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Self-reported Water Competency Skills at a Historically Black College & University and the Potential Impact of Additional HBCU-based Aquatic Programming

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Abstract

This article provides an analysis of self-reported water competency skills at a Historically Black University (HBCU). A survey was administered to undergraduate students who lived on campus at one HBCU. Of the 254 respondents that reported the ability to swim, only 187 respondents self-reported the ability to swim and the ability to perform water competency skills. The biggest discrepancy occurred within individuals that identified as Black or African American. In this group, 142 out of 250 participants proclaimed the ability to swim. However, the number of Black or African Americans that could swim dropped to 84 when researchers operationally defined swimming as having the ability to perform all five water competencies identified by the American Red Cross (Quan, 2015). Acknowledging that the community role of Historically Black Colleges and Universities (HBCUs) has embodied the African American community since their inception. The Social-Ecological Model illustrates how historical factors impact the drowning disparity that persist today (Dahlberg & Krug, 2006; “The Social-Ecological Model: A Framework for Prevention | Violence Prevention | Injury Center | CDC,” n.d.). The results of this study combined with the rich history of HBCUs points to the need for additional aquatic water safety education and programming at HBCUs.

Keywords: drowning prevention, Historically Black Colleges and Universities (HBCUs), Social-Ecological Model, swimming, water competency

Introduction

There were approximately 34,315 fatal unintentional drownings (non-boating related) annually in the United States between 1999-2019 (Clemens, Moreland, & Lee, 2021). This is a calculated “11 drowning deaths per day” as cited by the Centers for Disease Control and Prevention (2021). During the time of this study, African American children aged 5 – 19 drown in swimming pools at rates 5.5 times higher than those of Whites (*Drowning | Gateway to Health Communication | CDC*, 2017; Gilchrist & Parker, 2014). Anderson (2017), Kahrl (2016), and Wiltse (2014) provide a historical account of the barriers between Black Americans and their right to swim. Historical factors helped fuel a socioecological cycle that continues to feed a drowning disparity in the Black Community today (Anderson, 2017).

Historical Context

Social issues around Black swimmers and their right to swim have a troubling history that continues today. Wiltse (2007) suggested that there are two distinct expressions of racism regarding the use of pools. This includes legal segregation and de facto segregation.

Segregation

The ruling of *Plessy v. Ferguson* in 1896 made way for racial segregation, which called for separate and equal facilities. However, facilities for Black Americans were constructed several years after their White counterparts had access to aquatic facilities. In many instances, White-only pools were erected without a companion Jim Crow pool, which was a clear violation of the Fourteenth Amendment (Smith, 2012). Legalized segregation was a common practice in the southern states.

A consequence of segregation occurred on June 27, 1919, when Eugene Williams drifted past an imaginary line of segregation in Lake Michigan. Upon crossing into the “White territory”, Eugene Williams was hit in the head with a rock and drowned. His death fueled the backdrop to what is now known as the “Red Summer” (Ryan, 2017, p. 31). The police refused to arrest the White man who reportedly threw the rock. The inaction of the police officers ignited resentment. This resulted in violence between Black and White Chicagoans. The reported ‘gangs’, concentrated on the South Side neighborhood rioted for a week. By the end of the week, 15 Whites and 23 Blacks had been killed, over 500 people injured, and an estimated 1,000 Black families lost their homes due to vandalism (Editors, 2019).

In 1951, a Little League baseball team won the Youngstown Ohio City Championship. The team decided to celebrate at the local pool where there was an unwritten rule that Black patrons were not permitted in the pool area (Wiltse, 2007). The only Black member of the team, Al Bright, was forced to sit outside the fence of the pool. After several parents pleaded with the guards the supervisor relented. A compromise was struck, and Al was allowed to enter the pool as long as everyone else got out (Wiltse, 2007). The result ended with Al being pushed around the pool in a rubber raft and being told not to touch the water (Wiltse, 2007).

De Facto Segregation

After the 1964 Civil Rights Act, many pool locations were de facto desegregated and were placed in racially homogenous neighborhoods³ (Wiltse, 2007). Limiting access to recreational aquatic sites remained consistent as segregation faded from legal practice. However, the cultural divide continued into de facto segregation.

An example of de facto segregation occurred in the summer of 1966. Amid a crippling heatwave, a few teenagers in a predominantly African American community on the Westside of Chicago opened a fire hydrant with the hopes of getting some relief from the extreme heat (Wiltse, 2007). Wiltse (2007) described that the need for the hydrant water was fueled by the city’s historic inadequate provision of swimming pools in the city’s Black neighborhoods combined with the inability to access pools in non-black neighborhoods due to racial tensions. As a

result of the hydrant opening, police were notified, and the arrest of a local community leader ultimately led to a 3-day riot. Frantically, Mayor Richard Daley of Chicago phoned Dr. Martin Luther King Jr. and asked him to come to Chicago to help discuss the many concerns of the local community. After meeting with local community leaders Dr. King suggested that the mayor starts by building recreational buildings with pools in all communities throughout the city of Chicago. The mayor heeded Dr. King's advice. Over the next two years, the city opened thirty-two new pools (Wiltse, 2007).

Lasting Implications of Segregation

At the time this data was collected, African American children ages 5 – 19 drown in swimming pools at rates 5.5 times higher than those of Whites (*Drowning / Gateway to Health Communication / CDC*, 2017; Gilchrist & Parker, 2014). More recent research indicates that unintentional drowning rate and disparity rate ratios for “Black youth aged 10–14 years (7.6), 15–19 years (5.6), and 5–9 years (4.4)” (Clemens, T. et al, 2021). An example worthy of examining the drowning disparity and how it intersects with race, society, and community in the United States, are the unintentional drowning deaths on the August 3, 2010 incident in Shreveport, Louisiana involving six teenagers (ages 13 to 18). On this day, the teenagers died while attempting to save a family member and friend from drowning, who survived (Claiborne & Francis, 2010).

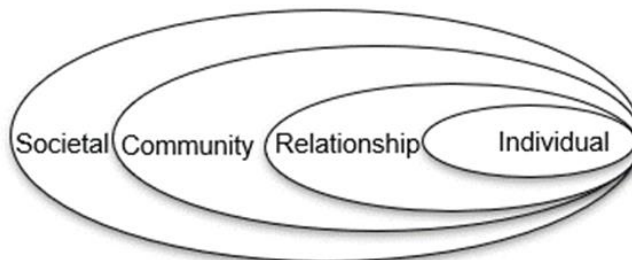
In early June 2019, an 11-year-old fatally drowned in a resort pool while visiting Myrtle Beach, South Carolina (Londberg, 2019). These deaths and many others are preventable with the knowledge of water safety and engaging in learning to swim lessons at all ages.

Such instances serve as reminders of the historic barriers Black Americans have faced in pursuing their right to swim. These barriers have decreased the likelihood of swimming becoming an integral way of life for many Black Americans. Hence in many families, the sports, culture, and lifesaving skills of swimming are often not passed down from generation to generation as commonly with Whites (Wiltse, 2014).

Theoretical Framework: Social-Ecological Model

The implications of such norms in society may have influenced how some Black Americans perceive their capabilities to participate in aquatic activities. The aquatic histories of the past with the internalized cultural oppression and forced societal assimilation by reconnecting the disruption of the fluid aquatic language and skills of Africans is dismantled by the enslavement people and subjugated to violence for those seeking the human right to swim (Dawson, 2006, 2018; Dawson & Wigo, 2013; Rawlins, 2018).

Figure 1
Social-Ecological Model



(Modified from Dahlberg & Krug, 2006; “The Social-Ecological Model: A Framework for Prevention |Violence Prevention|Injury Center|CDC,” n.d.)

Social-Ecological Model and Swimming in the Black Community

The examples used in this and other areas of research indicate how the behaviors and beliefs about swimming and water safety have impacted the lived experiences of some Black Americans.

Societal

There is a direct link between societal beliefs, stereotypes, and the exclusion of Black Americans in the realm of aquatics. This impact has historical roots that have lasted for decades and are reflected today in the drowning disparity found in the Black Community. Cultural norms launched in a historic context were carried forward for many aquatic professionals and Black families. This societal impact can also be found in the birth of stereotypes that perpetuate a cycle of oppression of Black role models in aquatics. These attributes have led to relatively few Black Americans participating in competitive swimming as compared to White swimmers hence less representation in the Olympics (and aquatic professions) which fuels a misguided societal view of their overall swimming ability. Society *often* measures the swimming competencies of Black Americans based on Olympic appearances instead of actual water competency skills and without acknowledging the impact of historical factors (Anderson, 2017).

Community

As a result of historical factors, many communities have a shortage of Black aquatic professionals. Additionally, a shortage in the number of aquatic programs offered in the Black community persists. Legal segregation and de facto segregation fueled a cycle of excluding the Black Community from aquatics outside of their neighborhoods. This exclusion lasted for decades and will persist without support within and outside the Black community. It will take numerous community interventions to overcome the drowning disparities. Key interventions must include

people who have been historically excluded from positions of leadership in aquatic programming.

Relationship

A relationship is inclusive of one's "[p]eers, family, friends, neighborhoods, advisors, and faculty members..." (Shen-Miller et al., 2013, p. 501). A relevant example in this context of research would be a parent(s)/guardian(s) deciding to enroll their child in swim lessons. The family's influence on the possible participation in swim lessons may be directly linked to whether the parent knows how to swim (Ross et al., 2014, p. 227). As Ross et al. (2014) found, children with parents who do not know how to swim are less likely to participate in swim lessons (p. 227).

Individual

As noted, in the Theory of Planned Behavior, an individual's planned behavior begins with an idea. This idea dictates key factors, starting with the individual's intentions. The intentions are based on three core factors: attitude, subjective norm, and perceived control (Kerner et al., 2001). As noted by the Societal, Community, and Relationship aspects of the Social-Ecological Model, these pressures help shape the individual's attitude. In this instance, if these attributes are negative factors stemming from historical trauma then the attributes that impact the individual's decision and outlook are impacted; hence, the African American drowning disparity cycle often repeats (Anderson, 2017).

Historically Black Colleges and Universities (HBCUs)

Historically Black Colleges and Universities (HBCUs) are institutions that were established before the Civil Rights Act of 1964 to serve the Black community. Only three HBCUs were established before the American Civil War (Cheyney University of Pennsylvania, Wilberforce University, and Lincoln University in Pennsylvania) (*Historically Black Colleges and Universities and Higher Education Desegregation*, 2018). The Morrill Act of 1890 required states to establish a second land grant college for African Americans if they were excluded from the existing land grant college (*Historically Black Colleges and Universities and Higher Education Desegregation*, 2018).

Even though HBCUs "make up only 3 percent of four-year colleges in the country, they have produced 80 percent of the nation's [B]lack judges and 50 percent of its [B]lack doctors. Among [B]lack college graduates with a degree in STEM, 27 percent are from historically [B]lack colleges. And remarkably, HBCUs have trained roughly 50 percent of [B]lack teachers" (Smith-Barrow, 2019). Little

is known about the impact of measures taken to decrease unintentional drowning deaths by connecting with the Black community within HBCUs.

Purpose

The purpose of this study was to determine the need for water competency and underlying factors as they relate to students at an HBCU. Per the American Red Cross (2019), the basic skills necessary for one to be considered water competent (also known as “critical water safety skills”) and to reduce the risk of drowning are to:

- Step or jump into the water over your head.
- Return to the surface and float or tread water for one minute.
- Turn around in a full circle and find an exit.
- Swim 25 yards to the exit.
- Exit from the water. If in a pool, be able to exit without using the ladder.

(Making Water Safe for Everyone | Red Cross, 2019)

By identifying the need for introductory swim classes at a specific HBCU, researchers can best assess the perceived water competency of students and identify a research pool of students who may be willing to demonstrate water competency. Using the provided data, the researchers demonstrate how the Social-Ecological Model and the perceived water competency skills at a specific HBCU coincide.

Method

Study Origins

The genesis of this pilot study originated organically from a discussion in a research design course. The instructor, a white cisgender male, provided drowning statistics to a predominately Black class of 15 students. The instructor highlighted the disparity between African Americans and Whites. The instructor asked the class, “Why do you (the class) think the drowning disparity exists?” Two students immediately replied, “Black people don’t swim.” This statement elicited a mixed response from the group.

The students eagerly provided anecdotal evidence to support and refute the assertion that “Black people don’t swim.” The responses from the Black students ranged from, “My mom swims and she taught me” to “Nobody in my family swims, and we don’t need to.” A few students who identify as Caribbean, White, or “Two or More Races” did report a family history of swimming and the ability to swim.

As students interjected with personal antidotes, a student commented, “I can swim, but I can’t tread water.” Then another said, “I can swim, but I don’t go underwater.” This provided a natural segue into operational definitions. The class

looked towards the instructor for a definition of “swimming”. The group agreed that swimming was more than successfully traveling in the water from point A to point B.

After adopting an operational definition of water competency as having the five water competencies (cf., American Red Cross, 2019), only five students reported that they could swim. The ‘swimmers’ consisted of one individual from the Caribbean, one who identified as being of two or more races, both White students, and one Black student. The remaining 10 students all identified as Black and as being non-swimmers. Most notably, none of the 10 non-swimmers were interested in learning more about water competency. The instructor informed everyone that the university offered free swim lessons. Discussing the disparity in drowning rates, identifying the free learn-to-swim resources, and discovering the need were not enough to inspire the non-swimming students to want to become water competent.

This small, convenient, sample size perpetuated the larger societal drowning disparity (Gilchrist & Parker, 2014) and the perspective (Anderson, 2017) found in the literature. A small sample size of 15 Kinesiology Students, however, may not accurately represent the activity habits of the larger diverse student body at the University.

IRB Approval

To overcome bias and increase the sample size, the principal investigator contacted the Department of Institutional Effectiveness to assist with the development and delivery of the Water Competency Survey (see Appendix A). The Department of Institutional Effectiveness at the University houses the Office of Institutional Research, Planning, and Analytics (Hereafter, IRPA). IRPA is the official reporting entity for the participating institution. Traditionally IRPA prepares university statistics and completes mandated reporting to government agencies and accrediting bodies. However, the IRPA office also welcomes staff and faculty requests for data used in academic research. They provided access to the student body and applied university as well as industry standards. Specifically, the IRPA has standardized language for creating a letter of consent, federal standards for assessing race/ethnicity, and timetable for delivery.

Participants

After discussing the purpose of the study, full-time undergraduate students that attended the main campus during the 2018-2019 academic year were eligible to participate in the study. Although this is still a convenient sample, this procedure effectively provided all undergraduate students at the university to anonymously respond to the survey.

IRPA suggested a launch date of October 10 and an end date of October 19. Non-respondents would receive an email repeating the request daily. This timeframe was selected because it did not coincide with any other IRPA surveys and was consistent with their two-week standards for online survey data collection. Approximately, 3,585 students received the email found in Appendix A. The email provided a link to the survey that can be found in Appendix B.

Results

Over the suggested two-week period, 396 undergraduate students responded to the survey. The participant demographic of this survey was respondents between the ages of 17-57. Eleven responses were voided due to a lack of information; thus, the total number of complete responses was 385.

Participant Demographics

Table 1 depicts the number of individuals who reported whether or not they could swim by race/ethnicity. All four individuals who identified as American Indian or Alaska Native self-reported the ability to swim. The sample population included eight individuals who identified as Asian, four of whom reportedly could swim. Of the individuals identifying as Black or African American, 142 self-reported the ability to swim and 108 indicated that they could not swim. The individuals identifying as Hispanic or Latino accounted for 16 self-reported swimmers and six who could not swim. There was one individual who selected N/A to the race question and one who reported being Native Hawaiian or Other Pacific. Both individuals reported that they could swim. The sample population included five nonresidents, three who reported they could swim and two who could not. Twenty individuals reported being of two or more races who indicated they could swim, six reportedly could not swim. Finally, the study included 67 individuals who identified as white. All but four of the white individuals reported the ability to swim.

Although 254 respondents reported the ability to swim, not all were water competent. Table 2 compares the percentage of participants who initially reported the ability to swim with the percentage of participants who reported the ability to swim and could perform all five water competencies. Participants included 385 individuals between the ages of 17-57. 4 individuals identified as American Indian or Alaskan Native 4 reported the ability to swim, but only 3, or 75 percent, were water competent, or possessed the water competencies necessary to safely navigate the water. 8 individuals identified as Asian, and 4 proclaimed the ability to swim. All four individuals were also reported as water competent. The study included 250 individuals that identified as Black or African American, 56.8 percent (n=142) self-reported the ability to swim. Only 33.6 percent (n=84) reported the ability to perform all five water competencies. Two individuals elected not to self-identify

by race. One of whom reported the ability to swim and perform all five water competencies. Twenty-two individuals identified as Hispanic or Latino, 72.73 percent (n=16) self-reported the ability to swim, and 54.55 percent (n=12) self-reported water competency. There was one Native Hawaiian or Other Pacific Islander individual who self-reported the ability to swim and was water competent. Five individuals identified as non-US residents, three of these individuals self-reported their ability to swim, and two were water competent. Twenty-six individuals identified as Two or More Races, of which 76.92 percent (n=20) reported the ability to swim and 69.23 percent (n=19) reported water competency. Islander individuals self-reported the ability to swim and were water competent. Finally, 94.03 percent of White individuals surveyed proclaimed the ability to swim; 92.54 percent of them self-reported the ability to perform all five water competencies.

Table 1
Self-Reported Ability to Swim by Race.

Race	Responded	Responded	N
	Yes, I can swim	No, I cannot swim	
American Indian or Alaska Native	4	0	4
Asian	4	4	8
Black or African American	142	108	250
Did Not Identify	1	1	2
Hispanic or Latino	16	6	22
Native Hawaiian or Other Pacific Islander	1	0	1
Nonresident	3	2	5
Two or More Races	20	6	26
White	63	4	67
Total	254	131	385

Table 2

Self-Reported Swimming Ability Vs. Self-Reported Water Competency by Race.
 Percentage Comparison of Self-Reports

Race	<i>N</i>	Reported They Could Swim	Were Water Competent
American Indian or Alaska Native	4	100.00%	75.00%
Asian	8	50.00%	50.00%
Black or African American	250	56.80%	33.60%
Did not Identify	2	50.00%	50.00%
Hispanic or Latino	22	72.73%	54.55%
Native Hawaiian or Other Pacific Islander	1	100.00%	100.00%
Nonresident	5	60.00%	40.00%
Two or More Races	26	76.92%	69.23%
White	67	94.03%	92.54%
Total	385	65.97%	48.57%

As can be seen in Table 3, of the 4 American Indian or Alaska Native respondents, 4 originally said they could swim and only 3 proclaimed proficiency in all five water competencies. Of the 8 Asian respondents, 4 originally said they could swim and only 4 proclaimed proficiency in all five water competencies. Of the 250 Black or African American respondents, 142 originally said they could swim and 84 proclaimed proficiency in all five water competencies. Of the 22 Hispanic or Latino respondents, 16 originally said they could swim and only 12 proclaimed proficiency in all five water competencies. Of the 2 N/A respondents, one originally said they could swim and proclaimed proficiency in all five water competencies. The one Native Hawaiian/Other Pacific Islander reported the ability to swim and proclaimed proficiency in all five water competencies. There were 5 non-US residents, and 3 reported the ability to swim and 2 proclaimed the ability to perform all five water competencies. Of the 26 individuals identified as two or more races, 20 originally said they could swim and 18 proclaimed proficiency in all five water competencies. Of the 67 White individuals, 63 reported the ability to swim and 62 proclaimed proficiency in all five water competencies. In total, 254 of

the 385 respondents reported the ability to swim; however, 187, or 48.57% proclaimed proficiency in all five water competencies.

Table 3

Participants (n=385) Self-Reported Ability/Competency by Race/Ethnicity

Race	<i>N</i>	Can Swim	Water Competent
American Indian or Alaska Native	4	4	3
Asian	8	4	4
Black or African American	250	142	84
Hispanic or Latino	22	16	12
N/A	2	1	1
Native Hawaiian or Other Pacific Islander	1	1	1
Nonresident	5	3	2
Two or More Races	26	20	18
White	67	63	62
Total	385	254	187

Table 4 highlights the interest of ‘non-swimmers’ (i.e., individuals who self-reported they could not swim) in water safety training. In total, 131 participants, or 34 percent of respondents reported they could not swim. Individuals who identified as Asian made-up 3.1 percent of non-swimmers, 0.8 percent of whom were interested in learning more about water safety. Although 82.4 percent of the non-swimmers were Black or African American, 37.4 percent were interested in learning more about water safety. Hispanic or Latino non-swimmers accounted for 4.6 percent of non-swimmers and 3.8 percent were interested in learning more about water safety. Less than one percent of non-swimmers selected N/A to identify their race/ethnicity and they reported they were not interested in learning more about water safety. Approximately 1.5 percent of Non-residents and those who identified as having two or more races indicated that they were interested in learning more about water safety. Nonresidents and those that identified as having two or more races represented 1.5 percent and 4.6 percent (respectively) of the non-swimmers.

Discussion

Anderson (2017) has suggested that the Social Ecological Model illustrates a variable that contributes to the drowning disparity among Black Americans compared to other races/ethnicities. The primary aim of the study was to determine the need for water competency training as it related to students at an Historically

Black College/University (HBCUs). The researchers identified the self-reported swimming abilities and water competency skills at one HBCU. The secondary aim of this study was to identify the need for and interest in introductory swim classes at a specific HBCU. The study included data from 385 respondents who were students enrolled at one HBCU and who ranged in age from 17 to 54.

Table 4

'Non-Swimmers' (n=131 respondents) Interest in Water Safety Training

Would you like to be contacted by the American Red Cross about water safety training?	No	Yes	Total
Asian	2.3%	0.8%	3.1%
Black or African American	45.0%	37.4%	82.4%
Hispanic or Latino	0.8%	3.8%	4.6%
N/A	0.8%	0.0%	0.8%
Nonresident	0.0%	1.5%	1.5%
Two or More Races	3.1%	1.5%	4.6%
White	1.5%	1.5%	3.1%
Total	53.4%	46.6%	100%

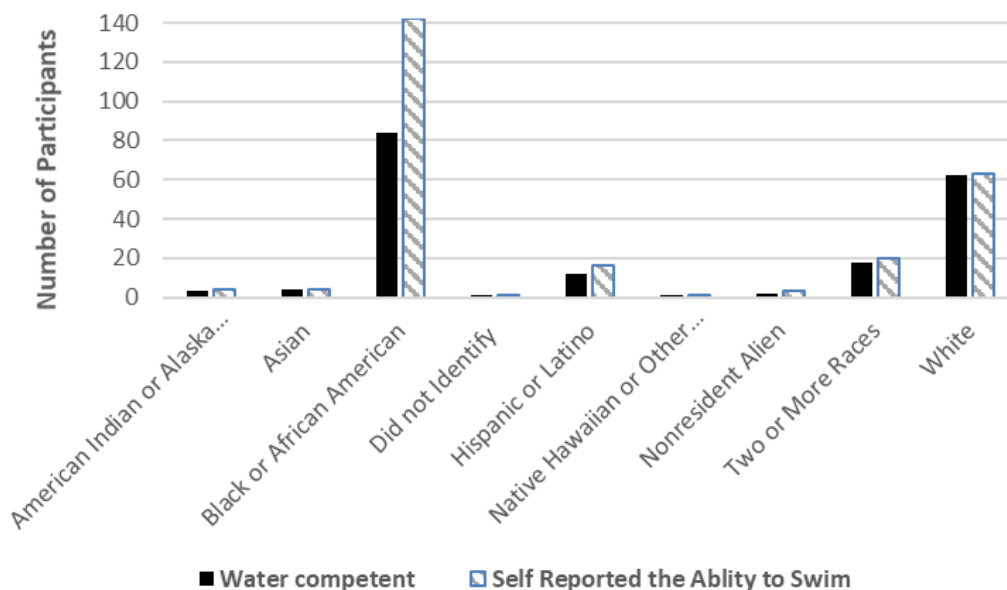
The Centers for Disease Control and Prevention (2017) as well as Gilchrist and Parker (2014) had raised concern when African Americans were identified as having the highest risk for drowning when compared to any other ethnicity. These concerns have been echoed in mainstream media by news stories like the Shreveport incident where 6 teens drowned in 2010. The subheading by Claiborne and Francis (2010) read, "They couldn't swim, which is consistent with a study highlighting black kids." Previous studies have omitted empirical data to explain why individuals at high risk of drowning such as African Americans enter the water.

The sample population in the current study reflected the HBCU population to which the survey was administered. Compared to the population of the United States, individuals who identified as Black or African American were overrepresented as victims of fatal drowning. Consequently, the researchers were interested in reviewing the percentage of individuals who initially proclaimed they could swim but who did not possess the necessary swim skills or swim competencies to be proficient swimmers as indicated by the American Red Cross. In other words, researchers were interested to learn the percentage of individuals

by race who incorrectly identified as a swimmer, but who could not perform the five water competency skills (American Red Cross, 2014; 2019).

This study found disparities in the ability to swim and perceived water competencies. As highlighted in Table 2 and illustrated further in Figure 2, the disparities increased among high-risk groups such as individuals who identified as Black or African American. More specifically, this study included 250 individuals who identified as Black or African American. Of the 250 participants, 142, or 56.8%, of these individuals reported that they could swim. Additionally, 84, or 33.6% of the 142 individuals self-reported they could perform the five water competencies as defined by the American Red Cross. Let us consider that 142 individuals who claimed they could swim as having all five water competencies, the number dropped to only 84 who also identified as being water competent. In other words, a group of 58 individuals who were statistically at higher risk of drowning (i.e., said they could swim, but could not perform all the water competencies) are potentially entering the water without the skills necessary to safely navigate the water.

Gilchrist & Parker (2014) reported that individuals in the American Indian/Alaska Native and Hispanic/Latino communities were also at an elevated risk of drowning. Table 2 and Figure 2 shows that these groups, albeit small in this sample, reported a similar discrepancy between self-reporting swimming ability while not reporting water competency skills. More specifically, 25 percent of individuals who were American Indian or Alaska Native self-identified that they could swim when they could not perform the five Red Cross water competencies. The researchers of this study recognize they could not make inferences about American Indian/African Native with a sample size of only 4. Similarly, individuals in this study who identified as Hispanic or Latino reported a similar discrepancy although nationally, they are not identified as being significantly more at risk than the white population. Approximately 18 percent of individuals in our sample identified that they could swim when they could not perform the 5 water competencies. Again, this sample size was small (n=22). The researchers of this study strongly suggest that a similar survey should be administrated at Hispanic Serving Institutions as well as Tribal Colleges.

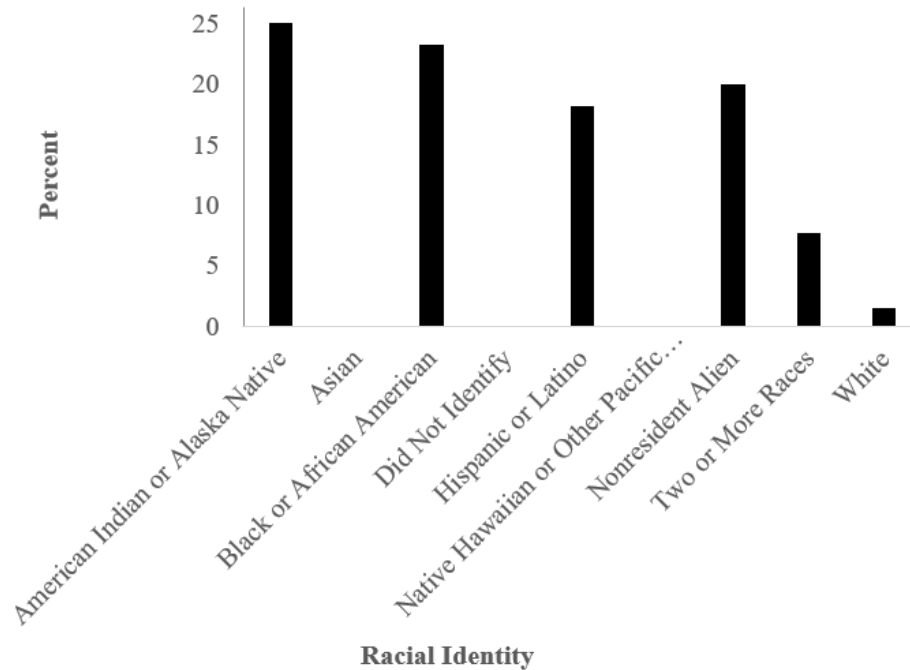
Figure 2*Reported Self-Water Competency vs. Self-Reported Ability to Swim*

The ability to swim at this point in the study was not operationally defined. Swimming was left to the interpretation of the individual completing the study. Table 4 illustrates the disinterest across races, including African Americans, in learning about water safety. Worthy of notation, 45 percent of Black or African Americans that completed the survey knew that they could not swim and were not interested in learning more about water safety.

Historical factors helped fuel a socioecological cycle that continues to feed a drowning disparity in the Black Community today (Anderson, 2017). HBCUs are rooted within the Black community and provide role models across a myriad of professional domains. Anderson (2017) suggests a lack of Black American aquatic professionals as role models perpetuate the disparity cycle. Given the aforementioned history of HBCUs, they provide an ideal setting to break the drowning disparity.

Figure 3

Percent of Individuals Who Identified as a Swimmer within Each Race

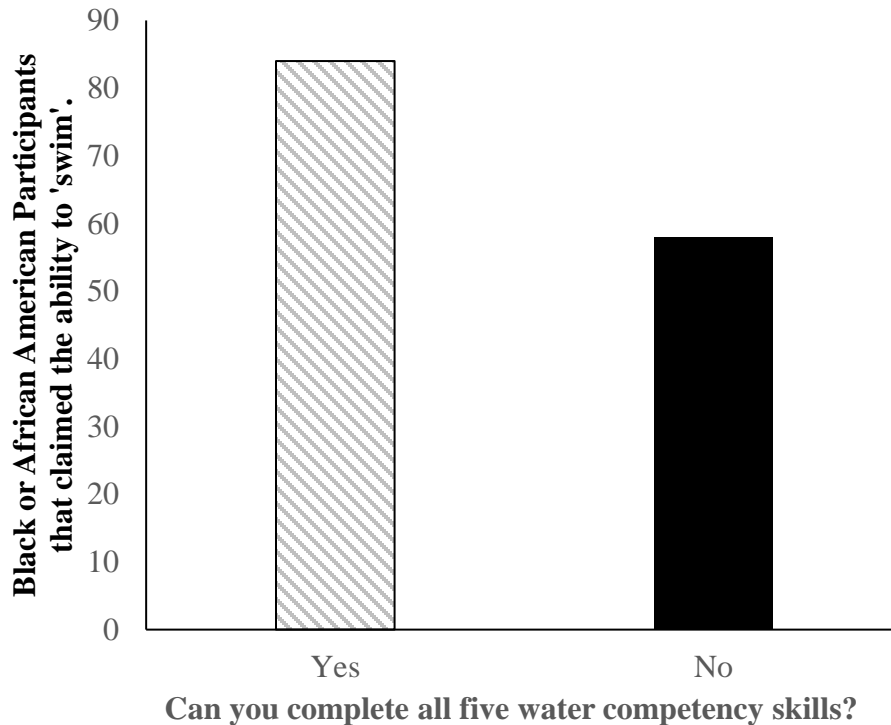


Conclusion

Of the 254 respondents who reported the ability to swim, only 187 respondents self-reported the ability to swim and perform five water competency skills. The biggest discrepancy occurred among the Black/ African American group, in which 142 out of 250 participants proclaimed their ability to swim. The number of Black or African Americans who reported being able to swim dropped to 84 when researchers operationally defined swimming as having the ability to perform all five American Red Cross water competencies, as illustrated in Figure 4. Perhaps more concerning is the 41 percent of individuals that thought they could swim do not possess the skills required to safely navigate the water. This could be one factor to explain why African American children aged 5 – 19 drown in swimming pools at rates 5.5 times higher than those of Whites (*Drowning | Gateway to Health Communication | CDC, 2017; Gilchrist & Parker, 2014*).

Figure 4

Water Competency among Black/African Americans (N=142) Who Reported Ability to Swim



It is important to note that researchers, such as Gilchrist & Parker (2014), evaluate racial and ethnic disparities by comparing racial groups to White individuals. The current study reported 63 out of 67 white individuals surveyed proclaimed the ability to swim while 62 of the 63 self-reported the ability to perform all five water competencies. These results were consistent with the opinions from the research design class of 15 students. They illustrated a misunderstanding of the skills necessary to safely engage in aquatics activities. This may be a contributing factor to the drowning disparity found in the Black or African American Communities.

Despite researchers' intentions of justifying the need for an introductory swim class, the majority of students expressed little interest in learning how to swim. The Social-Ecological Model points to societal, community, relationships, and individual influencers who like drove this lack of interest. The insertion of the program led to greater interest and regular participation in the aquatic field from some of the survey participants as well as the further development of Black aquatic professional leaders of the program. This finding coincided with the Social-

Ecological Model in which the interjection by the university and researcher changed variables leading to excitement, interest, and engagement of HBCU students in the aquatic field and aquatic activities. At the same time, students influenced and had experience with youth that will serve as a counterbalance to the stereotypes and myths surrounding Black American engagement in aquatic activities and careers.

By using a culturally conscious lens, the researchers connect how the drowning disparity and the Black diaspora intersect with the social-ecological constructs of historically excluded communities. Most importantly this study demonstrated how the African American Drowning Disparity Cycle may be influenced by culturally competent and mindfully designed programming (Anderson, 2017).

Limitations

The study contained limitations including the involvement of language implemented by the institution when disbursing the survey regarding racial/ethnic identity and the interpretation of the questions related to the survey. The institution regulated how individuals identified by race/ethnicity; thus, the institutional language may have challenged respondents to “choose” either their identified race *or* ethnicity rather than have the respondent self-identify using their own terms.

As previously discussed, the study included self-reported data from college students at one HBCU. A demonstration of water competencies might have been more accurate than self-reported values. The age range of college students may have yielded different results than other age groups. Additionally, data from one HBCU does not apply generalization across the HBCU community.

Finally, an 11 percent response rate for the online survey is below the standard of 17 percent found in the literature (Frippiat & Marquis, 2010; Pedersen & Nielsen, 2016). In future studies, researchers should consider monetary incentives and/or examine the text in the questions to prevent response dropout (Pedersen & Nielsen, 2016).

Taking Action

In conjunction with the study, one researcher decided to partner with college students and the Early Childhood Laboratory School (ECLS) at the University. This effort began with student leaders who had the expertise and passion to change the narrative around aquatics in the Black community. The group of students met with the ECLS director and developed a “Family Swim Night.” The student-led event followed the American Red Cross Orientation to Swim Lessons Curriculum and

offered an opportunity for preschool students and their family members to safely engage in aquatic activities.

The first event was hosted in January 2017. Six Public and Allied Health students ran the event which consisted of eight parents and eight children. The School Coordinator was so excited by the event's success that they immediately scheduled a follow-up event. The second event held in March 2017 featured a volunteer group of 12 Public and Allied Health students who hosted 17 parents and 30 children. The parent orientation to swim lessons has since become an ongoing event and swim lessons have been incorporated into the Early Childhood Laboratory School curriculum. Graduates of this program now boasts numerous American Red Cross lifeguards, instructors, and other support staff (all of whom are students of color) who host an ongoing swim lesson program for preschool students twice a week. In addition to developing lifesaving water competency skills, the young participants are engaged by leaders from their community in the newly developed aquatics program. Most importantly, this program created role models who have broken the cycle of drowning disparities on an individual, relationship, and community level as predicted by the social-ecological model and dismissed misguided stereotypes and myths that have fed the disparity.

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Appendix A

Dear Student,

In the United States, nearly 4,000 individuals die from drowning each year. African American children aged 5-19 drown in swimming pools at rates 5.5 times higher than those of whites. The purpose of this study is to assess the need for water competency. A brief 10-question survey (estimated one-minute completion time) will capture the self-reported water safety competencies of students at your University.

Participants will be asked for an email address. The email will be used as a follow-up if the participant indicates they are interested in participating in a follow-up study. Only cumulative aggregate data will be reported for questions 2-10.

To serve our students better, the University would like to have your feedback regarding water competencies needs at [this participating institution].

If you have any questions about the survey, contact the office below. Thank you for providing feedback to help the University to better serve its students.

Appendix B

The email also included a SurveyMonkey link to a 10-question survey. The questions were as follows:

1. Age
2. Race/Ethnicity
3. Can you swim?
4. Comfortable and/or willing to enter the water with full submersion?
5. Once submerged, can you return to the surface and remain there for at least 1 minute using treading or floating techniques without a flotation device?
6. Can you change the orientation of your body allowing repositioning, turning at least 180 degrees, and facing toward an exit direction?
7. Can you propel through the water, including leveling off and moving front and/or back position for at least 25 yards/meters?
8. Can you safely exit the water?
9. Are you willing to demonstrate any of the above water competencies, while under the supervision of an American Red Cross Certified Lifeguard?
10. Would you like to be contacted by the American Red Cross about water safety training?