly discussed.

Figure 1.1- Motivation for Occupation

Motivation at work.

The following example describes the participant’s motivation to achieve her goals at work, and portrays the drive she has towards actions/tasks she views as important. As the participant stated regarding a conversation with her boss, “I told her I’m going to make my goal. I’m going to exceed it. I’ve been promoted to manager, I should accept more responsibility. I should lead by example, so that’s what I’m doing” (personal communication, March 5, 2007). The participant is driven and committed towards her career goals as this is of importance to her.

Motivation during leisure.

In addition, motivational influences affect the chosen leisure activities that the participant engages in, whether considered healthy or unhealthy. For instance, though
smoking is not considered a healthy activity, the participant enjoys this activity and
smokes one pack per day because of this. She openly acknowledges that smoking is not
healthy for her or for her family, yet she continues to engage in this act because her
motivation of enjoying it outweighs her motivation to quit, at this point in time.

Motivation during activities of daily living.

Furthermore, the participant considered her education as an activity of daily living
(ADL). Motivation during this ADL emerged as the participant continued to strive to
further her schooling despite many setbacks. “Being a student is really, really important
to me because those are my mom’s dying words to me” (personal communication, March
10, 2007). This motivation to excel academically was a source of motivation that
ultimately guided her decisions to continue her education throughout her life.

Motivation was also influential in another daily living activity, specifically, meal
preparation. Motivation behind this act was rooted in satisfaction upon seeing the final
food presentation, pride that she is able and willing to prepare a meal after a long day of
work, and content that she is “doing the right thing for her family” (personal
communication, March 5, 2007). On the other hand, because a typical dinner time is
between 7:00 and 10:30pm, a sense of guilt is felt by the participant while preparing
meals because of the fact that her daughter is eating so late. Moreover, the participant
expresses dissatisfaction with preparing meals since it is difficult to be health conscious
when cooking so late.

As the participant acknowledged the fact that eating late is not considered an
optimal meal time, she also understands exercise to be thought of as a healthy activity.
However, despite these understandings of “healthy behaviors”, she acknowledged that
she is unmotivated to engage in healthier activities. For instance, she mentioned a desire to incorporate exercise in her daily routine but has not yet acted on this. When asked why she has not incorporated this activity into her lifestyle, she stated “Lazy. There’s no excuse, there’s an exercise facility here. The motivation is not there right now” (personal communication, March 5, 2007). Therefore, though the participant readily accepts the concept of exercise as an activity suggested to be incorporated within a healthy lifestyle, her lack of motivation prevents her from acting on this knowledge. As the choices one makes on a daily basis affect one’s living of a healthy lifestyle, one must have the motivation and commitment to consistently make healthy choices for positive and healthy results to occur. Healthy choices are often viewed in terms of cooking/preparing healthy foods at appropriate meal times, which brings about the next topic that emerged from the data.

Nutrition.

As the media emphasizes certain foods and/or slogans of health to the American population, this may be the main form of nutrition-related knowledge that certain individuals obtain. Therefore, a slogan such as “Breakfast is the most important part of the day” may be the extent of nutrition knowledge, and may result in skewed understanding. When asked to provide an example of a healthy meal, the participant’s response included “baked fish, a vegetable, and salad”. When asked why she believed this to be considered a healthy meal, her response was “Just because the media says it is”. However, despite having some knowledge of what is considered important in a healthy lifestyle, the participant opts for unhealthy food choices, late meal times, tends to space meals too far apart, and does not seek healthier food choices/options.
First, unhealthy food choices are abundant in the participant's lifestyle. As limited meal planning occurs, the participant and her daughter often find themselves going out to eat during the work-week. Common foods eaten at restaurants include chicken fingers, chip and cheese, and potato skins. Moreover, each Friday night is considered "pizza night" and Saturday night is when the family goes out to eat. Furthermore, on Sundays, a big breakfast is prepared including bacon/sausage, eggs, pancakes/French toast, and possibly biscuits with rice. As the foods commonly consumed in the participant's life include fatty and fried foods, salty food such as potato chips, limited fruits and vegetables (i.e.- only consumes broccoli covered with butter and cheese), and a large amount of carbohydrates, food choices may negatively influence the participant's weight.

In addition to poor food choices, the time of day that meals are typically consumed are considered unhealthy (National Institute of Health, 2005). For instance, since the participant's husband works second shift, he often arrives home around 10:00-10:30pm. As the participant feels obligated to prepare a fresh meal for him each night, she is preparing dinner late. Though sometimes she may eat around 7:00pm without him, there are also times in which she eats dinner with him. When engaging in late meals, the participant noted that she attempts to consume smaller portions. Also, since she does not eat lunch, the average time between breakfast and dinner is between ten and twelve and half hours per day. Furthermore, she mentions her frequency of snacking between meals to be limited to three times per week, and typically consists of five or six Doritos. Additionally, though an infrequent activity, the participant noted that she has gotten up to eat in the middle of the night to have a snack though aware of the unhealthy choice while it was occurring.
Another aspect of nutrition revealed during the study is the fact that the participant has been known to taste foods throughout the process of preparing foods. For instance, when cooking foods for holiday dinners, the participant revealed that she is likely to have tasted each dish while preparing them. Thus, when it comes down to eating the actual meal, she may have already consumed a significant number of calories without realizing it. Having an awareness of hidden calories may assist the participant in modifying her consumption.

The consumption of certain foods may also be modified by planning meals ahead of time (Mayo Clinic, 2007). The study's participant mentioned that the extent of her meal planning occurs one night in advance. However, this meal planning does not occur on a regular basis, which results in going out to dinner on busy nights and/or preparing foods that are quick, easy, and typically less healthy. As planning meals tends to be a challenge for this participant, she mentioned another challenge of hers in regards to preparing healthy meals: expense.

The cost of healthy food was viewed as a barrier to preparing healthier meals. As the participant explained, "healthier foods you're going to pay two to three dollars more for it, then wonder, am I really going to like it? Or is this just going to sit in the refrigerator and go bad?" (personal communication, March 5, 2007). The drive and motivation to take risks in an attempt for healthier nutrition is lacking. This lack of motivation was also apparent in regards to her engagement in physical activity.

*Physical activity.*

Upon analyzing the completed activity configuration, each occupation engaged in per work day and per weekend day was categorized as a sedentary/very light, light
intensity, moderate intensity, or vigorous intensity activity. These occupations were
categorized based on the participant's feelings of exertion as compared with Borg's
Rating of Perceived Exertion (RPE), a copy of which is located in Appendix J. Of great
significance, as Figure 1.2 describes, is the finding that the activity level typically
engaged in by the participant on an average work day is considered 81.88%
sedentary/very light intensity, 17.92% light intensity activity, and 0.21% moderate
intensity activity. Moreover, a typical weekend day, as seen in Figure 1.3, involves
61.46% sedentary/very light intensity activity, 29.69% light intensity activity, and 8.85%
moderate intensity activity. As the participant is significantly limited in her engagement
in higher intensity activities, an adjustment in her daily occupations, habits, and routines
to engage in higher intensity activity is recommended in order to reap health benefits.

Figure 1.2- Typical Work Day Activity Levels
Furthermore, the data revealed that a lack of physical activity may be at the root of her limited energy while engaging in work, leisure, and activities of daily living. Though not a lot of energy is required while completing typical work-related tasks, the participant noted that she feels out of breathe when she has to go up and down the stairs on the rare occasion that it is necessary. However, she did state that she did not feel as out of breath when she did not smoke last year. In addition, the participant confirmed that the most physical activity that she typically engages in at work is walking to and from her car in the parking lot. Despite her intention of increasing activity, as demonstrated by parking
her car further from the building, she also admitted that she chooses to walk down the stairs and take the elevator up. Thus, her lack of motivation to choose physically active activities on a consistent basis, and the fact that she smokes, appears to have influenced her energy and endurance while at work.

In addition, time spent while engaging in leisure activities as well as activities of daily living have also resulted in fatigue and shortness of breathe. For instance, walking the mall shopping was considered by the participant to be her most physically active leisure pursuit. Though she shops about every weekend for two to three hours, she finds herself “exhausted” after walking and browsing in a large mall for a longer period of time. Another leisure activity that has resulted in fatigue has been during times in which the participant has brought her grandchild out into the community (i.e. shopping, getting pictures taken). She verbalized the extent of her exhaustion: “I almost didn't want to go to work Monday because I was so drained” (personal communication, March 5, 2007).

Though fatigue did not limit her engagement in work following a day of exhaustion, the idea that she was tempted to not go to work based on her feelings upon engaging in this activity provides evidence of how limited energy affects her daily life.

Lastly, activities of daily living such as preparing a large holiday meal have also resulted in exhaustion for this participant. The preparation of holiday meals includes getting up at early hours (i.e. 3:00 am), and cooking throughout the day. “Dinner may be done by 2:00pm. I won't even get dressed and leave the house until 7:30pm just because it's like “ahh, now I want to relax”” (personal communication, March 5, 2007). Thus, insufficient sleep in addition to limited endurance results in feelings of fatigue in all domains of her life. Whether engaging in work, leisure, or activities of daily living, the
participant experiences a degree of fatigue secondary to a variety of lifestyle choices, occupations, habits, and routines.

Leisure.

A variety of leisure activities were discussed throughout the data collection portion of the study, including: shopping, spending time with family, smoking, visiting friends about one time per week, traveling (infrequent), and leisure reading (infrequent). Despite the common leisure activities engaged in, the participant noted that she would like to have more of a variety of leisure activities. While engaging in leisure pursuits, the participant pointed out that all activities are engaged in with family and/or friends. Socializing was perceived to be of great importance during leisure activities as well as other domains of her life.

Upon analyzing individual leisure pursuits, most activities are of sedentary/light intensity with the exception of shopping at the mall or bringing her grandchild into the community, which ranges from light intensity to moderate intensity activity. For example, a common leisure activity is for the participant to play with her grandchild. Since her grandchild is not mobile yet, play consists of bouncing him on her lap, floor time, reading, and/or watching television, which are all sedentary/light intensity activities. Another example revolves around the leisure activity of visiting friends. This act consists of sitting down and “catching up” on each other’s lives, which is also considered a sedentary/light intensity activity. When discussing the participant’s desire for more hobbies in her life, the concept of barriers limiting participation arose.

Barriers considered to limit the participant’s engagement in leisure activity included expense and home/family commitments. In regards to expense, the participant
emphasized the fact that there are some things that she would rather do, however, those activities cost money that she does not want to spend. Her commitment to home and family also influences her decisions to engage in leisure activities. "Sometimes I feel guilty because I'd like to go to poetry night. It’s once every other Thursday and I’ve been twice. But then sometimes I feel guilty because I get off at 5:00pm and it starts at 7:00pm and my daughters like “you leaving me”" (personal communication, March 10, 2007). This sense of guilt results in her attending poetry night only one time per month. Thus, attempts to fulfill all of her roles and obligations influence her engagement in certain activities.

Roles.

The participant’s life consists of numerous roles in which she attempts to fulfill on a daily basis. At work, the participant’s roles include being a supervisor, coach, counselor, a “listening ear”, and a student (as she feels she learns from her employees). She considers herself to fulfill these roles successfully due to her belief that she has strong interpersonal skills and can relate to co-workers. In addition to roles at work, motherly roles are also perceived to be significant within her life. As the participant views her motherly roles as important, she puts forth effort towards fulfilling these roles during stressful and limited times. Her roles as a wife and student also occupy her daily life, resulting in a juggling between various roles. Though she perceives herself as juggling and fulfilling each role as necessary, a noticeable gap was uncovered when considering what she does for herself, her happiness, and her health. She appears to handle all responsibilities needed to help others (i.e. help daughter with homework, cook dinner for husband at 10:00pm), but there appears to be limited times in which she spends
solely to better herself physically, emotionally, and to assist in her overall wellness. For instance, when she has activities she would like to do but is asked to help out a family member she states “It’s just a matter of do I really want to and whether I want to or not I tend to not say yes” (personal communication, March 5, 2007). This comment reflects the participant’s willingness to give up her personal time in order to fulfill the roles placed upon her by those of value to her.

**Patterns and timing.**

Limited time for the participant to engage in health-related activities may be in part due to inadequate abilities to plan, schedule, manage time and prioritize both at work and in her personal life. “I say when I get off work I’m going to cook this, but that's about as far out in advance as I'm planning” (personal communication, March 10, 2007). Upon analysis of the MOHOST, and as seen in Figure 1.4, the participant’s facilitation of participation when preparing meals was significantly lower than selected occupations within the work and leisure domains. The participant was scored as “allowing occupational participation” within the subcategories of “knowledge”, “timing”, and “organization”. Thus, the participant has been found to have some awareness of what is considered healthy, but chooses not to actively seek nutrition information and continues to prepare unhealthy foods despite the knowledge available. In addition, the participant verbalized having constant distractions while preparing meals but some ability to continue with preparation with minimal “fuss”. Furthermore, she is organized to the point of knowing where common, everyday kitchen tools are located, but is unable to locate the three healthy cookbooks she owns. Thus, improvements in the areas of knowledge, timing, and organization may assist her in facilitating healthy meal preparation.
Additionally, as documented in the activity configuration, there are times during the work week in which the participant gets out of bed in the morning to wake her daughter for school, is up for thirty minutes with her daughter before she leaves for school, then returns to bed for another hour before getting ready for work. Improving skills such as planning, managing time, and scheduling may allow for more health-related activities to occur within her daily life, such as between the time she first wakes in the morning and the time in which she gets ready for work. Once an established pattern and routine has developed via scheduling, she may be more apt to reap the benefits of regular physical activity and/or health-related activities that may be occurring on a daily basis.

Self Perceptions/Perceptions of Actions.

Throughout the data analysis of this study, the participant was found to verbalize many perceptions of her self and of her daily life. On numerous occasions, her receptivity
to feedback was emphasized as a positive character trait. In addition, she viewed herself as “eager to learn, to work well under pressure, a hard worker, and an achiever” (personal communication, March 5, 2007). Other areas of her life in which she commented on multiple times included her lack of exercise and limited sleep.

Also of significance was the repeated mentioning of “human nature” when describing why the participant believed certain activities to be of importance. Great effort was found to be put towards activities/tasks of value to her, such as diversity boards, helping others, and fulfilling motherly, wifely, student, and supervisory roles. Furthermore, analysis of data found that external and/or physical characteristics were never mentioned to be of importance in any domain of her life. Rather, she appears to focus on and value intrinsic rewards versus extrinsic rewards in all aspects of her life. For example, she stated that she “values the job she performs more than the money she makes” (personal communication, March 5, 2007). Thus, the intrinsic reward of knowing she is performing her job well and helping others learn and grow within their careers outweighs the extrinsic motivation of money.

Another example which portrays areas of value in the participant’s life involves the use of her office space. As this space is an area in which she spends most of her time during the work week, she described it by stating “I keep neat little piles. And then I have a whole shelf of pictures of my family members. Then I have another whole shelf full of all of my certificates for different accomplishments” (personal communication, March 5, 2007). By delegating two shelves solely to family pictures and academic/career accomplishments, it is perceived that she is one to take pride in her family and strive on her accomplishments. In congruence with the findings upon analysis of the activity
configuration, she appears to engage in activities she believes she does well, are important, and activities that she enjoys. In fact, only 3% of documented activities within the week long activity configuration were those she disliked. Thus, when attempting to integrate health-related activities into her occupations, habits, and routines, consideration of activities incorporating intrinsic motivation and areas of value in her life, such as family and friends, may be essential.

Lastly, upon analyzing the qualitative data, the participant was found to perceive herself as someone who never sits down during the day. “I should be skinny for as much as I’m pacing around the house or around the malls” (personal communication, March 5, 2007). Yet, when analyzing the data in terms of activity levels exerted on a typical work day and weekend day, the results provide evidence towards a lack of physically active occupational engagement. Thus, the participant may be busy going from one task to another, yet these tasks do not require her to exert significant amounts of energy to successfully engage in them. Therefore, the actual energy being exerted each day is less than the participant perceives. An accurate understanding of the energy required for daily activities may assist the participant towards a healthier lifestyle by choosing physically active, social, and meaningful occupations, habits, and routines in her everyday life.

Overall, the topics that emerged upon data analysis included motivation, nutrition, physical activity, leisure, roles, patterns and timing, and self perceptions/perceptions of actions. Further examination of these topics allowed themes of occupations, habits, and routines to be uncovered as they relate to the participant’s obesity. These themes are further discussed and addressed in the following section.
DISCUSSION AND CONCLUSIONS

Discussion of Findings

The researcher of this study attempted to answer the question "In what ways do the occupations, habits, and routines of an African-American woman contribute to her obesity?". Upon data analysis, three themes were discovered and included: physical inactivity, nutrition, and motivation. Each theme will be discussed as it relates to her obesity and daily occupations, habits, and routines.

Themes

Theme 1: Physical inactivity.

As evidenced by the quantitative data obtained from the Occupational Questionnaire and interviews, a lack of physical activity by the participant is evident. "I just don't sit down literally. I'm like, I really have to sit back and think "what did I do for five hours after I got home and I never sat down?"" (personal communication, March 5, 2007). Though the participant is able to verbalize and document numerous activities in which she engages in daily, the activities typically engaged in do not require significant amounts of energy. As previously mentioned, the NIH recommends adults to engage in "thirty minutes or more of moderate intensity physical activity per day" in order to obtain health-related benefits (Summerfield, 1998, p. 3). Therefore, as a typical work day for this participant consists of 81.88% of sedentary/very light activity, 17.92% of light activity, and 0.21% of moderate activity, and as a typical weekend day consists of only slightly more physical activity, the amount of activity this participant engages in is insufficient for obtaining health-related benefits according to the National Institute of Health's recommendations.
Theme 2: Nutrition.

As mentioned previously, the foods that obese African-Americans typically consume and/or cook are often considered to be plentiful and unhealthy. This case has proven to support this statement as typical foods consumed by this participant include chicken fingers, chip and cheese, cheeseburgers, French fries, fried chicken, and catfish. Additionally, the participant commented that she usually prepares a plentiful breakfast on the weekends. “I typically make bacon or sausage, eggs and French toast and/or pancakes. But if I do biscuits, I do rice too. So it’s really weird. I only do pancakes if it’s pancakes or French toast, but if it’s biscuits I do rice too” (personal communication, March 5, 2007).

Food choices commonly consist of those high in fat, cholesterol, salt, and carbohydrates. Moreover, consumption of fruits and vegetables are limited. In fact, the participant stated that “there is one vegetable that everyone likes and that vegetable is broccoli and then I smother it with butter and cheese” (personal communication, March 5, 2007). Even though the consumption of fruits, vegetables, and low fat foods is ingrained within our culture as healthy practice, the participant openly acknowledges her poor eating habits. Less commonly known is the recommendation of the National Institute of Health (2005) for individuals to eat smaller, more frequent meals around the same time each day in order to help maintain energy throughout the day and prevent overeating at meal times. Furthermore, as the Harvard Health Review (2006) summarized, 499 Massachusetts residents showed that people who ate four or more times a day were 45% less likely to be obese than those who ate three or fewer times per day. Of significance in this study was the fact that on a typical day, the participant goes an
Obesity

average of 10-12.5 hours between meals, directly contradicting what is considered a healthy nutritional practice within the literature.

Additionally, though occurring infrequently, the participant has admitted to night eating with an awareness of the poor decision while engaging in the act. A study by Andersen, Stunkard, Sorensen, Petersen, and Heitmann (2004) revealed that though night eating was not associated with later weight gain, it was suggested that getting up at night to eat may contribute to further weight gain among those already obese. Therefore, adhering to the NIH’s recommendations and the Harvard Health Review’s (2006) finding regarding consumption of smaller portions of food, more frequently throughout the day, may help reduce temptations to eat in the middle of the night, thus reducing risks of weight gain.

In addition, as the participant was not found to plan meals consistently, she admitted that she ends up grabbing breakfast on the way to work and/or going out to eat on busy weeknights. “If it's a crazy week, my daughter and I are usually getting something out to eat, and my husband just because his food would be cold, I tend to cook him something almost every night. Not healthy, but it's a meal” (personal communication, March 5, 2007). Thus, fast food restaurants are utilized as a source of cheap and convenient meals on a regular basis. The consumption of high-calorie and high-fat foods from restaurants such as these may easily act as a contributor to the participant’s obesity. Therefore, in order to adhere to what the literature suggests to be healthy and nutritious behaviors, this study’s participant needs to greatly adjust her nutritional occupations, habits and routines in regards to food choices and consumption.
Theme 3: Motivation.

Upon data analysis, a major contributor to the participant’s occupations, habits, and routines revolves around her motivation to engage in activity. Interestingly, the participant appeared to fit in with Flynn’s (1998) finding that “those who do not experience body dissatisfaction at extremely high weights may be more at risk for obesity” (p.13). As the participant stated, “I think I'm getting closer to wanting to be [motivated] just because I'm just not feeling as energetic, just as good about myself” (personal communication, March 5, 2007). This statement adds support for Fitzgibbon et al’s (2000) finding that African-American women do not report dissatisfaction with their body until they are already in the overweight range. The idea that African-American women, including the current participant, are satisfied with themselves at a heavier weight may influence their motivation to engage in physical activity or other interventions to obtain a healthy weight. A lack of motivation is acknowledged by the participant to be a primary barrier when attempting to change her occupations, habits, and routines, and is considered to be the result of her bodily satisfaction at heavier weights upon analysis of the data.

Further analysis revealed that her values also play a significant role in her motivation to engage in her daily occupations, habits, and routines. Family, friends, and education appear to be of utmost importance in her life, and she will set her needs aside in order to fulfill her roles and obligations in relation to these values. For instance, consider the two-year time period in which her daughter lived with the participant’s mother. During this time the participant stated: “Life was really crazy then because I would go over there to do her hair. I would go over after work to make sure her
homework was done. And it was like I wouldn’t get home until 9:00 at night because I just felt like I needed to spend that time with her” (personal communication, March 10, 2007). As she willingly fills her time acting for others, she significantly limits time she has to engage in her own desired activities. Nevertheless, White et al’s (2004) findings of the use of family support to elicit an increase in weight loss motivation during obesity intervention may prove to be beneficial as the participant’s family has been emphasized to have such value in her life.

Furthermore, data analysis revealed that limited motivation may be at the root of the cause during times in which the participant has chosen to engage in restful activities during periods of the day in which health-related activities could easily be incorporated (i.e. going back to bed once daughter leaves for school). The Mayo Clinic (2007) recommends scheduling a time to incorporate physical activity or health-related occupations on paper, as one would schedule any other appointment, in order to assist individuals in staying on track with the development of a healthy routine. Additionally, to overcome the barriers of having limited time and being lazy in regards to engaging in exercise regularly, the Mayo Clinic (2007) recommends the following: squeeze in a few ten-minute walks throughout the day, get up earlier, rethink rituals, set realistic expectations, and plan physical activity during times of day in which one is most energetic. However, motivation and readiness to change must be had by the participant in order for these recommendations to result in long-term health-related benefits.

Coinciding with the significance of values in regards to her motivation, the data also revealed evidence of intrinsic motivations outweighing extrinsic motivations when engaging in certain activities. Often, intrinsic rewards/motivations were detected when
engaging in activities of value to her, such as when helping a friend and/or watching her
grandchild. For instance, a sense of self-worth was expressed when the participant stated
“my role is just to make sure that my grandchild is happy and that he's just taken care of”
(personal communication, March 5, 2007). In addition, the intrinsic reward of performing
her job well was considered of more importance to the participant than the extrinsic
reward of the money she makes. Thus, when an activity revolves around someone or
something of value to the participant, she is more likely to reap intrinsic rewards, which
tend to lead her to actively engage in that occupation. As a result, motivation to improve
her health must consider her values and be intrinsically motivating in order for the
participant to engage in the occupations, habits, and routines considered “healthy” within
the literature.

Application of Practice

The themes uncovered within this case study proved to be of significance within
this participant’s obese lifestyle. The participant’s occupations, habits, and routines
within each theme were found to contradict what the findings within the literature
considered to be healthy. Therefore, adjusting her occupations, habits, and routines
within the areas of physical activity, time management, nutrition, and motivation to form
alignment with findings within the literature may prove beneficial in the quest towards
living a well life at a healthier weight. Specifically, this case study revealed that an
increase in physical activity, improvement in time management skills, improvement in
healthy food choices, portions, and times of consumption, and incorporation of intrinsic
motivation by involving values and family support is necessary to live in congruence
with the findings within the literature considered healthy. Thus, tailoring an intervention
based on the uncovered themes in this case study may provide a basis from which successful obesity intervention may occur for this individual. When considering the larger obese African American women population, tailoring an intervention towards the modification of common themes among occupations, habits, and routines related to each individual’s obese lifestyle may be the key to successful obesity interventions among this population.

Limitations

As with any study, limitations existed within the current study. Such limitations included the difficulty locating a participant, lack of generalization, and lack of interrater reliability upon interpretation of results. Finding a participant was extremely difficult for three reasons. Despite the fact that health professionals participating in the study verbalized their access to obese African-American women, difficulty arose when locating women who were married and/or maintained full-time employment. Thus, the stringent criteria resulted in a process of locating a participant that lasted six months, which was four months longer than anticipated. Secondly, upon communicating with referring health professionals via e-mail, they noted a feeling of awkwardness initiating the referral process with individuals and immediately having to point out that they were obese. Referring health professionals felt uncomfortable having to point out this observation, as he/she did not want to embarrass the individual. Thirdly, African-American cultural values may have limited interest in participating in this study. For instance, obesity among African-American women has historically been viewed as a symbol of affluence during times when food was scarce (Johnson & Broadnax, 2003). Thus, a lack of interest to participate in a study questioning their lifestyle, as it does not fit in with the
"American" image of healthy, may be due in part to their cultural belief and value system.

Additionally, this case study lacks the ability to generalize data to larger populations. As each individual has different lives, characteristics, occupations, habits, routines, and lifestyles, findings among different individuals will vary. Nonetheless, this case study provided a base of information from which future researchers can utilize and compare when studying a larger population of obese African-American women.

Furthermore, the interrater reliability upon interpretation of this study was limited as one researcher was responsible for the analysis of obtained data. Having data analyzed by more than one individual may provide additional support for findings of the study.

**Suggestions for Further Research/Modifications**

As future researchers utilize this study when developing obesity intervention studies geared towards obese African American women, a few suggestions/recommendations should be considered. First, in order to increase the generalization of findings, future research needs to incorporate a larger sample of obese African American women. Researchers may find it beneficial to obtain participants from a variety of locations, such as churches, in addition to referrals from health professionals. If health professionals are to be utilized when locating participants, use of multiple health professionals from a variety of health care sites is recommended for optimal response. Furthermore, to reduce the uncomfortable feelings associated when acknowledging each woman's obesity during the referral process, future researchers may wish to utilize a sign-up sheet approach in which individuals may refer themselves for the study if interested.
Moreover, to generalize to a variety of lifestyles among obese women, future research should involve the comparison of occupations, habits, and routines among single versus married women, those with full-time employment vs. part-time employment and unemployment, those with college education vs. those without, and mothers vs. women without children. As occupations, habits, and routines are likely to vary among women, it would be beneficial to identify common themes that emerge among the range of different lifestyles. Moreover, studying a larger and more varied sample of obese African American women will increase the ability to generalize findings towards a larger population of obese African American women. Additionally, the current study's difficulty in locating a participant who met the strict criteria would be alleviated by incorporating women with a variety of characteristics and lifestyles. By including single women, those without children, unemployed women, etc., researchers will likely access more participants in a shorter amount of time.

Furthermore, future researchers should acknowledge and clarify the participant's cultural values, beliefs, and priorities. For instance, gathering insight as to whether each participant places value in dealing with her unhealthy weight, or views her obesity as the image she believes differentiates her as an African-American woman in this country may be essential as researchers attempt to identify successful obesity interventions among this population.

In addition, to increase interrater reliability, future studies should utilize multiple researchers upon analyzing the data. This will allow for multiple interpretations of results to be combined to form common, agreed upon themes believed to contribute to the obesity of participating African American women. As obesity interventions have not
proven to be successful among this population, it is essential for further research to be conducted to tap into the needs of obese African American women.

Implications for OT

As the profession of occupational therapy emphasizes the use of occupations, habits, and routines as important foundations to building a balanced and healthy lifestyle, this study has found a potential link for occupational therapy to provide effective interventions for African American women who suffer from obesity. Focusing on lifestyle modification by integrating balance and healthy choices into the occupations, habits, and routines of obese African American women will allow occupational therapists to put their skills to practice.

Though this study is unable to be generalized to the general population of obese African American women, the findings allow occupational therapists to consider the application of the MOHO with overweight/obese clients. Occupational therapists can also incorporate the use of the MOHO by considering each client’s motivation, performance capacity, and habituation. Consideration of these concepts can assist therapists supporting healthy changes within a client’s occupations, habits, and routines, and influence the creation and utilization of community groups that may provide the support and encouragement needed to consistently engage in occupations, habits, and routines considered within the literature to be healthy.

Conclusion

As African-American women are “more at risk for obesity/overweight and related morbidities, acceptable treatments must be developed for this population” (Sbrocco, Carter, Lewis, Vaughn, Kalupa, King, Suchday, Osborn, & Cintron, 2005, p. 246). This
case study attempted to answer the question “In what ways do the occupations, habits, and routines of an African-American woman contribute to her obesity?”. Occupations, habits, and routines of an obese African-American woman were examined for the purpose of uncovering themes related to her obese lifestyle. The factors identified may open the doors for occupational therapy, as this profession emphasizes the use of occupations, habits, and routines as important foundations to building a balanced and healthy lifestyle. Furthermore, future research concerning effective interventions for obese African-American women can build on the findings of this study.

Three themes were uncovered related to the obese lifestyle of an obese African-American woman. These themes, including physical inactivity, nutrition, and motivation were compared with the findings within the literature to be considered a healthy lifestyle. Physical inactivity within each domain of the participant’s life appears to be a significant factor affecting her obesity. As more than three fourths of her typical work day and over half of a typical weekend day is spent engaging in sedentary/very light intensity activities, she is not meeting the minimum recommendations of physical activity that result in health-related benefits as reported by the NIH (Summerfield, 1998).

In addition, analysis of her nutrition yielded results conflicting with the nutritional practices considered within the literature to be healthy. Areas in need of modification include food choices, timing of meals, and meal planning. Specifically, less fattening foods and more fruits, vegetables, and complex carbohydrates need to be consumed more frequently throughout the day for improved nutrition and energy, as well as to avoid overeating at meal times (National Institute of Health, 2005).
Lastly, data analysis revealed motivation to play a key role in the participant’s chosen occupations, habits, and routines. As supported within the literature to influence engagement in health-related activities, intrinsic rewards and family support appear to be essential factors to consider when influencing her motivation to engage in certain occupations, habits, and routines (White, Martin, Newton, Walden, York-Crowe, Gordon, Ryan, & Williamson, 2004, Sharma et al., 2005).

Overall, each uncovered theme proves to be of significance within the participant’s obese lifestyle. Furthermore, findings within the literature suggest physical activity, scheduling time to engage in health-related activities, the selection, preparation, and consumption of healthy foods, and intrinsic motivation to be significant behaviors within a healthy lifestyle. However, the findings among each theme within this participant’s occupations, habits, and routines contradict what the literature considers to be “healthy”. Thus, modifying the participant’s occupations, habits, and routines to form alignment with the findings within the literature may prove crucial for effective obesity intervention for this woman. In addition, findings and themes obtained from this case study may provide insight for future researchers studying a larger sample of obese African American women with varying roles and lifestyles as they strive to uncover successful obesity interventions among obese African American women. Moreover, findings of future studies may result in upcoming roles for occupational therapists in regards to successful obesity intervention among obese African American women in the future.
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APPENDIX A

Inclusion/Exclusion Criteria
Inclusion Criteria

- Female
- African-American
- 35-50 years of age
- Percent Body Fat 32% or greater
- Married
- At least one biological child
- At least one child living at home
- Maintains full-time employment (minimum of 40 hours/week)
- Middle-Class Status
  - (Annual income between $20,000 and $75,000)
- Normal tone and musculature
- Free of depression
- No known metabolic disorders as medically documented at the time of study (with the exception of Type II diabetes)

Exclusion Criteria

- Male
- Ethnicities other than African-American
- Younger than 35 years of age
- Older than 50 years of age
- Percent body fat below 32%
- Those with a single, divorced, or widowed status
- Those with no biological children
- Those without biological children living at home
- Lower-Class Status
  - Annual income below $20,000
- Upper-Class Status
  - Annual income above $75,000
- Those with any movement/cognitive disorders
- Those with current depression (within the past one year)
- Known metabolic disorders as medically documented at the time of study (excluding Type II diabetes)
- Those who work part-time
- Stay-at-home mothers
APPENDIX B

Occupational Questionnaire
OCCUPATIONAL QUESTIONNAIRE

Developed by N. Riopè Smith with assistance from G. Kielhofer and J. Hawkins Watts (1986).

INSTRUCTIONS:
In this questionnaire you will be asked to record your usual daily activities, and to answer some questions about these activities.

PART ONE:
Please think about how you have been spending your days the past few weeks. Try to decide what you do on a usual weekday (Monday - Friday). Using the worksheet that begins below, record your activities from the time you wake up. Each row represents a half hour. For each half hour record the main activity that you would be doing during that half hour. An activity can be anything from talking to a friend, to cooking, to bathing. If you do an activity for longer than a half hour, write it down again for as long as you continue to do that activity.

PART TWO:
After you have listed your activities, answer all four of the questions for each activity by circling the number of the most appropriate answer. Notice that the questions ask you to consider whether your activities are work, daily living tasks, recreation, or rest, and to consider how well you do the activities, how important they are to you, and how much you enjoy them. In the first question, work does not necessarily mean that you are paid for the activity. Work can include productive activities that are useful to other people, like volunteering at a hospital. Daily living tasks are activities that are related to your own self care, such as housekeeping and shopping. Rest includes taking a nap and not doing anything in particular. Even if a question does not seem appropriate for some of your activities, please try to respond to each one as accurately as possible. Your answers to every question are important!


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**OCCUPATION QUESTIONNAIRE**

Developed by N. Riopel Smith with assistance from G. Keilhofner and J. Hawkins Watts (1986)

Today's date ____________________________

Name ____________________________

Age ____________________________

<table>
<thead>
<tr>
<th>TYPICAL ACTIVITIES</th>
<th>QUESTION 1</th>
<th>QUESTION 2</th>
<th>QUESTION 3</th>
<th>QUESTION 4</th>
</tr>
</thead>
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<tr>
<td></td>
<td>I consider this activity to be:</td>
<td>I think that I do this:</td>
<td>For me this activity is:</td>
<td>How much do you enjoy this activity:</td>
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<tr>
<td></td>
<td>1 - work</td>
<td>2 - daily living work</td>
<td>3 - recreation</td>
<td>4 - rest</td>
</tr>
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<td>For the half hour beginning at: 5:00 am</td>
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<td>1 2 3 4 5</td>
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## Table 2

<table>
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<th>Time</th>
<th>Q1: Consider this activity to be</th>
<th>Q2: I think that I do this</th>
<th>Q3: For me this activity is</th>
<th>Q4: How much do you enjoy the activity?</th>
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</thead>
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<td></td>
<td>1 - work</td>
<td>1 - Very well</td>
<td>1 - Extremely important</td>
<td>1 - Like it very much</td>
</tr>
<tr>
<td></td>
<td>2 - daily in my work</td>
<td>2 - Well</td>
<td>2 - Important</td>
<td>2 - Like it</td>
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<tr>
<td></td>
<td>3 - recreation</td>
<td>3 - About average</td>
<td>3 - Take it or leave it</td>
<td>3 - Neither like it nor dislike it</td>
</tr>
<tr>
<td></td>
<td>4 - Rest</td>
<td>4 - Poorly</td>
<td>4 - Rather dislike it</td>
<td>4 - Dislike it</td>
</tr>
<tr>
<td></td>
<td>5 - Total waste of time</td>
<td>5 - Very poorly</td>
<td>5 - Total waste of time</td>
<td>5 - Strongly dislike it</td>
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For the half hour beginning at

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<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
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</table>
The Occupational Questionnaire


APPENDIX C

Example of MOHOST Items
**Model of Human Occupation Screening Tool (MOHOST) Rating Form (USA English)**

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<th>Client: ____________________________</th>
<th>Assessor: ____________________________</th>
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</thead>
<tbody>
<tr>
<td>Age: _____ Date of birth: <em><strong><strong>/</strong></strong></em></td>
<td>Designation: __________________________</td>
</tr>
<tr>
<td>Gender: Male □ Female □</td>
<td>Signature: ____________________________</td>
</tr>
<tr>
<td>Identification code: ____________________________</td>
<td>Date of first contact: <em><strong><strong>/</strong></strong></em></td>
</tr>
<tr>
<td>Ethnicity: Caucasian □ African American □</td>
<td>Date of assessment: <em><strong><strong>/</strong></strong></em></td>
</tr>
<tr>
<td>Asian □ Hispanic/Latino □ Other: ____________________________</td>
<td>Treatment settings: ____________________________</td>
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<table>
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<tr>
<th>Rating Scale</th>
<th>F</th>
<th>A</th>
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</thead>
<tbody>
<tr>
<td>Facilitates occupational participation</td>
<td>Allows occupational participation</td>
<td>Inhibits occupational participation</td>
<td>Restricts occupational participation</td>
<td></td>
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</table>

### Analysis of Strengths & Limitations

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### Summary of Ratings

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<th>Motivation for Occupation</th>
<th>Pattern of Occupation &amp; Interaction Skills</th>
<th>Communication Skills</th>
<th>Process Skills</th>
<th>Motor Skills</th>
<th>Environment</th>
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</table>

104 MOHOST v.2.0

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APPENDIX D

Letter of Study Description for Health Professional
Dear Health Professional,

My name is Michelle Velting, and I am a graduate student in the Master’s Occupational Therapy program at Grand Valley State University. I am currently working on my thesis titled “Occupations, Habits, and Routines: A Case Study of an African-American Woman”. The purpose of this study is to identify occupations, habits, and routines common of an obese African-American woman that may influence her development of obesity. The research will occur over a period of four weeks. By participating in the study, the individual will be asked to complete an activity configuration for a period of one week. This will involve the documentation of her daily activities in 30-minute intervals for seven 24-hour periods. One week will take place as the activity configuration is analyzed. Next, the Model of Human Occupation Screening Tool (MOHOST) will be completed at either the participant’s home or work environment. This form will use an interview format to obtain further detail regarding three commonly performed activities. This will last approximately one hour. Finally, a follow-up interview will occur one week after completion of the MOHOST. The interview will be approximately 90 minutes in length.

Prior to study initiation, I will make telephone contact with the referred individual to discuss further questions or details of the study. Further screening will occur and the consent form will be discussed at this time. One criteria of the study is that the participant be classified as obese as determined by body fat percentage. If available, this information will need to be provided by you, the client’s health professional, after the referred client has read and signed the letter of study description. If such information is not available, the participant will be required to obtain this measurement at GVSU’s Allendale Wellness Center. Transportation from Grand Rapids to Allendale and back, which totals about 17 miles each way, was estimated with the price of gasoline at $2.85/gallon and a vehicle consuming 15 miles per gallon. When adding the $3.00 to $5.00 fee associated with the Wellness Center, the total cost of this requirement will total no more than $15.00, and will be reimbursed by the researcher’s personal funds.

I invite you, as a local health professional, to refer obese African-American women to participate in this study. When referring an individual, the following introduction may be used: “Hello, my name is __________, and as a local health professional, I have been contacted by a Grand Valley State University graduate student in the Occupational Therapy program. Her name is Michelle Velting and she is currently attempting to fulfill her thesis requirements for the program. Her thesis involves the case study of an obese African-American woman in regards to her everyday habits and routines. She had found that treatment interventions for obesity among African-American women have not been successful in comparison to other ethnic groups. Exploring the habits and routines common of one obese African-American woman may provide future researchers with findings to stem from when researching the habits and routines of a larger population of obese African-American women. Results of researching a larger population of African-American women may result in a new and successful avenue of treatment for obese women of this ethnic group. If you are interested in participating in her study, here is a description of her study (provide the “Letter of Study Description for
the referred Client”). I’ll give you a few minutes to read it over”. If an individual chooses to sign the form, you are to keep the signed form, thank the individual and explain that the researcher will be in contact with them within the week. Please call (616) 299-0735 to inform me of the signed letter, as I will then personally retrieve the signed form from your work location.

By signing this form, you agree to participate in this study by referring obese African- American women believed to be appropriate for this study. If available, you also agree, upon participant signing of the consent form, to provide medical information including the individual’s height, weight, body fat percentage, and any medically recorded diagnosis of metabolic disorders other than Type II diabetes. Furthermore, if a participant withdraws prior to study completion, you agree to refer additional individuals until one completes the study. Lastly, you agree to compare the findings of the study, with those occupations, habits, and routines considered common of a healthy lifestyle through discussion with the participant should she verbalize interest in findings.

Thank you for your interest in this study.

Sincerely,

Michelle Velting, OTS
Grand Valley State University
Master’s Occupational Therapy Program

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Place of Employment

Address
APPENDIX E

Letter of Study Description for Referred Individual
Dear Participant,

My name is Michelle Velting, and I am a graduate student in the Master’s Occupational Therapy program at Grand Valley State University. I am currently working on my thesis which involves a case study of an obese African-American woman. The purpose of this study is to identify occupations, habits, and routines common of an obese African-American woman that may influence her development of obesity. The research will occur over a period of four weeks. By participating in the study, you will be asked to complete an activity configuration for a period of one week. This will involve the documentation of your daily activities in 30-minutes intervals for seven 24-hour periods. One week will take place as the activity configuration is analyzed. Next, the Model of Human Occupation Screening Tool (MOHOST) will be completed at either your home or work environment. This form will use an interview format to obtain further detail regarding three commonly performed activities. This will last approximately one hour. Finally, a follow-up interview will occur one week after completion of the MOHOST. The interview will be approximately 90 minutes in length.

Prior to study initiation, I will make telephone contact with you to discuss further questions or details of the study. Further screening will occur and the consent form will be discussed at this time. One criteria of the study is that the participant be classified as obese as determined by body fat percentage. This information is needed from your local health professional. If such information is not available, you will be required to obtain this measurement at GVSU’s Allendale Wellness Center. Transportation from Grand Rapids to Allendale and back, which totals about 17 miles each way, was estimated with the price of gasoline at $2.85/gallon and a vehicle consuming 15 miles per gallon. When adding the $3.00 to $5.00 fee associated with the Wellness Center, the total cost of this requirement will total no more than $15.00, and will be reimbursed by the researcher’s personal funds.

By signing this form, you give permission to obtain your height, weight, and percent body fat from your health professional as well as for me, Michelle Velting to contact you for the purpose of this study.

Thank you for your interest in this study.

Sincerely,

Michelle Velting, OTS
Grand Valley State University
Master’s Occupational Therapy Program

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APPENDIX F

Copy of Consent Form
Consent Form

Dear [Name],

I, Michelle Veiling, a student in the Occupational Therapy Master’s program at Grand Valley State University, am inviting you to participate in a research study to fulfill my thesis requirements. The study is titled “Occupations, Habits, and Routines: A Case Study of an African-American Woman,” and aims to explore the occupations, habits, and routines performed by a middle-class African-American woman, and its relationship to obesity. For inclusion in the study, you must be an obese African-American woman between the ages of 35-45 years, married and never divorced, with at least one biological child and full-time employment. You will be considered of the middle-class and free of depression and metabolic disorders other than Type II diabetes.

Classification of obesity will be determined by body fat percentage as documented by your health professional. If your referring health professional does not have your body fat percentage available, you will be required to have it measured at GVSU's Allendale Wellness Center. In addition to meeting the criteria, you must be free of depression and metabolic disorders other than Type II diabetes.

This study will occur over a period of four weeks. If you decide to participate, you will be asked to complete a form showing your activities, in half-hour intervals, for one week. One week later, you will be asked to complete a second form that will further describe your weekly activities. The second form will be completed using an audiotaped interview format, and will take approximately one hour. Lastly, an audiotaped follow-up interview, lasting approximately ninety minutes, will occur one week following the completion of the second form. Both interviews will occur at your home or work environment based on your preference and convenience.

Transportation from Grand Rapids to Allendale and back, which totals about 17 miles each way, was estimated with the price of gasoline at $2.85/gallon and a vehicle consuming 15 miles per gallon. When adding the $3.00 to $5.00 fee associated with the Wellness Center, the total cost of this requirement will total no more than $15.00, and will be reimbursed by the researcher's personal funds. Furthermore, you may benefit by identifying your occupations, habits, and routines which can be compared with those of a healthy lifestyle. Upon study completion, your referring health professional will discuss and compare these findings with you if desired. In addition, findings of this study may stimulate further research of occupational therapy’s role in working with this population, and may be reported within a scientific journal.

Any information that is gathered in connection with this study will remain confidential. No identifying information will be used in professional presentations or publications based on this study. Study data will be stored in a case study database for four years beyond the minimum research data retention period of three years, at which time the data will be destroyed. By participating in this study, you agree to provide your height, weight, and percent body fat as supplied by your health care professional and confirm that you do not have any physical, mental, or metabolic disorders that would prevent you from meeting the study’s criteria. Your participation is voluntary. Your decision whether or not to participate will not affect your relationship with your local health professional or Grand Valley State University. If you decide to participate, you are free to withdraw your consent and discontinue participation at any time without penalty.

[Name]

[Date]
If you have any questions, please feel free to contact me at (616) 299-0735. You can reach Dr. Nancy Powell, Thesis committee chair, at powellna@gvsu.edu, or at (616) 331-3128. Additionally, if you have any questions about your rights as a research participant that have not been answered, feel free to contact Paul Reitemeier, the Human Resource Review Committee Chair, at (616)331-3417. You have been given a copy of this form to keep. Your signature indicates that you have read and understand the information provided above, that you willingly agree to participate. You have received a copy of this form.

Print Name

Signature

Date
APPENDIX G

MOHOST Interview Questions
MOHOST Interview Questions:
Work and “One-on-One Coaching”

MOTIVATION FOR OCCUPATION:
Appraisal of Ability:
1. How long have you worked at your current job?
2. Please explain what the term “one-on-one coaching” means in regards to your job.
3. What makes someone good at one-on-one coaching?
4. For what reasons do you believe you are good at one-on-one coaching? Please give an example.
5. What areas involved in one-on-one coaching could you improve on? Please give an example.
6. Do you believe your employees and co-workers would agree with your perceptions of your abilities of one-on-one coaching? Why or why not?
7. Do you believe being of healthier weight would enhance your abilities to perform this duty? Why or why not?

Expectation of Success:
8. How do you handle unexpected events that interfere with successfully performing/engaging in one-on-one coaching? Please give an example.
9. Do you believe that you have control over your career and future career goals? Why or why not?
10. Give an example of a risk you have taken as related to achieving career goals.
11. Name two challenges you have faced along the road to your present career.
12. In what ways have you committed yourself to your work during stressful times (i.e. stress at work, home, etc).

Interest:
13. How do you ensure taking the time for one-on-one coaching during busy weeks?
14. What do you like about one-on-one coaching?
15. What do you dislike about one-on-one coaching?
16. In addition to one-on-one coaching, what other areas of your job do you enjoy? Why?
17. What areas of your job do you dislike? Why?
18. Give an example of a time at work when you were so engaged in a task due to enjoyment, that you put off other tasks and/or stayed at work late just to complete it.
19. Describe the feeling you have when you are one-on-one coaching employees.
Choices:

20. What is your career position/title?
21. Why did you choose this career path?
22. What are your future career goals? Why?
23. State your priorities as they relate to your career development.
24. How often do you find yourself having to problem solve at work?
25. Give two examples of issues that have required you to problem solve as it relates to one-one-one coaching and/or work in general.
26. Name two challenging situations at work that you have imposed on yourself. Why did you impose this challenge?
27. Name two challenging situations at work that have been imposed on you.
28. Name two examples of activities you suggested or engaged in at work that support socially accepted values. (i.e. team building outings/courses)

PATTERN OF OCCUPATION:
Routine:

29. Explain how you organize your daily routine in order to keep work appointments and/or complete all necessary work tasks.
30. What type of method do you use to organize your daily work routine?
31. Explain how well you follow your schedule.
32. How do you ensure a productive day at work?
33. What do you do if you are unable to follow your schedule due to some unexpected event?
34. How flexible is your work routine? Why?

Adaptability:

35. How do you handle situations in which you are unable to complete all that you desired or were required at work?
36. Give an example of a time that there was an unexpected change in your schedule. What did you do to handle that?
37. Describe a time when you were disappointed with a work-related activity and/or its result.
38. Describe a time when suggestions were made regarding a change in your work routine. What did you do, say, and feel?

Roles:

39. Describe how you include co-workers in work tasks.
40. Describe how you have supported co-workers engaging in work-related tasks.
41. What are your roles at work?
42. What are your roles when involved in one-on-one coaching?
43. Describe the various obligations you have when fulfilling multiple roles.
44. What do you believe helps your ability to fulfill various work-related roles?
45. What do you believe hinders your ability to fulfill various work-related roles?
46. Describe what you would change in order to better fulfill your varied roles.
Responsibility:
47. Describe a time at work in which your act resulted in something positive for a co-worker and/or your company.
48. Describe a time at work in which your act resulted in something negative for a co-worker and/or your company.
49. Describe two situations at work in which you took the initiative to take on a certain task.
50. Describe your ability to complete designated work tasks without support.
51. Describe a time in which you sought feedback regarding your work performance.
52. How did you react to feedback provided to you regarding areas in need of improvement?

COMMUNICATION AND INTERACTION SKILLS
Non-Verbal Skills:
53. Describe an instance in which you conveyed your mood to a co-worker with non-verbal behavior.
54. Describe an instance in which your body language inaccurately conveyed your mood to a co-worker?
55. Approximately how many times have you been told by a co-worker that you look a mood other than one you are actually feeling? (i.e. you look mad, but in reality are just tired)
56. Describe the types of body language and gestures you understand yourself to exhibit often.
**Observe during interview

Conversation:
**Observe during interview

Vocal Expression:
**Observe during interview

Relationships:
57. Describe ways in which you adjust your actions/behavior to allow co-workers to be included within an activity.
58. Describe two times in which you demonstrated awareness of a co-worker’s needs.
59. What tactics or means do you use when giving constructive criticism to a co-worker in order to help them complete a task?
60. Describe one situation in which you shared with another co-worker in order to assist him/her with completing a task.
61. Describe one occasion in which you assisted a co-worker in completing a task.
PROCESS SKILLS
Knowledge:
62. Describe your ability to retain information.
63. Describe two instances in which you sought information while engaging in work
64. What tools are available for you to seek information while at work?
65. What tools do you consistently use at work in order to seek needed information?
66. Why do you choose those tools versus other options?

Timing:
67. Describe your ability to engage in a task with surrounding distractions.
68. Describe your ability to start and finish tasks completely without breaks and/or being distracted.
69. Describe a situation at work in which you had to think on the spot. Were you successful? Why or why not?
70. Describe two situations in which you had to prioritize tasks needed to be done at work.

Organization:
71. Describe the appearance and organization of your office space.
72. Do you maintain an organizational system by which you can quickly retrieve items? Explain.
73. Describe an instance in which you were unable to locate and retrieve an item at work due to misplacement. What was the result?

Problem Solving:
74. Describe an instance in which you had to make a quick decision at work.
75. What did you base your quick decision on? (i.e. objective or subjective data?)
76. Describe a time at work in which you noticed a problem may occur. What did you do to prevent the problem from occurring?

MOTOR SKILLS:
Posture & Mobility:
77. Have you experienced pain while working? If yes, please explain.
78. What do you believe is causing your pain? (if applicable)
79. What changes at work or in your daily life do you believe would reduce or prevent pain from occurring?
80. What is your understanding of proper body mechanics to prevent poor posture/back pain?

Coordination:
81. Describe your ability to use tools at work (i.e. keyboard)
82. Do you believe your ability to manipulate work-related tools helps/hinders your work performance? Why?
Strengthen & Effort:
83. Describe your ability to lift and carry objects while at work.
84. What is the most weight that you are required to lift at work?
85. Describe an instance in which your task performance has required increased time to complete because of a lack of strength.
86. What techniques have you used to compensate for limited strength while at work? (i.e. pushing, sliding, pulling objects)
87. Has there ever been a time at work in which something broke due to your inability to lift/carry the object? If so, please describe.

Energy:
88. Describe a time when you had to increase your activity level at work in order to meet a deadline.
89. Describe how you felt upon increasing your energy level. (i.e. extremely tired, out of breath, no difference)
90. On average, how long does it take you to relax after increasing your activity level at work?
91. Describe your pace when engaging in a task at work. (i.e. fast, steady, slow, fast then slower, etc)
92. On average, how often do you feel as though you’ve exerted yourself at work?
93. What have you done at work to feel exerted?

ENVIRONMENT:
Physical Space:
94. Describe the physical environment in which you work.
95. What aspects of this environment help/allow you to perform your job with ease?
96. What aspects of this environment hinder your ability to perform your job with ease?
97. Describe the areas that are available for you and co-workers to relax and recreate.
98. Do you believe certain aspects of your work’s physical environment pose safety risks to you and your co-workers? If so, please explain.
99. Describe aspects of your work’s physical environment that you would change in order to assist your work performance, productivity, and safety.

Physical Resources:
100. Do you believe the physical resources available to you at work meet your safety needs? Why or why not?
101. Describe the physical resources at work that allow you the opportunity to express yourself. (i.e. bulletin boards, etc)
102. Describe the available physical resources that assist your ability to perform your job well.
103. Describe limitations of physical resources that affect your ability to perform your job.
104. What physical resources do you desire that would enhance your job performance?
Social Groups:
105. Describe two activities in which you have socially engaged with co-workers.
106. What opportunities are available for you and co-workers to socialize?
107. Do you feel that your work performance is enhanced when socialization occurs with co-workers? Why or why not?
108. In general, describe the relationship you have with your co-workers.
109. Describe one instance in which you were able to rely on a co-worker for help.
110. Describe one instance in which you and/or a co-worker was recognized for their contributions to work.
111. If possible, in what ways would you improve the social atmosphere at work?

Occupational Demands:
112. Explain how work-related tasks match your skills and abilities.
113. Do work activities result in your satisfaction and enjoyment? Why or why not?
114. Describe the amount of challenge work-related tasks lend. (i.e. are challenges overwhelming, just right, or not challenging enough?)
115. Describe your satisfaction with the work demands posed on you.
MOHOST Interview Questions:  
Leisure- “Playing/Spending Time with Grandson”

**MOTIVATION FOR OCCUPATION:**

**Appraisal of Ability:**

116. How old is your grandson?
117. Please explain the roles of a grandmother.
118. What makes someone a good grandmother?
119. For what reasons do you believe you are a good grandmother?
120. What aspects of being a grandmother do you believe you can improve?
121. Do you believe your family members and friends would agree with your perceptions of your abilities as a grandmother? Why or why not?
122. Do you believe being of healthier weight would enhance your abilities to perform grandmotherly roles? (i.e. play) Why or why not?

**Expectation of Success:**

123. How do you handle unexpected events that interfere with successfully performing/engaging in grandmotherly roles? Please give an example.
124. Do you believe that you have control over the amount and quality of time you have with your grandson? Why or why not?
125. Describe one or two challenges you’ve faced when playing with your grandson. (i.e. fatigue, pain, lack of time)
126. Describe your feelings about being a grandmother at age 35.
127. In what ways have you committed yourself to your grandson during challenging times? (i.e. lack of time, stress, fatigue)

**Interest:**

128. How do you ensure taking the time for playing with your grandson during busy weeks?
129. What do you like about playing with your grandson?
130. What do you dislike about spending time with your grandson?
131. In addition to playing with your grandson, what other aspects of being a grandmother do you enjoy? Why?
132. What aspects of being a grandmother do you dislike? Why?
133. Give an example of a time in which you were so engrossed with playing with your grandson, that you lost complete lack of time.
134. Describe the feeling you have when you are playing with your grandson.
Choices:
135. How has becoming a mother and grandmother at early ages affected your chosen lifestyle?
136. How has becoming a grandmother at this point in your life redirected your future life plans?
137. Describe the priorities you have in regards to the actions and qualities you wish to portray as a grandmother.
138. How often do you find yourself having to problem solve while playing or spending time with your grandson? Please give two examples.
139. Describe two instances in which you initiated spending time with your grandson though you knew it would be challenging. Why did you choose this challenge?
140. Name two activities you suggested or engaged in with your grandson that socially supports accepted values. (i.e. sharing, trust, honesty, polite)

PATTERN OF OCCUPATION:
Routine:
141. Explain how you organize your daily routine in order to ensure spending time with your grandson.
142. What type of method do you use to organize your daily routine at home?
143. Explain how well you follow your schedule.
144. What do you do if you are unable to spend time with your grandson despite scheduling time with him?
145. How flexible is your home routine as it related to being able to spend time with your grandson? Please explain.

Adaptability:
146. Describe a time when you were disappointed while playing with your grandson.
147. Describe a time when suggestions were made regarding your roles/abilities as a grandmother. What did you do, say, and feel?

Roles:
148. Describe how you include others while playing with your grandson.
149. Describe how you have supported family is activities related to your grandson.
150. What are your roles as a grandmother when playing with your grandson?
151. Describe the various obligations you have when fulfilling your roles as a grandmother.
152. What do you believe helps your ability to fulfill various grandmotherly roles?
153. What do you believe hinders your ability to fulfill various grandmotherly roles?
154. Describe what you would change in order to better fulfill your varied roles as a grandmother.
Responsibility:
155. Describe a time in which your act resulted in something positive for your grandson.
156. Describe a time in which your act resulted in something negative for your grandson.
157. Describe two situations in which you took the initiative to take on a certain task/activity as a grandmother.
158. Describe your ability to complete grandmotherly tasks/activities without support.
159. Describe a time in which you sought feedback regarding your performance as a grandmother.
160. How did you react to feedback provided to you regarding areas that could be improved?

COMMUNICATION AND INTERACTION SKILLS
Non-Verbal Skills:
161. Describe an instance in which you conveyed your mood to your grandson and/or children with non-verbal behavior.
162. Describe an instance in which your body language inaccurately conveyed your mood to your child/grandchild.
163. Approximately how many times have you been told by your child or family that you look a mood other than one you are actually feeling? (i.e. you look mad, but in reality are just tired)
164. Describe the types of body language and gestures you understand yourself to exhibit often when spending time with your grandson.

Conversation:
**Observe during interview

Vocal Expression:
**Observe during interview

Relationships:
165. Describe ways in which you adjust your actions/behavior to allow your grandson to be included within an activity.
166. Describe two times in which you demonstrated awareness of your grandson’s needs.
167. What tactics or means do you use when giving constructive criticism to one of your children in order to help them complete a task?
168. Describe one occasion in which you assisted a your child/grandson in completing a task.
PROCESS SKILLS

Knowledge:
169. Describe two instances in which you sought information (re: health, moods, development, etc) while playing/spending time with your grandson.
170. What tools are available for you to seek information regarding your grandson and children?
171. What tools do you consistently use in order to seek this information?
172. Why do you choose those tools versus other options?

Timing:
173. Describe your ability to play with your grandson despite surrounding distractions.
174. Describe your ability to start and finish tasks with your grandson without breaks and/or being distracted.
175. Describe a situation while spending time with your grandson in which you had to think on the spot. Were you successful? Why or why not?
176. Describe two situations in which you had to prioritize activities/tasks while playing with your grandson.

Organization:
177. Describe the appearance and organization of the area in which you typically spend time with your grandson.
178. Do you maintain an organizational system by which you can quickly retrieve items? Explain. (i.e. toy box, food items...)
179. Describe an instance in which you were unable to locate and retrieve a toy at home due to misplacement. What was the result?

Problem Solving:
180. Describe an instance in which you had to make a quick decision while playing with your grandson.
181. What did you base your quick decision on? (i.e. objective or subjective data?)
182. Describe a time while spending time with your grandson in which you noticed a problem may occur. What did you do to prevent the problem from occurring? (ex- choking hazard, tripping hazard)

MOTOR SKILLS:

Posture & Mobility:
183. Have you experienced pain while playing with your grandson? If yes, please explain.
184. What do you believe is causing your pain? (if applicable)
185. What changes at home or in your daily life do you believe would reduce or prevent pain from occurring?
186. What techniques do you use when playing with your grandson to prevent back/neck pain from occurring?
Coordinating:  
187. Describe your ability to use tools while playing with your grandson (i.e. toys with small attachments)  
188. Do you believe your ability to manipulate play tools helps/hinders your ability to engage in play with your grandson? Why?  

Strength & Effort:  
189. Describe your ability to lift and carry objects while playing with your grandson.  
190. What is the most weight that you need to lift when playing with your grandson?  
191. Describe an instance in which your it has taken you longer to finish a playful activity because of a lack of strength/endurance.  
192. What techniques have you used to compensate for limited strength while playing with your grandson? (i.e. pushing, sliding, pulling objects)  

Energy:  
193. Describe a time when you had to increase your activity level while playing with your grandson in order to engage in another activity at a certain time.  
194. Describe how you felt upon increasing your energy level. (i.e. extremely tired, out of breath, no difference)  
195. On average, how long does it take you to relax after increasing your activity level with your grandson?  
196. Describe your pace when engaging in activities with your grandson. (i.e. fast, steady, slow, fast then slower, etc)  
197. On average, how often do you feel as though you’ve exerted yourself while playing with your grandson?  
198. What have you done with your grandson to feel exerted?  

ENVIRONMENT:  
Physical Space:  
199. Describe the physical environment in which you typically play with your grandson.  
200. What aspects of this environment help/allow you to engage with your grandson with ease?  
201. What aspects of this environment hinder your ability to engage with your grandson with ease?  
202. Describe the areas that are available for you to relax and recreate with your grandson.  
203. Do you believe certain aspects of your physical environment pose safety risks to you and your grandson? If so, please explain.  
204. Describe aspects of your physical environment that you would change in order to assist you when playing/spending time with your grandson.
Physical Resources:
205. Do you believe the physical resources available to you where you typically spend time with your grandson meet your safety needs? Why or why not?
206. Describe the physical resources that allow you the opportunity to express yourself. (i.e. clothing, gifts, etc)
207. Describe the available physical resources that assist your ability to engage in play with your grandson in a way that satisfies you.
208. Describe limitations of physical resources that affect your ability to engage in play with your grandson in a way that satisfies you.
209. What physical resources do you desire that would enhance your engagement when playing with your grandson?

Social Groups:
210. Describe two activities in which you have socially engaged with your grandson.
211. What opportunities are available for you and grandson to socialize?
212. In general, describe the relationship you have with your grandson.
213. Describe one instance in which you were able to rely on a child/husband for help.
214. Describe one instance in which you were recognized for your contributions as a grandmother.

Occupational Demands:
215. Explain how play-related activities match your skills and abilities.
216. Do leisure activities such as playing with your grandson result in your satisfaction and enjoyment? Why or why not?
217. Describe the amount of challenge leisure activities, such as playing with your grandson, lend. (i.e. are challenges overwhelming, just right, or not challenging enough?)
218. Describe your satisfaction with the leisure activities you typically engage in such as playing with your grandson and shopping.
MOHOST Interview Questions:
Daily Living Work (ADL) - “Meal Prep”

MOTIVATION FOR OCCUPATION:
Appraisal of Ability:
219. Describe when you began to prepare meals and your process of learning to prepare meals.
220. What makes someone good at preparing meals? (i.e. manage multiple food prep, taste?)
221. Do you believe you are good at preparing meals? Why or why not?
222. What areas involved in meal preparation could you improve on? Please give an example.
223. Do you believe your family and friends would agree with your perceptions of your abilities regarding preparing meals? Why or why not?
224. Do you believe your current weight and health influence what and how you prepare foods? Please explain.

Expectation of Success:
225. How do you handle unexpected events that interfere with successfully performing/engaging in food preparation? Please give an example.
226. Do you believe that you have control over what you prepare for meals? Why or why not? (i.e. likes/dislikes of family members, cost of food, etc)
227. Describe a time you attempted to prepare a new recipe that you were unsure if you and your family would enjoy.
228. Name two challenges you face when it comes to preparing healthy meals.
229. In what ways have you committed yourself to preparing healthy meals during stressful times (i.e. stress at work, home, etc).
230. Describe what you consider to be a healthy meal.
231. Why do you believe this to be healthy?

Interest:
232. How do you ensure taking the time for preparing meals during busy weeks?
233. What do you like about preparing meals?
234. What do you dislike about preparing meals?
235. In addition to preparing meals, what other aspects of everyday living do you enjoy? Why?
236. What areas of your everyday living do you dislike? Why?
237. Give an example of a time when you were enjoying preparing a meal so much, that you put off other tasks just to complete it.
238. Describe the feelings you have when you are preparing meals.
Choices:

239. Who is the primary person to prepare meals in your household?
240. Do you prefer to be the primary person to prepare meals? Why or why not?
241. State your priorities as they relate to preparing meals. (i.e. cost, health, time, etc)
242. How often do you find yourself having to problem solve while preparing meals?
243. Give two examples of issues that have required you to problem solve while preparing meals.
244. Describe a time you chose to attempt to prepare a challenging recipe.
245. Give an example of a time you supported socially accepted values by preparing foods. (i.e. make dinner for sick friend…)

PATTERN OF OCCUPATION:

Routine:

246. Explain how you organize your daily routine in order to prepare meals as desired/necessary.
247. What would you do if you were unable to complete preparing a meal due to some unexpected event?
248. How flexible is routine as far as preparing meals? Why?

Adaptability:

249. Give an example of a time that there was an unexpected change in your schedule, resulting in a lack of time to make dinner for your family. What did you do to handle that?
250. Describe a time when you were disappointed with food that you had prepared.
251. Describe a time when suggestions were made regarding ways to improve your meal preparation routine. What did you do, say, and feel?

Roles:

252. Describe how you include family and friends when preparing foods.
253. Describe how you have supported others when preparing meals/foods.
254. What are your roles as one who prepares meals for your family?
255. Describe your various obligations (things you need to think about) when engaging in meal preparation.
256. What do you believe helps your ability to fulfill roles related to preparing meals?
257. What do you believe hinders your ability to fulfill roles related to preparing meals?
258. Describe what you would change in order to better fulfill your roles as one who prepares meals.
Responsibility:
259. Describe a time when you prepared food out of kindness or in order to help a family member, friend, and/or co-worker.
260. Describe a situation in which you took the initiative to prepare food for a certain event.
261. Describe your ability to prepare meals without support.
262. Describe a time in which you sought feedback regarding food you have prepared.
263. How did you react to feedback provided to you regarding areas in need of improvement?

COMMUNICATION AND INTERACTION SKILLS
Non-Verbal Skills:
**Observe during interview

Conversation:
**Observe during interview

Vocal Expression:
**Observe during interview

Relationships:
264. Describe ways in which you adjust your actions/behavior to allow family/friends to be included within meal preparation.
265. Describe two times in which you demonstrated awareness of your family/friends needs when preparing meals.
266. Describe one situation in which you shared a recipe with another.
267. Describe one occasion in which you helped someone prepare a meal/food.

PROCESS SKILLS
Knowledge:
268. Describe two instances in which you sought information while preparing meals.
269. What tools are available for you to seek information about meal preparation? (i.e. internet for recipes, friends, etc)
270. What tools do you consistently use in order to seek needed information?
271. Why do you choose those tools versus other options?

Timing:
272. Describe your ability to prepare foods/meals with surrounding distractions.
273. Describe your ability to start and finish preparing a meal without breaks and/or being distracted.
274. Describe a situation while preparing a meal in which you had to think on the spot. Were you successful? Why or why not?
275. Describe two situations in which you had to prioritize tasks needed to be done while preparing a meal.
Organization:
276. Describe the appearance and organization of your cooking area.
277. Do you maintain an organizational system by which you can quickly retrieve items? Explain.
278. Describe an instance in which you were unable to locate and retrieve an item while preparing a meal due to misplacement. What was the result?

Problem Solving:
279. Describe a time that you noticed a problem may occur when preparing a meal. What did you do to prevent the problem from occurring?

MOTOR SKILLS:
Posture & Mobility:
280. Have you experienced pain while preparing meals? If yes, please explain.
281. What do you believe is causing your pain? (if applicable)
282. What changes in your daily life do you believe would reduce or prevent pain from occurring while preparing meals?
283. What techniques do you use in order to reduce/prevent pain while cooking?

Coordination:
284. Describe your ability to use cooking tools, (i.e. can opener)
285. Do you believe your ability to manipulate cooking-related tools helps/hinders your work performance? Why?

Strength & Effort:
286. What is the most weight that you are required to lift while preparing meals? (including bringing bought food items in house from store)
287. Describe a time when preparing a meal took longer to complete due to having decreased strength and endurance.
288. What techniques have you used to compensate for limited strength while preparing meals? (i.e. pushing, sliding, pulling objects)

Energy:
289. Describe a time when you had to increase your activity level while preparing a meal in order to complete it by a certain time.
290. Describe how you felt upon increasing your energy level. (i.e. extremely tired, out of breath, no difference)
291. Describe your pace when engaging in meal preparation. (i.e. fast, steady, slow, fast then slower, etc)
292. On average, how often do you feel as though you’ve exerted yourself when preparing foods/meals?
293. What have you done while preparing meals to feel exerted?
ENVIRONMENT:
Physical Space:
294. Describe the physical environment in which you prepare meals.
295. What aspects of this environment help/allow you to prepare meals with ease?
296. What aspects of this environment hinder your ability to prepare meals with ease?
297. Describe the areas that are available for you to relax and recreate while preparing meals.
298. Do you believe certain aspects of your kitchen’s physical environment pose safety risks to you and your family? If so, please explain.
299. Describe aspects of your kitchen’s physical environment that you would change in order to help you prepare meals more efficiently and safely.

Physical Resources:
300. Do you believe the physical resources available to you at home meet your safety needs? Why or why not?
301. Describe the available physical resources that assist your ability to prepare meals. (i.e. dishwasher, stove, oven, microwave, measuring spoons)
302. Describe limitations of physical resources that affect your ability to prepare meals as desired.
303. What physical resources do you desire that would enhance your ability to prepare meals?

Social Groups:
304. Describe two ways you have socially engaged family and friends while preparing meals/food.
305. Do you feel that prepare better meals when you are socializing with family and friends? Why or why not?
306. In general, describe the relationship you have with your family.
307. Describe one instance in which you were able to rely on a friend and/or family member for help.
308. Describe one instance in which you were recognized for your prepared food/meal.
309. If possible, in what ways would you improve the social atmosphere when preparing meals?

Occupational Demands:
310. Explain how meal preparation tasks match your skills and abilities.
311. Does preparing meals/food result in your satisfaction and enjoyment? Why or why not?
312. Describe the amount of challenge preparing meals lend. (i.e. are challenges overwhelming, just right, or not challenging enough?)
APPENDIX H

OCAIRS Questions
1. Recommended OCAIRS Questions in Mental Health Setting

**PATTERN OF OCCUPATION**

N.B. For use in questioning on current status.

*Encourage client to consider all daily activities, being sure to include self-care and activities of daily living. If the client identifies having a health maintainer (patient) role, it is to be considered as a valid role. Successful performance of the role of health maintainer requires considerable effort and may be (or become) a source of pride.*

- Describe a typical weekday (before you began treatment/this programme/were hospitalised).
- Describe a typical weekend day (before you began treatment/this programme/were hospitalised).
- Does your daily schedule let you do the things you need and want to do?
- Has your daily routine changed over the last 6 months/since your accident/since your divorce etc.—pick some pivotal event if possible? How?
- Are you satisfied with your current daily routine?
- What do you do? What are your major responsibilities? (Parent? Spouse? Worker? Student? Homemaker?)
- Do you belong to any groups?
- (For each role mentioned) How important is _____ to you? Do you enjoy _____?
- How well are you able to _____ (for each role mentioned)?
- What else do you do? What other roles do you fill?

**SKILLS: COMMUNICATION & INTERACTION SKILLS, PROCESS SKILLS, MOTOR SKILLS**

*Note: If unsure of self-report reliability, ask for examples of performance of each skill in questions.*

- Are you able to do the things you want or need to do? (If no) What limits your ability to do things?
- Are you able to concentrate, problem-solve, and make decisions to get things done?
- Do you have the physical ability to accomplish what you need and want to do?

- Are you able to overcome those limitations and barriers?
- Do you prefer to work alone or with others? How well do you work with others?

**ENVIRONMENT**

- Where do you live? (location, house, apartment?) Is it easy to get around and get things done?
- In the area where you live, are there things to do/places to go that interest you?
- Is there a place you go to on a regular basis (e.g. work, school, church, the park, the doctor’s office) Is it easy to get to from your home?
- Are there any physical barriers at _______(from above) or at home that prevent you from getting things done?
- In terms of activities you would like to participate in, places you would like to go, what if anything prevents you from doing so? (money, transportation, safety concerns, physical barriers)
- Are there resources available to help you overcome barriers to getting things done?

- Do you spend a lot of time alone? Who do you spend most of your time with?
- Who are the most important people in your life right now?
- Does what they expect from you match what you like or would like to do?
- Would you describe your (work, school, community) setting as supportive?
- Do the people or situations in your life place limits on you?
- If you need help/support, can you count on family/friends/community?

**MOTIVATION FOR OCCUPATION**

- What things in your life do you feel you do well, or are proud of?
- What are some things that have been difficult for you? How did you handle it?
- What is the biggest challenge you are currently facing?
• How successful do you think you will be over the next six months?

• Is your major occupational role such as worker, student, volunteer, caretaker something you enjoy? What about it interests or satisfies you?

• What do you like to do with your time outside of work or major occupational role?

• Do you have any other interests or hobbies?

• (For interests mentioned) How often do you _____? Are you satisfied with the amount of time you are able to spend __________?

• What do you value most in your life? (What is most important to you?)

• What are other things or ideals that you value (are important to you)?

• How important are these to you?

• Are you able to live life in ways that fit with the values you think you should have or try to live up to?

• Is there anything about your life that you feel goes against your values?

• Do you ever set goals for yourself/make plans for the future? Have you followed through on any of them?

• What goals do you have for the next week? The next month?

• What are you doing to accomplish that?

• Do you have any long-term goals (1 year, 5-10 years)?

• How will you accomplish those?
APPENDIX I

Selected OCAIRS Questions, Areas of Interview and Probing Questions
### Selected OCAIRS Questions, Areas of Interview and Probing Questions

<table>
<thead>
<tr>
<th>Areas</th>
<th>Example of a Question</th>
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</thead>
<tbody>
<tr>
<td>❖ Pattern of Occupation</td>
<td><strong>OCAIRS Questions:</strong></td>
</tr>
<tr>
<td></td>
<td>✶ Describe your typical weekday.</td>
</tr>
<tr>
<td></td>
<td>✶ Describe your typical weekend day.</td>
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<tr>
<td></td>
<td>✶ Does your daily schedule let you do the things you need and want to do? Give examples.</td>
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<tr>
<td></td>
<td>✶ Has your daily routine changed over the last six months? How?</td>
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<tr>
<td></td>
<td>✶ Are you satisfied with your current daily routine? What do you like/dislike about your routine?</td>
</tr>
<tr>
<td>❖ Roles/Responsibilities</td>
<td><strong>OCAIRS Questions:</strong></td>
</tr>
<tr>
<td></td>
<td>✶ What are your major responsibilities? (Parent, spouse, worker, student, homemaker?)</td>
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<tr>
<td></td>
<td>✶ How important to you is each role that you mentioned?</td>
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<tr>
<td></td>
<td>✶ How much do you enjoy each role that you mentioned?</td>
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<td></td>
<td>✶ How well are you able to perform each role that you mentioned?</td>
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<tr>
<td></td>
<td>✶ What else do you do? What other roles do you fill?</td>
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<tr>
<td></td>
<td>✶ How does each role influence your daily routine and choice of activity? Give examples.</td>
</tr>
<tr>
<td>❖ Diet</td>
<td>✶ How would you describe your typical morning, noon, and evening meal routine?</td>
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<tr>
<td></td>
<td>✶ Describe your eating patterns (food portions, types or food, times of day, etc)</td>
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<tr>
<td></td>
<td>✶ Describe your food/eating patterns on a typical weekday.</td>
</tr>
</tbody>
</table>
Obesity

- Describe your typical food/eating patterns on a weekend day.
- On average, how often do you go out to week during one month? When you eat out, does your eating/food intake/patterns change? If so, please describe.

❖ Home Care

- Describe the chores you do on a typical weekday.
- Describe the chores you do on a typical weekend day.
- Are you satisfied with your household chore routine? Please describe.
- How do household chores impact your leisure activities and routine? Please describe.

❖ Self-Care

- Describe your typical self-care routine when getting ready for work in the morning.
- Describe your typical self-care routine when getting ready for bed each night.
- Describe your typical self-care routine when getting ready on a weekend morning.
- Describe your typical self-care routine when getting ready for bed on the weekend. Are you satisfied with your current self-care routine? Please describe why or why not.
- How does your typical self-care routine impact your leisure activities and routine? Please describe.

❖ Work

- Please describe your typical work day.
- Describe the activity level during a typical work day.
How long do you typically work during one work shift?
• How many days or shifts do you work per week?
• Are you satisfied with your work routine?
• Describe how you feel physically and emotionally after completing work on a typical day.
• How does working impact your leisure activities and routine? Please describe.

Leisure

• Please describe your typical leisure activities and how often they occur per week.
• When you engage in leisure activity, how long is a typical bout of activity? (ex- walking- 30 minutes, a movie- 2 hours)
• Describe the leisure activities you typically engage in on a weekday.
• Describe the leisure activities you typically engage in on the weekend.
• Do you prefer to engage in leisure activities alone or with others?
• Are you satisfied with the leisure activity you engage in? Please describe why or why not.
• What barriers hinder your leisure activity? (ex- transportation, safety concern, money, time)
• Describe the physical activity level required for each leisure activity mentioned.

* Additional probing questions will be used to obtain more detail about each question as needed.
* Questions selected from the OCAIRS
APPENDIX J

Borg Rating of Perceived Exertion
Instructions for Borg Rating of Perceived Exertion (RPE) Scale

While doing physical activity, we want you to rate your perception of exertion. This feeling should reflect how heavy and strenuous the exercise feels to you, combining all sensations and feelings of physical stress, effort, and fatigue. Do not concern yourself with any one factor such as leg pain or shortness of breath, but try to focus on your total feeling of exertion.

Look at the rating scale below while you are engaging in an activity; it ranges from 6 to 20, where 6 means “no exertion at all” and 20 means “maximal exertion.” Choose the number from below that best describes your level of exertion. This will give you a good idea of the intensity level of your activity, and you can use this information to speed up or slow down your movements to reach your desired range.

Try to appraise your feeling of exertion as honestly as possible, without thinking about what the actual physical load is. Your own feeling of effort and exertion is important, not how it compares to other people’s. Look at the scales and the expressions and then give a number.

6 No exertion at all
7 Extremely light (7.5)
8
9 Very light
10
11 Light
12
13 Somewhat hard
14
15 Hard (heavy)
16
17 Very hard
18
19 Extremely hard
20 Maximal exertion

9 corresponds to “very light” exercise. For a healthy person, it is like walking slowly at his or her own pace for some minutes

13 on the scale is “somewhat hard” exercise, but it still feels OK to continue.

17 “very hard” is very strenuous. A healthy person can still go on, but he or she really has to push him- or herself. It feels very heavy, and the person is very tired.

19 on the scale is an extremely strenuous exercise level. For most people this is the most strenuous exercise they have ever experienced.
APPENDIX K

Figures
Motivation during Meal Prep ADL activity is significantly lower when compared to engaging in work and leisure activities.
Figure 1.2
Activity Levels During Typical Work Day

Cases weighted by Hours Spent in Activity

* "Sedentary" label represents sedentary/very light intensity as represented on Borg's RPE scale.
Figure 1.3
Activity levels during Typical Weekend Day

Cases weighted by Hours Spent in Activity

* "Sedentary" label represents sedentary/very light intensity as represented on Borg's RPE scale
Figure 1.4
Process Skills as Determined by MOHOST results

Knowledge, timing, and organization limit facilitation of meal prep within 'Process Skills' category.