

ASSESSING AFRICAN AMERICAN WOMEN WITH
PREEXISTING HEALTH CONDITIONS PERCEPTION
OF AQUATIC ACTIVITIES ON QUALITY OF LIFE IN
RURAL COMMUNITIES

By

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Abstract: Aquatic activities are activities that are performed in water. While there are many types of aquatic activities, many African American women do not participate. To understand why African American women do not participate in any form of aquatic activities, their perception of aquatic activities should be taken into consideration. The assessment tools used in the study were WHO-BREF, PAQ-DP, and SWLS to collect suggest if there was a correlation between the specific demographic questions and their perception of aquatic activities as all questions related to quality of life.

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CHAPTER I

INTRODUCTION

The purpose of this research study is to assess factors contributing to the perception and participation in aquatic activities by African American women in rural communities who have preexisting health conditions. This study will also focus on the perceived potential impact that aquatic activities may have on the same individuals' reported quality of life by investigating if a correlation exists between demographic information such as age, marital status, geographical location, socioeconomic status, skill level of aquatics, level of education, and health conditions often associated with African American women.

Rationale for the Study

Presently, there have not been any research studies that specifically address the perception of aquatic activities on quality of life related to African American women with preexisting medical conditions (Skinner & Thomas, 2008; Grosse, 2020). The need of a study addressing these issues is relevant because Type II diabetes and hypertension are prevalent in the African American race, especially in older African American women. Also, it has been observed that many African Americans in rural communities do not participate in any form of aquatic activity. Currently, efforts to motivate African Americans to incorporate

aquatic activities into their lifestyle have had limited success, due to the barriers of living in rural communities where access to the aquatic environment is limited. Researchers have stated that for adult learners to participate in activities, they must first see how the activity can benefit their lives (Hidi & Renninger, 2006). In general, aquatics is an under-researched field, specifically research addressing African Americans and the lack of aquatic activities (Waller & Norwood, 2011).

There is a significant lack of participation related to African American women and aquatic activities. This seems to be correlated with a significantly higher drowning rate for African American women versus other ethnicities and gender (Gilchrist & Parker, 2014). A review of literature reveals that African American women as a group hold negative attitudes toward participation in swimming (Hastings, et al., 2006). The proposed investigate will examine if a correlation exists between demographic information such as age, marital status, geographical location, socioeconomic status, skill level of aquatics, level of education, and health conditions often associated with African American women.

Hypothesis

The aim of this study is to examine African American women with preexisting health conditions perception of aquatic activities on quality of life in a rural community. The nonexperimental cross-sectional study design will collect data to assess the following hypothesis:

H₁: There is a correlation in African American women with preexisting health conditions perception of aquatic activities and reported perceived quality of life in the rural community.

H₀: There is no correlation in African American women with preexisting health conditions perception of aquatic activities and reported perceived quality of life in the rural community.

Research Questions

The following research questions were created to evaluate if there a correlation exists between demographic information and the aquatic participants' reported perception, which measures quality of life:

1. Is there a correlation between the aquatic participants' assessed perception and age?
2. Is there a correlation between the aquatic participants' assessed perception and marital status?
3. Is there correlation between the aquatic participants' assessed perception and socioeconomic status?
4. Is there a correlation between aquatic participants' assessed perception and the experience/skill level of aquatics?
5. Is there a correlation between aquatic participants' assessed perception and their level of education?

Limitations

Limitations of this study include sample size, researcher experience and bias, and participant's individuality when answering questions. The size of the study could limit the

ability to generalize the results to other African American women with preexisting health conditions.

The researchers' prior experience and bias associated with aquatic activities and RT could influence the overall approach to the study and analysis of data collected. The participant's individual backgrounds could influence the answers to survey questions, as well as the interpretation and understanding of participant responses by the researcher.

Delimitations

For this study the following delimitations are made:

1. Study participants are African American women who currently reside in rural parishes in northern Louisiana.
2. The study is conducted on African American women who currently reside in rural parishes in northern Louisiana reside in rural parishes in Louisiana that have preexisting health conditions.

Assumptions

For this study the following assumptions are made:

1. It is assumed that the participants of the study understand quality of life.
2. It is assumed that the participants of the study understand the survey questions and accurately answer the questions.
3. It is assumed that the data entered from the questionnaires are accurate.
4. It is assumed that the participants have engaged in some aquatic activity.

Definition of Terms

The following terms have been included for an enhancement of understanding of the terms which will be used throughout the study.

- **African American:** those Americans that self-report as being of African descent but born in the United States (Waller & Norwood, 2001).
- **Aquatic interventions:** water-based treatments or exercises of therapeutic intent, for relaxation, fitness, and physical rehabilitation (Brody & Geigle, 2009).
- **Perception:** the way you think about or understand someone or something (Elron, 1969). • **Barrier:** a law, rule, problem, etc., that makes something difficult or impossible (Crosby, 2017).
- **Culture:** the beliefs, customs, arts, etc., of a particular society, group, place, or time (Birukou, Blanzieri, Giorgini & Giunchiglia, 2013).
- **Diabetes (Type II):** One of the two major types of diabetes, the type in which the beta cells of the pancreas produce insulin, but the body is unable to use it effectively because the cells of the body are resistant to the action of insulin (Asa et. al., 2012).
- **Drowning:** the process of experiencing respiratory impairment from submersion/immersion in liquid (Beek, et al., 2005).
- **Ethnicity:** “Refers to shared cultural practices, perspectives, and distinctions that set apart one group of people from another. That is ethnicity is a shared cultural heritage. The most common characteristics distinguishing various ethnic groups are ancestry, a sense of history, language, religion, and forms of dress. Ethnic differences are not inherited; they are learned” (Van de Vijver, 2017, p.2).

- **Hypertension:** a systolic blood pressure (SBP) of 140 mm Hg or more, or a diastolic blood pressure (DBP) of 90 mm Hg or more, or taking antihypertensive medication (Igarashi & Nogami, 2018)
- **Leisure:** enjoyable activities that you do when you are not working (Blackshaw, 2010).
- **Quality of life:** Quality of life (QOL) can be defined as “individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns,” according to the World Health Organization (WHO, p. 1, 1997).
- **Recreational Therapy:** Therapeutic Recreation: According to the American Therapeutic Recreation Association, Recreational Therapy (RT) is a treatment that utilizes recreation and activity based interventions “to restore, remediate and rehabilitate a person’s level of functioning and independence in life activities to promote, to promote health and wellness as well as reduce or eliminate the activity limitations and restrictions to participation in life situations caused by an illness or disabling condition” (ATRA, n.d.).
- **Rural community:** relating to the country, country people or life, or agriculture (Bennett et.al. 2003).
- **Aquatics:** a sport or activity of moving in or on water (Grosse, 2009).

CHAPTER II

LITERATURE REVIEW

The purpose of the literature review is to assess African American women with preexisting health conditions perspective of aquatic activities on quality of life (QOL) in rural communities. A review of related and current research may provide evidence in support of the proposed study, and also provide insight in understanding of how African American women perceive aquatic activities and the impact that aquatic activities have on QOL based on geographical location and health conditions. Themes outlined throughout the section include aquatics, benefits of aquatics, African Americans and aquatics, barriers for African Americans, participation in swimming, benefits of aquatics through a Recreational Therapist's (RT) scope of Practice, Preexisting Health conditions in African American women, Aquatics for Hypertension and Diabetes, barriers in rural communities, theoretical framework, and instrumentation.

Aquatics

The use of the aquatic environment provides a low-impact form of a physical activity intervention on the body; because aquatics do not involve as much weight-bearing due to the buoyancy of water providing less impact on joints of the body that makes it easier to perform activities in water than on land (Broach, 2004). Individuals who perform activities in deep water without using assisted devices burn twice the

number of calories because there is a higher level of resistance when moving in deep water. The result of more resistance includes an increase of heart rate and oxygen consumption (Lloyd & Little, 2010). Individuals immersed in the water chest deep have the force of water assisting their heart, helping the rate of blood flow through the body by hydrostatic pressure. A helpful training tool for individuals to assess physical exertion is the “talk test”. During physical activity in the water, individuals should attempt to carry on a conversation. If the participant is not able to carry on a conversation the level of exertion may need to be lessened because the level intensity of physical activity is not allowing enough oxygen for breathing (Lloyd & Little, 2010).

A study involving several researchers explored the benefit of aquatic activity. Results showed that some benefits of in aquatic activity involvement include improved mood like decreased anxiety and depression (Berger & Owen, 1992; Stein & Motta, 1992; Weiss & Jamieson, 1989). Participation in aquatic activities for individuals with disabilities are often motivated to continue the involvement in activities, improved health, and quality of life from family, friends, and social support groups. (Seligman, 2002). There are also different techniques that can be used during aquatic activities that have proven that social support is important for the enhancement of quality of life and one in particular is the Halliwick method. The Halliwick method is a form of aquatic therapy that Skinner & Thomson (2008) explain that aquatic therapy uses the properties of water for a therapeutic benefit for individuals of all ages. The article illustrates how individuals with disabilities can maximize the benefit of water activities to encourage participation and social interaction. The article discusses the Halliwick method by James McMillian that focus on ability rather than disability through the 10-point program.

Results from the study show that the benefits of aquatic therapy as an intervention with use of the Halliwick method increased function of cardiovascular, respiratory, immune systems, greater mobility, increased muscle strength, stretching, and pain relief.

African Americans and Aquatics

Participation in aquatic activities requires water competency skills to minimize many risks like drowning (Quan et al., 2015). Unfortunately, many African American individuals do not possess water competency skills supporting the prejudiced phrase that “African Americans do not swim” (Whitley & Kite, 2006). Studies support that leisure activities, including swimming, are part of the cultural capital reproduced and transmitted through families, schools, and other social aspects. This statement implies that if African Americans utilize swimming or other aquatic activities, as a part of the African American culture; aquatic participation will increase for generations (Stodolska, 2014; Ito, 2014). Further research analysis find that African American culture and the selected leisure activities are chosen based on socioeconomic background of African Americans families and their living environment (Firebaugh & Acciai, 2016). A study explored the association between social support and high blood pressure was studied in a random sample of adults in a rural community in North Carolina. Instrumental and emotional were measured and evaluated between African Americans and Caucasians. Results showed that African Americans were more likely to have low levels of both kinds of social support associated with hypertension. The findings are also consistent with cultural sociology and hypertension-related mortality (Strogat & James, 1986). The findings of this study sparked the interest of how preexisting health conditions and social support is important for quality of life in the proposed study.

A study by Irwin (2009) attributed a contributing factor to the lower participation rate in aquatics for African Americans to fear drowning. Irwin piloted the study in six metropolitan cities in the United States, with participants representing lower-income areas. A key finding was the high correlation between demographics and fear regarding aquatics. Out of the three ethnicities represented in the study, Caucasians had the lowest fear, while Hispanics and African Americans had a higher fear of drowning while participating in aquatic interventions (Irwin, 2009).

According to statistics from the Center for Disease Control (2019), African American females have the lowest drowning rate. According to Irwin et al. (2009), the lower drowning rate of African American women is linked to lower aquatic participation. Even though African American females have a low drowning rate, they also have a limited level of participation, the perception and knowledge of aquatics environment (Amodio et al., 2012). A study by Saluja et al (2006) found that while African American females had a relatively low level of reported drownings, concluding that emphasizing the need of addressing the overall drowning rate of African American individuals is essential.

The representation of African Americans in the world of aquatics is scarce, with "USA

Swimming ... reports more than 80% of White Americans and less than 2% of African Americans are involved in swimming programs" (Mogharabi, 2005 p. 20). The lack of interest of minorities in swimming and the percentage of minorities drowning implies that the interest, willingness, cultural and other factors to participate in aquatic activities are complex. The complexities include the attitudes and values that minorities place on

aquatics and the history of mistreatment of African Americans at aquatic amenities (Goodrid, 2018). There is well documented racial segregation and social reproduction of the separation of races in the US educational system (Mogharabi, 2005). In a study by Firebaugh & Acciai (2016) many African Americans reported the reason for not participating in aquatics is related to the continue cultural segregation often self-imposed due to the lack of involved in aquatics and the lack aquatic amenities in African American communities (Firebaugh & Acciai, 2016). The information provided gives support for the proposed study because not all African American women with health condition have the same level of education, nor live in the same geographical locations. An individual's level of education and geographical locations can impact their perception of aquatic activities on quality of life

Barriers for African Americans

Cultural differences of African Americans can add to the explanation of the lack of interest in swimming by the African American community (Irwin, 2009). The fear of water can often be related to the generational fear of the water being passed to current generations of

African American children by their parents or caregivers (National Academies of Sciences, Engineering, & Medicine, 2016). Researchers identified cultural issues like aquatic attire, body exposure, and religion in a two-phase study commissioned by USA swimming (Irwin, 2009; Green, 2014). In a 2010 follow-up study commissioned by USA Swimming, water fear was a predictor of limited to no swimming ability (Green, 2014). Skill level of aquatics is important to link to the proposed study because individual's who perceive themselves as a strong swimmer would not fear water like an

individual who is a beginner with a small skill set of aquatics. There was a distinct difference between African American respondents and their Caucasian counterparts regarding fear of water, with Caucasian respondents reporting less fear of water. In addition to fear of water as a barrier, most African American parents reported fear of enrolling their child in swim instructional lessons that could be linked to other fear of water (Green, 2014).

A second area identified as a unique feature within the African American culture is the strong sense of familial support (Green, 2014). Maintaining the expectations given to individuals by family members is important in the African American community (Wankel, 1993). Family can influence the behavior and participation of an individual. Findings show a positive correlation between parent influence and the level of physical activity of other family members (Edwardson & Gorely, 2010; Gustafson & Rhodes, 2006; Pugliese & Tinsley, 2007; Voss & Sandercock, 2013). Family members influence the physical activity levels of other family members by engaging in physical activity (modeling from Social Cognitive Theory), encouraging family members to be physically active, and providing support, such as transportation to physical activity settings (Edwardson & Gorely, 2010; Bandura, 2001). Family can also negatively influence a family member's participation level of physical activity by discouraging or preventing them from participating in physical activities (Boufous et al., 2004; Telford et al., 2012). Boufous et al. (2004) found that more than 25% of parents discouraged participation in aquatics or other physical activities due to concerns about injury or safety. Telford et al. (2012) found a negative association between parents' perceived risk of harm to their children and the amount of time their children were moderately physically

active. Results found that parents who had a fear of drowning did not encourage aquatic participation in children. (Boufous et al., 2004; Telford et al., 2012). This study is important to understand because when a person's perception is taken into consideration, loved ones can impact how an individual think especially when age is a factor. The proposed study explores how important another individual's opinion influences their own perceptions of an event or activity.

Participation in Aquatics

Most Americans cannot swim (American Red Cross, 2018). According to a study by the CDC, 62% of African Americans and 47% of Hispanics are less likely to know how to swim (CDC, 2010; Gilchrist et al., 2000). The American Red Cross (2018) conducted a national survey, which found that over half of all Americans (54%) cannot swim (American Red Cross, 2018; Quan et al., 2015). The survey also found that 62% of African Americans had limited to no swimming ability. The disparity between African Americans and Caucasians is suggested because of the lack of swimming competencies and the high drowning rates in African Americans for most age groups (Quan et al., 2015).

A study was conducted to explore if there was a factor contributed to African American women not participating in aquatic activities. While a correlation has been associated with African American women not participating in aquatics because of household income, a contrast in the study did reveal a relationship between income and education concerning aquatic competencies (Myers et al., 2017). The relationship between African American women income and education will be explored to also investigate if there is a difference with their perception of aquatic activities to see if that

is why there's lack of participation. A previous study linked educational attainment resulted in a higher household income, which positively correlates with increased aquatic activity (Shishehbor et al., 2008). The participants surveyed in Irwin's (2009) study revealed a relationship between income and education compared to aquatic competency. As the household income and parental education levels of African Americans increased, so did the self-reported aquatic competency (Irwin et al., 2008). The study also indicated that a child who lived in a low-income household was twice as likely to be classified as having low aquatic skills compared to respondents from higher-income households (Irwin et al., 2008)

African American and Hispanic respondents classified in the low-income category were more likely to fear drowning (Irwin et al., 2008). These respondents were also less likely to agree with the statement, "I have a parent/guardian that encourages me to swim Irwin et al., 2008, p.41." Whereas the respondents who had a higher income household were more inclined to agree with the statement, "I have a parent/guardian that encourages me to swim Irwin et al., 2008, p.42" and "a majority of my family members can swim." Lastly, the fear of drowning decreased with this higher household classified income group (Irwin et al., 2008, p.43).

In contrast, the less involved an African American parent was in the child's physical activity, the less likely the child was to participate in swimming (Rhodes & Lim, 2017). Due to parental support, discouraging their child in swimming, the child is more likely to be deemed an "at-risk" swimmer. One study that focuses on the parental educational knowledge and skill of aquatics contributes to a continuous cycle of lack of engagement in aquatic

activities. Conclusion states that along with the lack of a parent's knowledge of swimming and skill level of aquatics; pool facilities in the surrounding vicinity (i.e., neighborhood), and a lack of positive support results in children being less likely to participate in swimming as an aquatic activity, and less likely to be enrolled in formal swim lessons. Another correlation found in the study was that if a parent/caregiver did not know available swimming facilities, they likely perceived their child to have little or no swimming ability (Ryan et al., 2011).

Preexisting Health Condition in African American Women: Hypertension

More than 40 percent of non-Hispanic African American men and women have hypertension (Douglas, 2003). Hypertension in African Americans is the highest in the United States (Douglas, 2003). The CDC states that of the percentage of African Americans with hypertension, 57.7% of African American women between the ages of 45-64 have hypertension in the United States, and aquatic activity was reported as a form of physical activity to decrease hypertension (CDC, 2012). The statistical information provided is important for the proposed study because one of the preexisting health conditions that will be assessed is hypertension because of its prevalence in African American women.

Hypertension or high blood pressure occurs when the force of blood flowing through the artery wall is too high (Delevatti et al., 2018). Cardiovascular disease and some of the associated risk factors, such as hypertension, diabetes, and obesity, affect African Americans more than any ethnic group (Black, 2006). Statistical reports indicate that African American women are 50 times more likely than any other ethnic group and gender to have hypertension (CDC, 2012). Therefore, reducing risk factors associated

with heart disease decreases the occurrence of other preexisting health conditions (Myers, 2003). Participation in aquatic interventions could lower the risk factors and the percentage of African American women affected by hypertension (Women & Cardiovascular Diseases: Statistics, 2009).

Aquatic exercise is an effective form of activity for preventing and controlling hypertension (Igarashi & Nogami, 2018). Participants in a study were grouped as hypertensive and non-hypertensive in an aquatic exercise program for 12 weeks. The scholars found a decrease in blood sugar levels in the hypertensive group after intervention. Even though blood sugar level was not the focus in the study, it is important for the researcher to mention because the proposed study is not only exploring hypertension but also Type II diabetes. The study shows how hypertension, aquatic activity, and blood sugar level can affect each other. In conclusion, the researchers suggest aquatic exercise programs improved anxiety levels and functional autonomy in adults with hypertension (Igarashi & Nogami, 2018; Lund et al., 2008). Even though hypertension is the focus, other sub-factors like blood sugar levels can be affected when diagnosed with hypertension. Another example is in a study intended to investigate the effect of aquatic exercise on mental health and functional autonomy in individuals with hypertension. The results showed decreased anxiety levels, as well as decreases in levels of hypertension, and the individuals reported the desire to actively participate in future aquatic activities (Lund et al., 2008).

Researchers have examined the association between social support and the prevalence of hypertension in individuals who participated in a therapeutic aquatic program. Even though medication influences multiple factors in the study, the findings

confirm that social support must be recognized as an element in the aquatic therapeutic program (Ito, 2014). The article supports the proposed study rationale that social support can influence engagement in activities can enhance quality of life. Another study explored instrumental and emotional support for African American women. The findings of the study show a high correlation between social support and participation of aquatic activities for African American individuals with hypertension that participates in aquatic activities (Strogat, 1986). In addition to finding correlations associated with hypertension, one study examines the effect of regular aquatic exercise on blood pressure. The study included healthy adults that only participated in aquatic exercise and a control group that did not exercise (Delevatti et al., 2018). It was determined there was a significant decrease in blood pressure, both systolic and diastolic, of those who participated in aquatic exercise. (Delevatti et al., 2018).

A modified lifestyle change, and regular exercise can prevent the risk of hypertension, but with individuals who have health conditions the question arises about that form of activity is better to participate in land based or water-based activities (Gupta & Guptha, 2010). Studies were conducted to determine which is more effective, land-based or aquatic-based exercise (Douris et al. 2003; Arazi et al., 2012; Miller et al., 2002). Scholars recommend that aquatic exercises benefit older adults, a study that supports this was performed to justify the importance of older adults' participation in aquatic exercises (Igarashi & Nogami, 2018). Results showed that aquatic exercises have a significant effect on older adults and blood pressure when swimming is involved as an aquatic exercise. There are many benefits to both land-based and aquatic-based exercise, but this study by Cunha et. al. (2017) wanted to find the advantages of aquatic exercise

versus land exercise. The results show that aquatic exercise provides more ability to perform exercise tasks than land exercises but exploring immediate antihypertensive benefits of acute aquatic exercise should continue in future studies.

Additional research into the relationship between exercise and older women with high blood pressure and the potential impact of aerobic exercise participation. Researchers measured blood pressure after physical activity. Results found that water exercise's immediate antihypertensive benefits compared to land-based exercise were significantly different. The conclusion indicated that older women favored water exercises because the intervention did not strain the body, which could cause other health condition or injury (Bocalini et al., 2017).

Igarashi and Nogami (2017) found similar results. The participants, which included 45 older women, were divided into three groups: those with normal blood pressure, treated high blood pressure, and untreated high blood pressure. After participating in equal amounts of landbased and water-based exercise, the results show that water-based exercise effectively reduces blood pressure and improves cardiac.

Preexisting Health Condition in African American Women: Type II Diabetes

The World Journal of Diabetes (2012) defines diabetes mellitus as a group of metabolic diseases characterized by chronic hyperglycemia resulting from defects in insulin secretion, insulin action, or both. Specially, type II diabetes impairs the function of the insulin-producing cells in the body. Type II diabetes can be caused by two interrelated problems. The first is that the body doesn't produce enough insulin to properly convert sugar into energy. The second is that cells respond poorly to insulin and take in less sugar. Type II diabetes is more common in older adults, but the increase in

the number of children with obesity has led to more cases of type II diabetes showing in younger individuals. Although type 2 diabetes can't cure itself, it can be treated through a healthy diet and exercise. If you don't have enough of these, you might require insulin therapy or medications.

Health care providers cannot stress enough the role that structured activities have on individuals with Type II diabetes (Sigal et al., 2006). A recent publication shows how any aquatics form can help stabilize diabetic level or even eliminate diabetes, particularly for Type II diabetes (Asa et al., 2012). Additionally, with the risk of injury and harm to the body and confidence level in body appearance the type of activity to participate in is subjective.

Individuals diagnosed with type II diabetes may be cautious in the type of activity that is chosen. Land-based versus aquatic-based exercises can play a factor. Individuals with significant mobility limitations due to obesity or severe deconditioning often find the pool a welcoming environment because of the ease of mobility and the decrease strain on the body. Even though aquatic exercise can be good, individuals diagnosed with diabetes, type II specifically, must be cautious when performing aquatic exercises. One caution is that individuals should always wear water shoes. Wearing protective water shoes is necessary to protect the individual's feet which may experience tears and blisters due to the finish often associated with the bottom of pools to provide traction. Many people with diabetes have neuropathy in their feet, which causes them not to feel pain when injured, resulting in injury that can lead to infection and amputation. Another caution for people with Type II diabetes is the risk of hypoglycemia (Chipkin et al., 2001). It is important to eat before exercising; their blood

sugar level could drop to levels that are too low for safety. Individuals should also replace exerted calories, or their sugar glucose level could decrease, and a snack must be available for precautionary purposes (Nuttamonwarakul et al., 2012). The information is viable for the proposed study because if the researcher understanding the reasoning behind choosing a certain form of activity, then if all precautions and safety measures are provided, their perception of engaging in aquatic activity could change.

Barriers in Rural Communities

Living in a rural community can limit an individual's participation in aquatic activity. In a rural setting, an individual can encounter barriers to reduce aquatic participation such as resources, location, and funding in the rural areas where performance at a mastery level and quality of life is lower than other geographical locations (Cousins, 1998). As identified in Bennett et al. (2003), resource allocation often an area of constraint related to living in a rural community. Resource allocations determines which areas of the city are given resources. Resources are given based on the United States census and based on the number of citizens in the area that complete the economic census in order to help the government distribute funds and assistance to states (Brown, et. al., 1999). An article written in the American Journal of Preventive Medicine identified the perceived environmental factors that hinder engagement among rural children. The study identified that the citizens perceived that physical, sociocultural, policy, and economic funding for activity programs influence physical activity patterns (Schasberger et. al., 2019). In addition to the environmental factors, a previous research study identified factors that influence a child's physical activity as neighborhood, family, and program characteristics (Holt et al., 2009). Hence the safer the community

and the more plentiful the resources were for physical activity participation (i.e., access to swimming pools). The more likely a child would engage in physical activity. Ryan et al. (2011) also found that positive family involvement was directly related to a child's physical activity. The more supportive a parent was in the child's participation in physical activity, then the more likely to participate in swimming. Constraints concerning rural communities do not only affect the United States but also internationally.

There have been various learn-to-swim programs attempting to address higher minority drowning rates in the rural community, but most of the programs have struggled. One expert believes that programs such as learn-to-swim fail to stay thriving due to African American communities' lack interest in aquatic sports altogether (Crosby, 2017). Access to aquatic facilities is often limited in a rural community (Mogharabi, 2005). A study conducted in 2011 examined parents' knowledge or lack thereof regarding facilities available to participate in aquatic activities (Ryan. Et al., 2011). The purpose of the study was to understand what barriers might be present to prevent youth minorities from participating in swimming. The minority in the study included African American males and females. The five identifiable barriers examined in the study were: availability of the nearest pool, the condition of the nearest pool, access to the nearest pool, safety with people around the pool (i.e., patrons in the pool), and the child's experience at the pool (Ryan et al., 2011). The exploration of the literature supports the researchers reasoning on why African American women have a certain perception of aquatic activities based on geographical location.

Historical Causes of Low Level of Aquatic Participation by African Americans

Concerning lack of accessibility, the pools built in the southern states, such as Texas, Georgia, and Louisiana, pools were also being constructed with intentional racial segregation between blacks and whites since integration in schools was allowed (Wiltse, 2007). While swimming pools were becoming immensely popular for their recreational and social values, racial divides began to occur at pools located in Northern states. As the construction of municipal pools experienced tremendous growth, segregation began to appear with the intentional structure of smaller swimming pools being built for segregation purposes (Wiltse, 2007).

One example of a historical barrier in the rural community is keeping public pools segregated (Wiltse, 2014). A city advocate presents the argument to the courts that even though the Supreme Court's ruling in the 1954's case of *Brown v. Board of Education*, that sanctioned laws barring African Americans from sharing public facilities and form the "separate but equal" doctrine. The doctrine suggesting that segregation should not continue to exist due to the unique recreational aspect of public facilities like swimming, everyone did not feel the same (Bell, 1980; Wiltse, 2007). As a result, the judge hearing the case agreed and declared the segregation at pools even though public schools' desegregation had taken effect. The judge stated that swimming pools were more sensitive than schools due to the visual and physical intimacy that was a by-product of public recreation pools (Bell, 1980). The decision by the judge impacted African American individuals because even with the desegregation of public schools' utilization of public entities of public recreation was restricted limiting the amount of leisure recreation for African Americans.

Another example of the differences in schools and the community environment was reported on the *Chicago Tribune's* front page (2007). The article described that Highland Park High School, a public school, has more modern pool amenities than some colleges. The differences in resources available at public schools depend on geographical location, and the type of school attended. These same differences in schools' resources are also evident in recreational resources, including aquatic amenities and programs (Roux et al., 2007). The schools and park district programs often share facilities, including gyms and swimming pools, making availability limited to rural communities (Roux et al., 2007).

Results from segregation are also in connection to generational ideas on public recreation. An article in the *Virginia Law review* stated that the older African American generation did not want their children to experience the hatred that was brought to them, and wanted their children to feel welcome; so once desegregation of public recreation in 1960, especially for the southern states like Louisiana, the older African American generation still did not participate nor wanted their children because they were still not welcomed or given privileges and the majority (McKay, 1954; Bell, 1980;Wiltse, 2007).

A study by the Leadership Council for Metropolitan Open Communities found "stark racial and economic disparities persist in the distribution of access to opportunities across the Chicago region" (Lukehart et al., 2005, p. 14–15). Quality of life factors like health, personal preference, family dynamic, and financial status were included. Results show that an individual lifestyle and community resources can be different depending on the area in which they live

(Roux et al., 2007). Factors include but are not limited to how leisure and money are utilized. Results also show that low socioeconomic status correlates to lower leisure participation. In many rural neighborhoods, swimming pools are nonexistent. The idea is centered on the lack of resources available (Rosenzweig, 1988).

The majority of the research on the impact of race on leisure participation were quantitative studies that provided statistical analysis of the differences in leisure choices. Still, quantitative studies cannot explain why one race participates in a leisure activity more than others (Barnett, 2006). The reasons for differences in leisure participation between people of different ethnicities have been unexplored. Wolch (2004) & Barnett (2006) identify differences in water-related leisure choices resulting from less participation by African Americans. These studies conclude that aquatic activities are activities that European Americans participate in more than African Americans.

Usage of Demographic Information

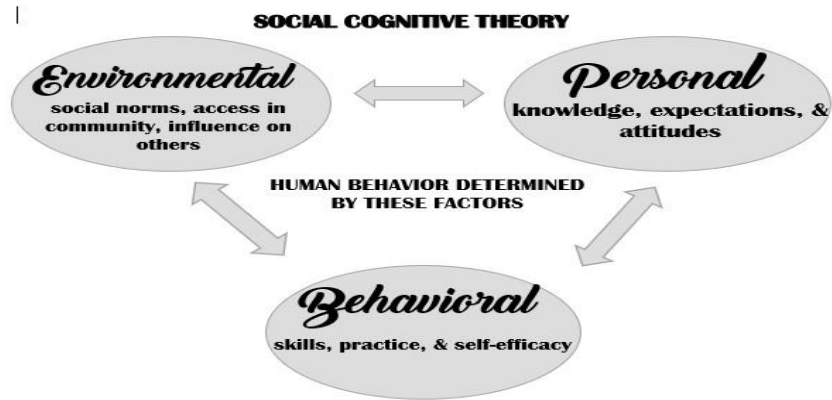
Asking questions about an individual you can gather valuable demographic information about them. This type of information can help identify and develop an understanding in order to reach them where they are in life. Demographic questionnaires are used for determining the characteristics of the participants in a study (Dandekar, 1959; Griffin & Holbert, 2001). The questionnaire collects information about individuals who are part of the general population. A demographic questionnaire is a tool that can collect various types of information about a person like age, race, gender, education, and employment. Demographic questions are important in the proposed study because it

gives the researcher subtle data to compare to the overall questionnaire to individualize each participant in the study.

Theoretical Framework: Social Cognitive Theory

Social Cognitive Theory became present in the 1970s when cognition was the primary focus more than behavior (Luszczynska & Schwarzer, 2005; Bandura, 1971). Before the extension of self-efficacy, SCT started as the social learning theory (SLT) in the 1960s (Rosenstock, Strecher, & Becker, 1988; Gibson, 2004). After exploring those individuals learning through observation, Bandura studied this idea to base behavior on experience, but learning can occur through observation and modeling of others (Bandura, 1971). In 1977, Bandura published his Social Learning Theory (SLT) impacted psychology and related healthcare fields. Scholars became aware of the importance of social modeling in human motivation and participation (Dholakia et al., 2004; Lockwood et al., 2002). Bandura demonstrated that learning by experience could be a faster way through social modeling of ability and capability.

Social modeling is not just observation of someone; it is modeling behavior to increase the pattern of participation to increase the level of competencies (Bandura, 1974). In addition to increasing competency level, social modeling affects motivation by forming behavioral outcome expectations (Bandura, 2004). Bandura fully developed his SCT of human functioning composed of three components, as shown in Figure 1 (Bandura, 2004).



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Figure 1. The Theoretical framework for Social Cognitive Theory

According to SCT, an individual's behavior can shift if they understand that they have control (Bandura, 1977). Perceived self-efficacy pertains to personal action control when people believe that they have the capability and ability to do a task, then the person will most likely complete the task. People who think they can cause events or complete tasks may model a more active and self-determined life (Doll et al., 1996). This type of assumption reflects the belief of being able to master challenging demands through adaptive action of self-efficacy (Bandura, 1977). Self-efficacy makes a difference in how people perceive things (Bandura 1977, 1997). It has been found that a strong sense of personal efficacy is related to better social inclusion (Bandura 1997, 2001; Bandura et al. 2002; Maddux 1995).

Outcome expectancies are another fundamental construct in SCT. One's behavior may initiate bodily changes, responses from others, or self-awareness (Bandura, 2001). Together with self-efficacy, these influence goal setting and goal pursuit (Bandura, 2001). SCT can be found as a resource for many health and educational agencies. SCT is

beneficial in rural communities for examining how individuals perform in their environment (Bandura, 2002). SCT explains the influence of social factors on health and how a person's experience can change behavior.

Social Cognitive Theory: Self-Efficacy.

One construct of SCT is self-efficacy (Bandura, 2006). Perceptions of self-efficacy can influence a person's participation in activities and how much effort they put into the activity if they believe they can do the exercise. Those who effectively try new activities spend more effort and persist longer (Bandura 1986, 1997). Self-efficacy has been linked to providing successful health-related outcomes. A strong level of self-efficacy suggests higher quality of life and wellbeing (Hampton, 2000). Self-efficacy has also been associated with physical endurance during exercise among individuals with health-related problems like diabetes (Hurley & Shea, 1992; Senecal, Nouwen, & White, 2000; Williams & Bond, 2002).

Bandura (1997) described five levels that influence self-efficacy: mastery experience, vicarious experience, verbal persuasion, emotional & physiological states, and imaginal experience (Bandura 1997). Still, a broader explanation has been proposed by Cervone (1997, 1999, 2000), stating that self-efficacy occurs through activities and situations where inability and capability are taken into consideration. In other words, individuals are prone to be successful in activities that show off what they can accomplish.

Social Cognitive Theory: Outcome Expectancy

A second construct is outcome expectancy (Bandura, 1986). Outcome expectancy is the idea that a person's attitude toward doing something will result in consequences, either good or bad. Still, people tend to perform behaviors that will result in a positive outcome. Consequences can be categorized as social, physical, or self-assessing (Bandura, 1977, 1986, 2001).

When discussed together, perceptions of efficacy and outcome expectancy provide a clearer understanding of SCT (Williams & Bond, 2002). The likelihood of engaging in an activity if a person's attitude towards the activity is not positive will decline, even with the presence of self-efficacy (Wise, 2002). Similarly, if a person likes the results associated with behavior by their attitude, they are unlikely to participate if they feel they do not have the skills. Although outcome expectancies can predict the performance of health behaviors (Williams & Bond, 2002), self-efficacy is studied more (Bandura, 1986, 1997; Williams & Bond, 2002). Self-efficacy can influence behavior directly by determining personal goals to choose and indirectly by motivating those around (Bandura 1997, 1998).

Social Cognitive Theory: Self-Regulation.

A third construct proposed by SCT is self-regulation (Bandura, 2006). The idea suggests that people control behavior through a personal system: (a) self-observation, (b) judgment, and (c) self-reaction (Bandura 1986, 1991). The way people perceive things can be both positive and negative. People perform at the level in which they believe can bring about the best reward. Likewise, individuals typically continue until their performances align with expectations to avoid self-doubt; therefore, perceptions of self-

efficacy affect self-regulation (Bandura 1986, 1997; Bandura & Cervone, 1983, 1986). It is thought that with activities that require compound thinking, a negative level of attitude is displayed, which in turn decreases performance and participation if the level of competency is not present (Bandura & Jourden, 1991; Cervone, Jiwani, & Wood, 1991; Cervone & Wood, 1995). Examining an individual's attitude can provide a better understanding of their perception of events. Finally, suppose people meet or exceed internal standards but would also be dissatisfied with a repeat performance. In that case, they then develop more demanding standards to reduce the risk of boredom for future participation (Bandura & Jourden, 1991; Cervone, Jiwani, & Wood, 1991; Cervone & Wood, 1995).

Utilizing Social Cognitive Theory.

One pilot study assessed SCT components to QOL to see if SCT predicts better outcomes through interventions or primary care with individuals with cancer (Graves et al., 2003). Some variables used in the intervention included: 1) knowledge about cancer, 2) having a positive attitude, 3) setting goals, and 4) participation in relaxation. The results indicated that using SCT based interventions increased overall QOL outcome variables for adult cancer patients more than primary care (Graves et al., 2003).

In support of using SCT to predict physical activity, a four-week study was done to indicate the engagement and intensity level of future physical activity of college students (Petosa et al., 2003). Three hundred and fifty college students completed a vigorous physical activity. Exercise task, self-regulation, outcome expectancy-value, social support, self-efficacy, and positive exercise were considered and accounted for 27% of variance during physical

activity. The results support that the use of SCT can be a predictor in understanding factors associated with physical activity for college students (Petosa et al., 2003).

Another study by Bandura (1998) examines how to promote healthy habits to reduce health-related diseases from an SCT perspective. The health promotion and disease prevention models and the direction to influence individuals to exhibit healthy habits have changed throughout the years (Bandura, 1998). As a RT there are also health promotion models through the scope of practice that can recover threats of health protection and achieve high levels of health promotion (Austin, 1998). RT use the Health Protection/Health Promotion model to collaborate with physician to bring about self-actualization of individuals to help enjoy, regain, or restore optimal health and wellness (Austin, 2009). Instead of explaining the bad things that can happen if better habits are not formed, a positive approach by explaining the good things that come with healthy habits. In addition, equipping individuals with the environmental resources to increase self-regulatory skills to manage their positive health habits with accountable social support align with the social cognitive components (Bandura, 1998). In the 1998 study by Bandura, SCT considers the socio-structural and personal factors of health. Results suggest that a generalized approach to health promotion requires a change in the environment and not just on the habit demonstrated by the individual (Bandura, 1998). Further progress in health promotion is needed and suggested in the study by building new health promotion facilities and a new system to ensure that technology is not a factor in reaching all populations. An individual's beliefs in shared efficacy to achieve social transformation can impact the policy and public health approach to health promotion and disease prevention (Bandura, 1998).

Gender roles are a topic that is subjective in everyday life. Bussey & Bandura (1999) utilizes SCT with gender roles to explain development and functioning. The researchers' question that gender belief is formed from the mixture of experiences and how the ideas are directly linked with motivational and self-regulatory processes to guide gender-linked perceptions throughout life. The perspective of gender and roles in the study are the outcome of a significant social impact. Results justify that people contribute to their self-development and bring about social changes that define and structure gender relationships through their actions and influence (Bussey & Bandura, 1999).

A recent article discusses motivation from the perspective of Bandura's SCT (Lloyd & Little, 2010). Motivation is defined as a personal influence that results in goal-directed outcomes by choice, effort, persistence, achievement, and environmental regulation (Schunk et al., 2014). Motivation has been a prominent feature of SCT from earlier research to current research. The article discusses the reciprocal interactions after research is summarized on behavioral, environmental, and personal influences on motivation. The study explained that motivational factors are self-evaluations of progress, self-efficacy, values, outcome expectations, attributions, and self-regulation (Schunk & DiBenedetto, 2020). Other factors can be considered for future research, such as culture, long-term effects of interventions, and technology regulation.

The SCT can be linked to the proposed study because the researcher's intent is to access African American women with preexisting health condition perception of aquatic activities on quality of life. The literature explains that an individual's influences are

based on other's actions, environmental factors on health behaviors. Given the information, the proposed study is centered around social support, instilling expectations, self-efficacy, observational and educational learning to bring behavioral change to influence perception of aquatic activities as it relates to quality of life.

Quality of Life

Quality of life is an approachable concept that can have many levels, definitions, and forms of assessment based on a researcher's subjective perspective of what quality of life includes and the range of applicable theoretical models. Quality of life can be defined "as the satisfaction of an individual's values, goals and needs through the discerning of their abilities or lifestyle" (Emerson, 1985, p. 282). This definition is consistent with the satisfaction and wellbeing that match with an individual's perception of their objective situation and their needs or aspirations (Andrews & Withey, 1976; French, Rogers, & Cobb, 1974). A study by Brajša-Žganec, Merkaš, & Šverko (2011) was conducted to explore how leisure activities and quality of life play a role in wellbeing. Results show that engagement in leisure activities contribute to subjective wellbeing and quality of life, but leisure activities vary with age and gender.

A literature review revealed there is limited research related to the African American's perspective on quality of life, but in the Journal of Black Studies an article by Blake & Darling (2000) explains the perception of quality of life for African Americans. Many African American males' report diminished quality of life is reported denied opportunities of employment which limits the ability to provide for their families (Morris, 1989). Darling and Black, (2000) report American women also report low levels of quality of life and life satisfaction related to a high rate of single-family

households. The time demands of being a single parent and often the sole provider has resulted in lower levels of reported quality of life for African American women related to limited amounts of leisure time.

Researchers with a focus on social indicators use charts to analyze the quality of life of a population (Flax, 1972; Liu, 1976; Schneider, 1976). One study explores the link between social support and the quality of life for African Americans with type 2 diabetes. The study included 89 African American adults with type 2 diabetes. They were asked to complete measures related to quality of life, self-care behaviors, and social support. Support behaviors and measures of diabetes-related quality of life were analyzed using stepwise regressions. The results revealed that satisfaction with support was associated with improved diabetes. Support behaviors were also linked to actions that promote healthy eating and physical activity. Social support is associated with a variety of factors that can affect diabetes-related health outcomes. The findings indicate that support plays a critical role in the management of diabetes (Tang et. al., 2008).

One cross-sectional study described the quality of living for African American women with breast cancer. The study was carried out to test a stress coping model that considers various factors that can affect a woman's quality of life. Ninety-eight African American women were observed who 4 years post diagnosis were. They reported a high quality of life, but many of them also experienced low symptom distress. The model revealed that 75% of the variance in the quality of life was due to factors other than illness. These include family functioning, distress, and recurrence status. The model also revealed that women's current concerns affect their quality of life (Northouse et. al., 1999).

Quality of life is conceptualized as a subjective evaluation of a person's overall wellbeing (Smith et al., 2021). The objective of this study was to determine the racial differences in quality of life between women experiencing menopause according to their lifestyle and health risk factors. A stratified logistic regression model was used to analyze the data collected from the women's health study. In multivariable models, the researchers found that among African American women, those with three or more comorbidities were more likely to have higher quality of life than those with zero to two comorbidities. Among the study, an African American woman's body mass index and income did not significantly affect quality of life. However, these factors were linked to lifestyle factors and demographic factors (Smith et al., 2021).

The review of literature explains that quality of life can be dependent on many factors. The factors include in the literature review specifically align with the influences that will be compared to African American women's perception of aquatic activities as it relates to quality of life like age, marital status, socioeconomic status, race, level of education, and health conditions.

Each factor is subjective which makes it important to assess when proposing the question of how African American women with preexisting health conditions living in a rural community perceive aquatic activities as it relates to quality of life.

Instrumentation and Assessment Tools

Assessment tools provide the opportunity to collect and analyze data. One such tool is the WHOQOL-BREF, a compressed version of the WHOQOL-100 (World Health Organization (WHO), 2012). This assessment tool gives a detailed measurement of an individual's QOL. The WHOQOL-100 has been considered to be too lengthy to utilize in

a more routine clinical/rehabilitation work but analyzed to produce similar results, reliability, and validity when compared to the WHOQOL-BREF (WHO, 2012).

The WHOQOL-BREF utilizes a short QOL form categorized in four domains (physical health, psychological, social relationships, and environment) (WHO, 2012). The assessment contains 26 questions, and 24 sublets are in each of the four domains. The assessment has instructions and headers grouped with the appropriate question. The WHOQOL-BREF is a self-assessment with socio-demographic and health status questions. Analyses of consistency, item total correlations, and construct validity through confirming factors indicated that the WHOQOL-BREF has good psychometric properties of reliability and validity (Skevington, Lotfy & O'Connell, 2004). In terms the statement claims that the WHOQOL-BREF is a valid cross-cultural assessment of QOL. The WHOQOL-BREF can be administered to anyone age 18 years and older. The consideration for those persons with specific diseases and impairments is valued, especially with measuring the QOL (WHO, 2012). The assessment can be self-administered or otherwise assisted, if necessary, with standard instructions given, the interval for test and retest range from two to eight weeks. The anticipated goal of measurement is to establish a baseline score of ranges in the four domains and examine changes in QOL from interventions (WHO, 2012).

The results from the WHOQOL-BREF study can populate an individual's profile after completion and scoring (WHO, 2012). Domain scores are calculated by multiplying the mean by four, giving the overall score for the survey. The goal is that future health practices use the WHOQOL assessment will be helpful and make a significant impact in the health and social services (WHO, 2012). The WHO developed

the instrument cross-culturally; hence, health care providers, administrators, and legislators in areas with no known QOL measuring tool exist may utilize the tool. Any setting supports data yielded by work involving the WHOQOL-BREF assessment tool (WHO, 2012).

This research study will utilize Physical Activity Questionnaire for Diabetic Patients (PAQ-DP), an established survey instrument. The survey instrument was chosen due to a currently nonexistent tool that utilizes SCT to measure African American women's perception regarding participating in aquatic interventions as physical activity. The PAQ-DP questionnaire uses a 5-point Likert scale from 1-5 with 19 questions with measurements of (strongly agree) to (strongly disagree), (very likely) to (very unlikely), (very beneficial) to (very harmful), (very worthwhile) to (very worthless), (very good) to (very bad), (very enjoyable) to (very boring), (very relaxing) to (very stressful), (strongly satisfied) to (strongly unsatisfied) used to develop a self-reported measure of physical activity suitable for assessing population levels of physical activity across countries (Ghazanfari et al., 2010). In the PAQ-DP questionnaire, all questions are direct measures of the three constructs of SCT. Validity statistical analysis is conducted with construct validity and convergent validity. The reliability of the survey instrument, with Cronbach's' alpha coefficient results in an alpha value above 0.70 (Ghazanfari, et al., 2010). An estimated correlation coefficient did test-retest the reliability of the scale. Then the PAQ-DP questionnaire was re-administered to a group of individuals one month after the first completion of the survey (Ghazanfari, et al., 2010). Acceptable agreement levels were then met as 00-0.2 as slight, 0.21-0.40 as fair, 0.41-0.60 as moderate, 0.61-0.80 as substantial, and 0.81-1 as almost perfect (Ghazanfari, et al., 2010).

Another assessment tool in this study is the Diener's Satisfaction with Life Scale (SWLS). The scale assesses satisfaction of the participant's life (Pavot & Diener, 1993). The domains of this assessment tool do not take health and finances into consideration, but the questions allow the participants to navigate their choices in an unbiased manner. Normative data are presented for the scale, which shows good convergent validity with other scales and with other types of assessments of subjective well-being. Life satisfaction as assessed by the SWLS shows a degree of temporal stability with age, and the SWLS has shown sufficient sensitivity to be potentially valuable to detect change in life satisfaction during the course of clinical intervention (Pavot & Diener, 1993). Further, the scale shows discriminant validity from emotional well-being measures.

Conclusion

The literature review provides evidence that aquatic interventions can be an effective treatment for patients with various conditions to increase QOL while using the conceptual, theoretical framework of SCT. Many researchers have sought to show a significant benefit that aquatic-based exercises might have compared to land-based exercises (Miller et al. 2002). Even though the studies show a difference, scholars should conduct further research. Aquatic therapy appears to provide short-term services for individuals with cardiovascular issues, suggesting it as a feasible intervention option, particularly with individuals with hypertension and type II diabetes (Hammer et al., 2009). The goal as a Recreational Therapist is to assess the African American woman with preexisting health conditions perspective of aquatic interventions on QOL, using the theoretical framework of SCT from an RT perspective.

CHAPTER III

METHODOLOGY

The purpose of this study is to explore factors contributing to the lack of participation and perceptions of aquatic interventions by African American women with preexisting health conditions on quality of life (QOL) in rural communities. More specifically, to gain insight for the expansion of more research on the reasoning associated with the lack of participation of African American women in aquatic activities. In order to gain an insight into this issue, the present study is being conducted to understand factors and correlations influencing participation in aquatic activities that can serve as a preventative action for change in quality of life in African American women with identified preexisting health conditions.

Research Design

The research for this study is a quantitative cross-sectional research design using a nonexperimental approach. The purpose is to measure the perception that African American women with preexisting health living in a rural community have related to aquatic activities as related to quality of life According to Creswell (2008), cross-sectional survey design has a distinct advantage of measuring current perceptions over a short period of time. In cross-sectional designs, researchers record information, but do

not manipulate variables. A common example of cross-sectional design is a census study in which a population is surveyed at one point in time in order to describe characteristics of that population including age, sex, and geographic location, among other characteristics. The most prominent characteristic of cross-sectional designs is that all of the observed data are collected at a single point in time. This differs from longitudinal and experimental designs, which make multiple observations over time. Often, cross-sectional designs are used to examine and compare single variables across multiple subgroups that are similar in other characteristics. Rather, they are best used to identify patterns, correlations, and incidence rates of a subject of study within a population. Such data can be used to describe the population of interest and to generate a new set of research questions and hypotheses that are better suited to establishing cause-and-effect relationships (Olsen & St George, 2004).

Site and Sample Selection

The questionnaire will be administered via email because of COVID-19 precautions. This method for administration of the questionnaire was chosen because it allows the researcher to send a mass email for multiple participants to access the questionnaire at one time. The link will provide access to the questionnaire that will be attached to the email. The questionnaire will be sent out to several chapters of sororities and other African American women organizations in the rural area of Minden, LA and surrounding communities that have over 100 active members.

The questionnaire is self-performed, and instructions will be clearly stated when the participant receives the link to access the questionnaire. The instructions will state: Hello, I am a doctoral student at the Oklahoma State University. I am conducting a study

on African American women's perception on aquatic activities as it relates to quality of life, and I would like to know your perception on what you believe aquatic activities have on overall quality of life. Please complete this 30-minute questionnaire. Your responses are anonymous, and feedback is allowed and recommended at the completion of the questionnaire. Thank you for your participation. The questionnaire will be formulated through a survey software called Qualtrics. Qualtrics Survey Software is an advanced survey tool available through Oklahoma State University. The software features a variety of question types to input answer choices, and a strong set of features in order to organize questions clear so that participants have limited problems navigating throughout the questionnaire and answer each question, which is why the researcher determined this software as a best fit for the study. Qualtrics allows researchers to collect and distribute data in various ways. The tools provided by Qualtrics will help improve the relevance and intelligibility of the researcher's data (Mc Elhinney, Sinclair & Taylor, 2016). The study will compare the demographic questions with the questionnaire that is composed of the three instruments: WHOQOL-BREF, PAQ-DP, and Satisfaction of Life scale. The researcher will use purposive sampling and the criterion type so that every African American woman that live within the specified rural radius that completes the questionnaire can be included in the population, but the only African American women that will be included in the study are the African American women who meet the criteria of having either or both Type II Diabetes and/ or hypertension.

The population for this study includes African American women who live in Minden, LA and other surrounding areas. The sample of the study includes African

American women who live in Minden, LA and other surrounding areas within a 35 miles radius who have been diagnosed with hypertension and/or Type II diabetes. The Raosoft sample size calculator will be used to determine statistical power. Raosoft gives a sample size calculator that considers the margin of error, the confidence level, and the response distribution. Using the Raosoft sample size calculator, it has been determined through the power analysis that a total sample size of 109 participants must complete the survey to achieve statistical power of 95% confidence level at 0.05.

Study Instrument Approval

Each of the assessment tools used in the study have been approved for modifications and administration by the creators. Modifications were done to the WHOQOL-BREF to align with the participants of the study. Some of PAQ-DP questions were not used for the study, and all questions from the satisfaction of life assessment were used with no modifications.

Instrumentation and Psychometrics

The assessment tools that will be utilized in the study are the WHOQOL-BREF, PAQDP, and Satisfaction of Life Sale. The overall questionnaire for the study will provide the descriptive statistics from each of the participants to assess their perception of aquatic activities on quality of life. The researcher will perform a Pearson's r to assess if there's a correlation between the participants' assessed perception from the WHOQOL-BREF four domains and the seven demographic questions.

Demographic Questionnaire

Asking questions about an individual you can gather valuable demographic information about them. This type of information can help identify and develop an

understanding in order to reach them where they are in life. Demographic questionnaires are used for determining the characteristics of the participants in a study (Dandekar, 1959; Griffin & Holbert, 2001). The questionnaire collects information about individuals who are part of the general population. A demographic questionnaire is a tool that can collect various types of information about a person like age, race, gender, education, and employment. The demographic questionnaire for this study consists of seven focus areas: age, marital status, socioeconomic status, knowledge of aquatics, level of education, geographical location, and specific health conditions. Each of the seven demographic questions will be compared to the questionnaire to assess the perception that African American women with preexisting health conditions have on aquatic activities as it relates to quality of life in a rural community.

Data Collection Procedure

Since all data are collected simultaneously in cross-sectional designs, inclusion and exclusion criteria of participants should be predetermined prior to data collection. Identifying and determining how best to access the population of interest is crucial to successful use of cross-sectional designs. Adequate use of a sampling frame, the list of members of a population from which a sample is drawn, is vital to sampling only the desired participants that fit the study criteria. A total of 109 participants will be included in the study with demographic questions of age, marital status, social economic status, skill level of aquatics, geographical location, highest level of education, and health conditions that live in Minden, LA, and surrounding areas. The researcher will send the questionnaire out via email as a mass message with the link attached. Once the participants complete the questionnaire, a qualitative comment section will be provided

for optional remarks by each participant. After the completion of each survey, a thank you message will appear from the researcher for participating in the study. Individuals who have not completed the survey after a week a reminder email will be sent as a courtesy. The questionnaire will be available for four weeks. After the four weeks, the questionnaire will close for data analysis

Data Analysis

After data is collected from the questionnaire, SPSS will be used to analyze the questionnaire results. The analysis for this study is descriptive statistics, Pearson's r , and Chi Square Test of Association. Descriptive statistics is utilized to compare the mode of each of the demographic answer choices that are composed of the three assessments. The hypothesis will be determined by obtaining descriptive statistics to summarize the data set, obtain correlation strength and direction, and to conclude if there enough evidence to suggest a significance in the correlation, if any. The research questions will be determined by performing a Pearson's r test to determine if there is a correlation between the aquatic participants' perception measured by quality of life that and age, marital status, socioeconomic status, experience/skill level of aquatics, level of education. The Chi Square Test of Association suggest if there is significant evidence from the correlation to conclude if the results are by chance or could the results be a representation of the population.

CHAPTER IV

FINDINGS

Introduction

The purpose of this research study was to assess factors contributing to the perception and participation in aquatic activities by African American women in rural communities who have preexisting health conditions. This study also focused on the perceived potential impact that aquatic activities may have on the same individuals' reported quality of life by investigating if a correlation exists between demographic information such as age, marital status, geographical location, socioeconomic status, skill level of aquatics, level of education, and health conditions often associated with African American women.

Demographics

The participants of this study were African American women that are diagnosed with Type II Diabetes and hypertension who lived in rural communities within a 35-mile radius of Minden, Louisiana. The age range for the participants were 18 years of age and older.

Findings

Three assessments were used to gather data from each participant related to their perception of aquatic activities and reported quality of life. The WHO-QOL BREF, PAQ-DP, and SWLS were used for this study. The data were analyzed seeking to

determine if a correlation or goodness of fit exists applying the Pearson's r and Chi Square respectively.

Hypothesis:

The aim of this study was to assess African American women with preexisting health conditions, perception of aquatic activities and related perception of quality of life residing in a rural community. The findings of the study suggest that there is a correlation which exists related to African American women with preexisting health conditions and their perceptions of aquatic activities and reported perceived quality of life in the rural community.

The hypothesis suggests there is a correlation in African American women with preexisting health conditions perception of aquatic activities and reported perceived quality of life in the rural community.

The null hypothesis suggests there is no correlation in African American women with preexisting health conditions perception of aquatic activities and reported perceived quality of life in the rural community.

The results of the study support the hypothesis by rejecting the null hypothesis by concluding there is a correlation in African American women with preexisting health conditions perception of aquatic activities and reported perceived quality of life in the rural community, ($r = -0.232$, $p < 0.05$) showing an inverse and weak correlation between the participants perception of aquatic activity and their reported perceived quality of life, and $p = 0.015$ suggest that the correlation that the researcher observed does exist in the population. The data in this study was analyzed at ($\alpha = 0.05$) significance level which

states that there's a 5% probability that the null hypothesis is true. The number of participants that met the criteria for the study was (N=110). Pearson's r measures the strength and direction of relationships between two continuous variables. The strength of Pearson's r correlations is determined on a scale of -1,0, and 1. The closer the value of r is to -1 and 1, the more the researcher concludes a strong correlation, and a strong perfect correlation shown by a linear representation through. The negative and positive value determines the direction of the correlation. If the r value is positive, then the relationship between the variables has a direct association; meaning the variables move in the same direction. For example, if one variable A increases, variable B increases. Negative values have an inverse relationship; meaning the variables move in opposite directions as one variable increases the other variable decreases. If the r value is zero, the researcher concludes there is no correlation between the two continuous variables. The results from the Chi Square Test of Association indicates that there is not enough evidence to suggest a significant correlation between the two variables $X^2(12,110) = 19.732, p=0.072$). The table and graph below show an illustration of the discussed results.

| | Value | df | Approximate Significance |
|---------------|--------|----|--------------------------|
| Pearson's r | -.232 | | .015 |
| Chi-Square | 19.732 | 12 | 0.072 |

Table 1 shows the direction, strength, and evident to suggest significance between variables

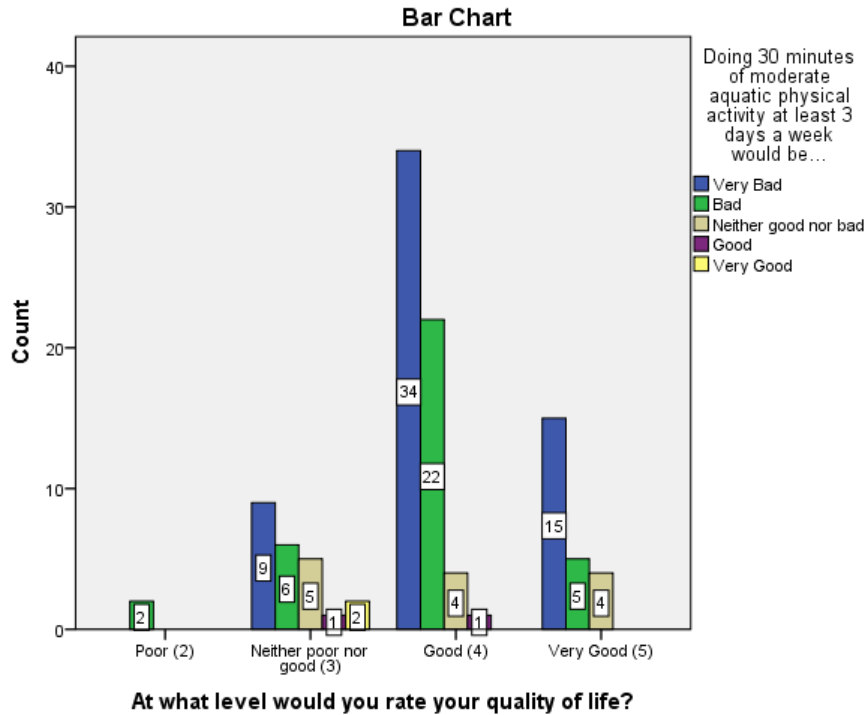


Figure 2 shows how the participants perceive aquatic activities

Research Questions:

The research question analysis was conducted to specially assess if there was a correlation between each demographic question as it relates to the participants’ assessed perception of aquatic activities to show the uniqueness and individualize each participant depending on age, marital status, socioeconomic status, level of education, and aquatic skill level. Geographical location and preexisting health conditions were not analyzed because the values were constant to fit the criteria in order to be included in the study. All the research questions exhibited a negative correlation. Each question had a significant level of ($\alpha=0.05$). The tables and graphs below also show a representation of the data analyzed for each of the research questions. The research question measure quality of life for each aquatic participants’ reported perception for the study.

1. Is there a correlation between the aquatic participants reported assessed perception and age?

The results from the following research question conclude that there is a negative and weak correlation between the participants' assessed perception of aquatic activities and age ($r = -0.011$), but there's not enough evidence for the researcher to conclude that the correlation would exist in the population based on the significance level ($p > 0.05$). The results from the Chi Square Test of Association indicates that there is not enough evidence to suggest a significant correlation between the two variables

$X^2(12,110)=19.884, p=0.069$). The findings of the study also suggest that the participant's age and how the participants perceive aquatic activities are independent.

| | Value | df | Approximate Significance |
|---------------|--------|----|--------------------------|
| Pearson's r | -.0411 | | .913 |
| Chi-Square | 19.884 | 12 | 0.069 |

Table 2 shows the direction, strength, and evident to suggest significance between variables

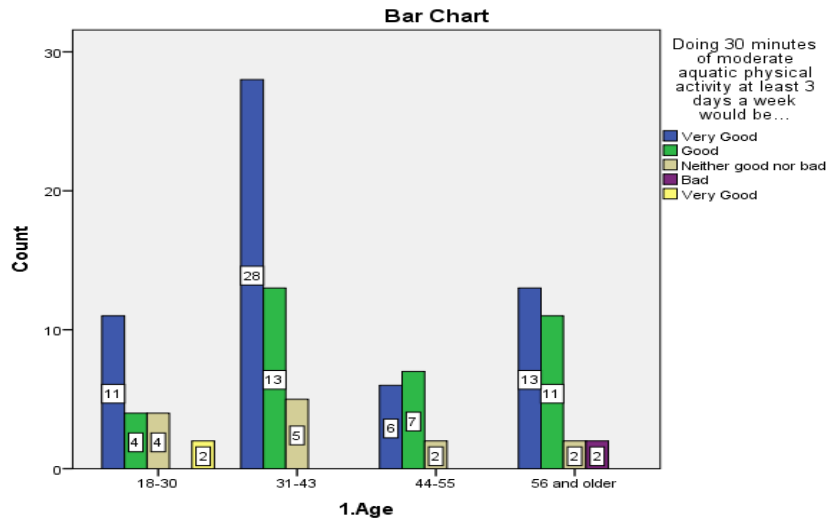


Figure 3 shows how the participants perceive aquatic activities based on age

1. Is there a correlation between the aquatic participants' reported assessed perception and marital status?

The results from the following research question suggest that there is an inverse and weak association between the participants' reported assessed perception of aquatic activities and marital status based on Pearson's r test statistics ($r = -0.031$), but there's not enough evidence for the researcher to conclude that the correlation would exist in the population based on the significance level ($p > 0.05$). The results from the Chi Square Test of Association indicates that there is not enough evidence to suggest a significant correlation between the two variables $X^2(12,110)=9.476, p=0.64$). The findings of the study also suggest that the participant's marital status and how the participants perceive aquatic activities are independent.

| | Value | df | Approximate Significance |
|--------------------|-------|----|--------------------------|
| Pearson's <i>r</i> | -.031 | | .750 |
| Chi-Square | 9.746 | 12 | 0.638 |

Table 3 shows the direction, strength, and evident to suggest significance between variables

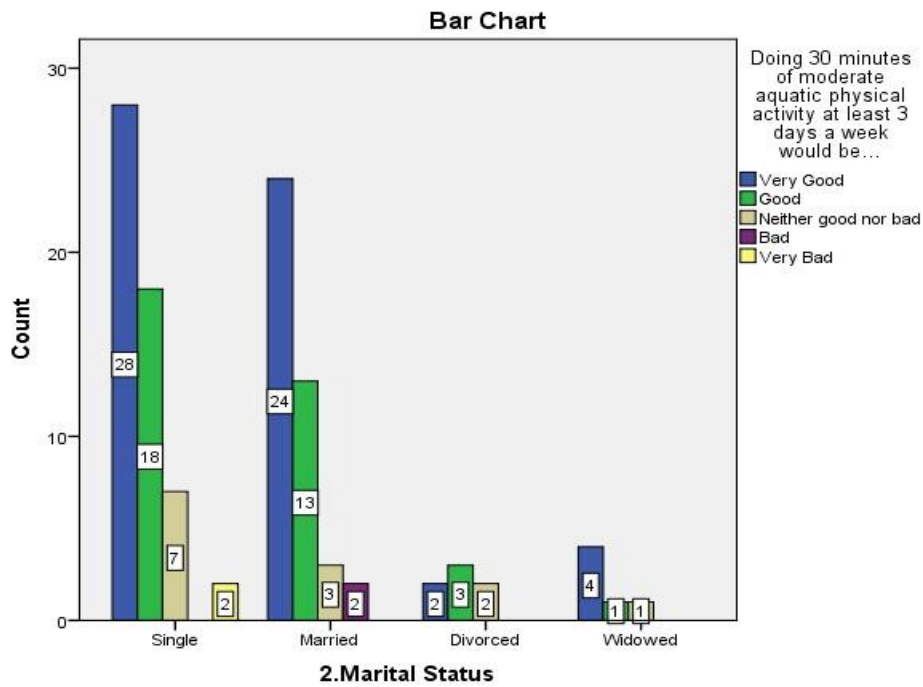


Figure 4 shows how the participants perceive aquatic activities based on marital status

3. Is there correlation between the aquatic participants' reported assessed perception and socioeconomic status?

The results from the following research question conclude that there is an inverse and weak correlation between the participants' reported assessed perception of aquatic activities and socioeconomic status from Pearson's *r* test statistics ($r = -0.173$), but there's not enough evidence for the researcher to conclude that the correlation would exist in the population based on the significance level ($p > 0.05$). The results from the Chi

Square Test of Association suggest that there is not enough evidence to conclude that there is a significant correlation between the two variables $X^2(8, 110) = 11.257, p=0.19$. The findings of the study also suggest that the participant's socioeconomic status and how the participants perceive aquatic activities are independent.

| | Value | df | Approximate Significance |
|--------------------|--------|----|--------------------------|
| Pearson's <i>r</i> | -.173 | | .070 |
| Chi-Square | 11.257 | 8 | 0.188 |

Table 4 shows the direction, strength, and evident to suggest significance between variables

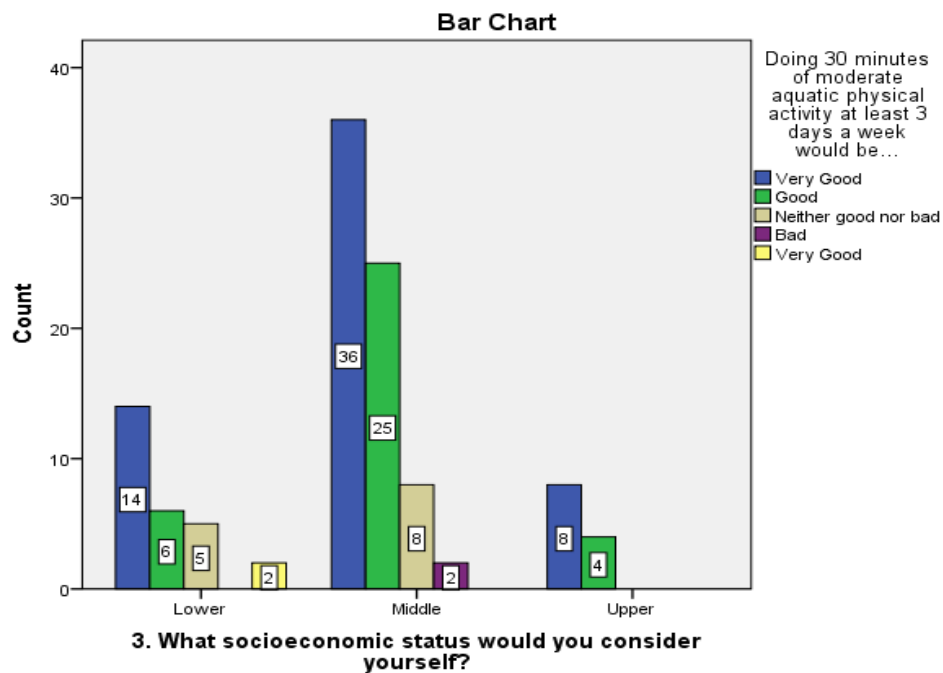


Figure 5 shows how the participants perceive aquatic activities based on socioeconomic status

4. Is there a correlation between aquatic participants' reported assessed perception and the experience/skill level of aquatics?

The results from the following research question conclude that there is an inverse and weak correlation between the participants' reported assessed perception of aquatic activities and skill level of aquatics from Pearson's r test statistics ($r = -0.063$), but there's not enough evidence for the researcher to conclude that the correlation would exist in the population based on the significance level ($p > 0.05$). The results from the Chi Square Test of Association suggest that there is not enough evidence to conclude that there is a significant correlation between the two variables $X^2(8, 110) = 11.016, p = 0.20$. The findings of the study also suggest that the participant's aquatic skill level and how the participants perceive aquatic activities are independent.

| | Value | df | Approximate Significance |
|---------------|--------|----|--------------------------|
| Pearson's r | -.063 | | .514 |
| Chi-Square | 11.016 | 8 | 0.201 |

Table 5 shows the direction, strength, and evident to suggest significance between variables

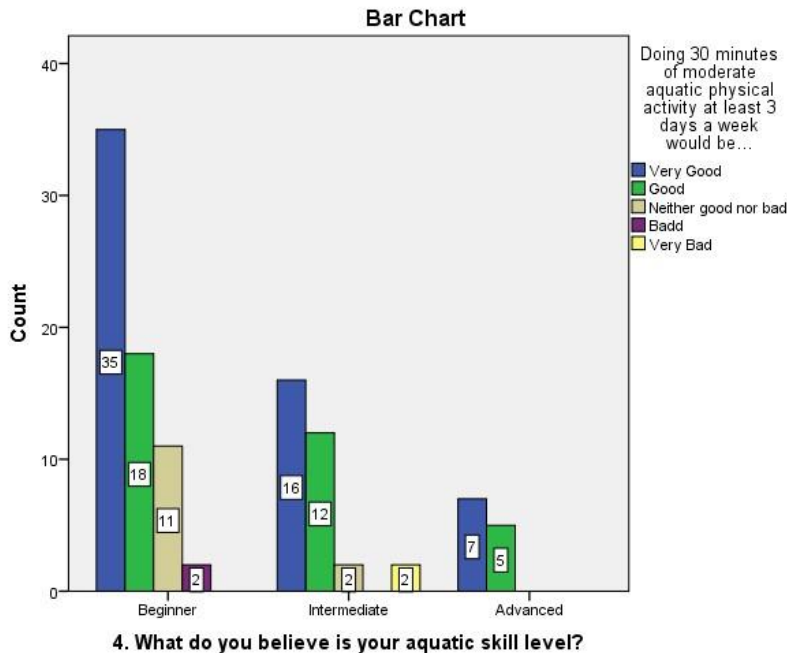


Figure 6 shows how the participants perceive aquatic activities based on aquatic skill level

5. Is there a correlation between aquatic participants' reported assessed perception and the participant's level of education?

The results from the following research question conclude that there is an inverse and weak correlation between the participants' reported assessed perception of aquatic activities and the participant's level of education from Pearson's r test statistics ($r = -0.047$), but there's not enough evidence for the researcher to conclude that the correlation would exist in the population based on the significance level ($p > 0.05$). The results from the Chi Square Test of Association suggest that there is not enough evidence to conclude that there a significant correlation between the two variables $X^2(12, 110) = 16.853$, $p = 0.16$. The findings of the study also suggest that the participant's level of education and how the participants perceive aquatic activities are independent.

| | Value | df | Approximate Significance |
|--------------------|--------|----|--------------------------|
| Pearson's <i>r</i> | -.047 | | .627 |
| Chi-Square | 16.853 | 12 | 0.155 |

Table 6 shows the direction, strength, and evident to suggest significance between variables

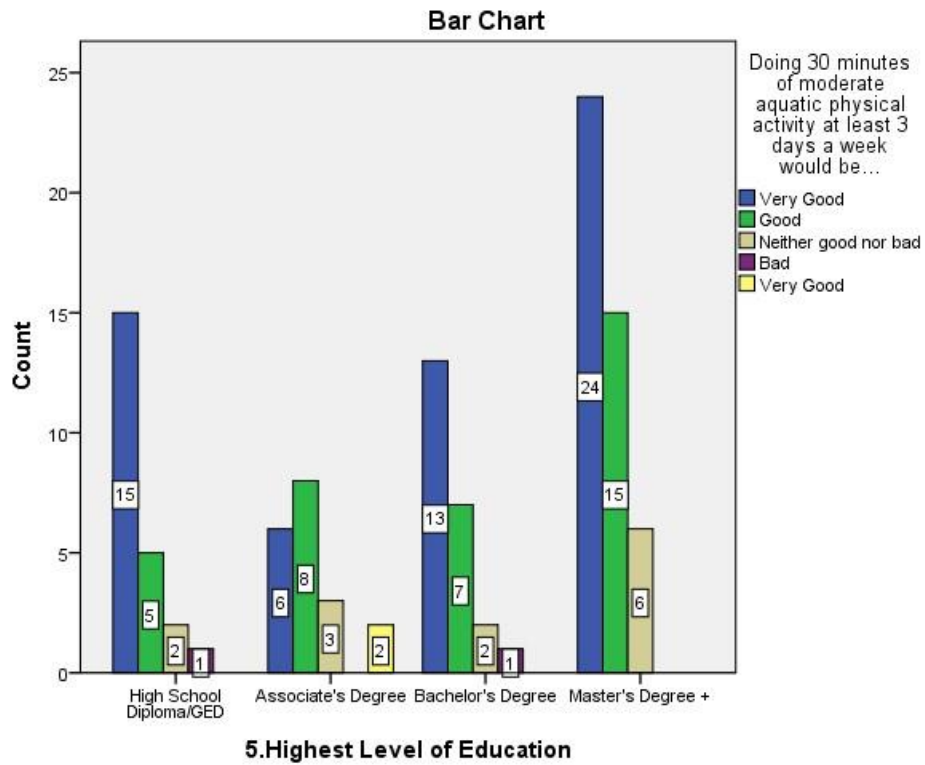


Figure 7 shows how the participants perceive aquatic activities based on level of education

CHAPTER V

DISCUSSION

Introduction:

The purpose of this research study was to assess the perception on aquatic activities by African American women in rural communities who have preexisting health conditions. In order for the assessment to be made, the study was conducted to indicate if there was a correlation. The questionnaire was assembled by the researcher through the Qualtrics software provided through Oklahoma State University. The questionnaire was then sent through an anonymous link to all African American sororities, religious organization, and social media through convenience sampling. The anonymous link was provided for a month and at week two the anonymous link was provided again as a reminder for those individuals that did not complete. At the end of the month, there were a total of 132 participants to complete the survey, but only 110 participants fit the criteria for the study. The Rasoft sample size calculator determined based on the population, level of education, and socioeconomic status 109 participants had to complete the questionnaire and fit the criteria to successfully have a 95% significant confidence level for the study. The data was analyzed for 110 participants after four weeks. The results from the hypothesis suggested that there was a weak and inverse correlation found in African American women with preexisting health conditions perception of aquatic activities and reported

perceived quality of life in the rural community, and there's enough evidence to suggest that the correlation would be the same in the population. The Chi Square Test of Association suggested that there is not enough evidence to conclude that there was a significant correlation between the participant's reported assessed perception of aquatic activities on quality of life.

Each of the five analyzed research questions compare the reported assessed perception of aquatic activities to age, socioeconomic and marital status, aquatic skill level, and educational level. Each of the five research questions resulted in an inverse weak correlation but suggested that the observed data was by chance and not significant enough to conclude for the entire population based on the Pearson's *r* test statistics. The Chi-Square Test Association indicated that each of the research questions suggested that there is not enough evidence to conclude that there a significant correlation between the reported assessed perception of the participant's and age, socioeconomic and marital status, aquatic skill level, and educational level. The results concluded that each paired variable is independent of one another.

Significance of the Study and Practical Implications

The implication of this study gave a general baseline to understand the perception that African American women who have preexisting health conditions living in a rural community have about aquatic activities as it relates to quality of life.

Knowing how an individual perceives aquatic activities could provide researchers and practitioners an idea on why African American women with health conditions do not participate in aquatic activities, and educators can then implement interventions to meet the needs of individuals to attract more aquatic participation to continue the expansion of

more aquatic research. The data indicates that there is an inverse and weak correlation associated with African American in rural communities who have preexisting health conditions women perception of aquatic activities on quality of life. Based on the data analysis the researcher can conclude that the independent variables do not have a strong correlation. The correlation which does exist represents a weak and negative correlation and provides evidence of an inverse association. An inverse association means as one variable increases, the other decreases.

Future Directions:

The research that has been presented gives an avenue for more research. With further research, it is recommended that:

1. This study be replicated after rewording some of the demographic questions. It was commented that many of the individuals did not know the definition of rural and urban as it related to geographical location. Many of the participants were not included because urban was selected even though their geographical location was indeed rural.
2. Looking at the research again an expansion of the study was included investigating the two similarities between all participants geographical location. The review of literature provides explanations of limited resources and accessibility to bodies of water as reasons why individuals do not participate in aquatic activities (Amodio, E., et.al.,2012). As an expansion of the research, the researcher can provide and implement in those rural areas aquatic programs that individuals can participate. Research can then be performed to evaluate the

questions suggested and continue the advancement of more aquatics research like the benefit of aquatic activities.

3. More research comparison race and gender be conducted when aquatic activities are discussed.
4. Future research would attempt to establish further validity of the instruments used in this study

Conclusions:

The intent of the study was to assess if there was a correlation between African American women with preexisting health condition perception of aquatic activities as it relates to quality of life who live in a rural community. The study also breaks down if there's a correlation between age, marital status, level of education, aquatic skill level, and socioeconomic status. This study was intended to be a baseline for future studies to help understand the direction is assessing aquatic programs to increase the participation of African Americans women.

As a result of this study, the researcher gained a better understanding of the need for more accessible aquatic sources in rural communities that interest individuals so they can see the benefit of aquatic activities as something that can provide an increase in their quality of life. While participation exist to some degree, education in aquatics, equal opportunity of aquatic centers, and accessibility does not (Austin, 1998). There is some degree of urgency related to the importance of aquatic activities because the rate of

drowning is steadily increase in the African American community and is predicted to increase (CDC, 2010). The researcher believes that with the adequate availability of leisure education on aquatics, accessibility, and resources to implement aquatic programs in the rural communities that attract the interest of citizens more engagement and knowledge can spread with hopes of increasing aquatic participation and lowering drowning rates, so individuals see the benefit of aquatic activity.

Participation in aquatic activity is important to the well-being of all people, but especially to those who have health conditions like Type II Diabetes and Hypertension (Douglas, 2003; Crissfulli et.al., 2020). Aquatic activities are equally important in terms of health, but also in building self-confidence in bodily appearance, personal relationships, and spiritual navigation in life.

In perspective, Recreational Therapists researchers and practitioners specialize in identifying special populations and providing inclusive programs, activities, and services to fit everyone's needs to achieve an optimal quality of life. In knowing this, a constant reminder for the research is to always provide opportunity to achieve the optimal quality of life to all even if it's the exploration of new leisure activities like aquatics. In summary, the aquatic field is one that is continually being researched. The goal of the researcher is to continue exploring and researching the aquatic field and gather information to provide the benefits of aquatic activities to all individua

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