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The Effects of the Relationship Between Racism and the Environment on Personal Health

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The Effects of the Relationship Between Racism and the Environment on Personal Health

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Abstract

Substantial research evidence suggests that racial and ethnic minority groups living in America do not have the same access and opportunities for maximized health as their White counterparts. Factors of the environment, termed social determinates of health, explain this phenomenon. There are five social determinates of health which are influenced by racism: education, economic stability, neighborhood and built environment, health and healthcare, and social and community context. Research has been conducted in various populations on how the relationship between racism and the five social determinants of health negatively affect the health of individuals. However, little research has been conducted in college populations on this topic. The purpose of this study is to determine if there is a relationship between racism and the environment that affects the personal health of college students and if so, to compare the results to existing studies and literature. The participants were given a brief survey with questions pertaining to race/ethnicity, the five social determinants of health, and racism. The results of this study show there is a relationship between racism and the environment that affects the personal health of college students and there are significant similarities between these results and the results of existing studies. The results of this study are likely to contribute to the need to reduce the health disparities gap and improve health equity in America through policy making.

Keywords and phrases: Racism, Environment, Social Determinants of Health, Health Disparities,

Health Disparities Gap, Health Equity.

Introduction

The health disparities gap in America has widened over the past several years (National Healthcare Quality and Disparities Report, 2017). Contrary to America being a progressive, first world country, policy makers have been failing to promote health equity. In America, there is a significant difference in multiple aspects of health between White and non-White people. More and more minorities are making up the total U.S population. By 2050, it very probable that the current minority population, consisting mainly of African Americans and Hispanics, will together make up the majority population (Roberts, 2009). If the health disparities of current minority populations do not improve, then the majority U.S population will have poorer health than it does now. With this being said, the need for a reduction in the health disparities gap is even greater. To reduce the health disparities gap between Whites and non-Whites, the underlying problem needs to be addressed: racism.

Racism impacts all the social determinants of health in various ways. Racism interacts with one's environment to create unfavorable conditions. It is in these conditions that one's health is hindered. It is often difficult for racial/ethnic minorities to find adequate jobs in America; sometimes it is because they are inexperienced or not qualified for the specific job, however, there are many times where racial/ethnic minorities are denied jobs solely because of the color of their skin. This leaves many racial/ethnic minorities to be of low socioeconomic status. "In the United States, socioeconomic status is closely linked to race and ethnicity: More non-Hispanic White people experience higher income levels than Hispanic and African American members of society. Throughout the life cycle, from fetal and neonatal stages through child and adolescent to adult and elderly stages, the poor are in worse health" (Shlovevar &

Baron, 2009, p. 271). Low socioeconomic status creates many unfavorable conditions, with housing being the most notable.

The conditions of people's neighborhood and built environment contribute greatly to their physical and mental health. Low income neighborhoods tend to possess many threats to health. The physical structure of a house and neighborhood can influence physical health. For instance, houses can contain mold and asbestos which can create lung problems and lead to asthma (Ellen & Glied, 2015). In many low-income neighborhoods, crime and violence rates are high. The likelihood of a person getting injured or killed due to violence is higher in low-income neighborhoods compared to higher income neighborhoods (Ellen & Glied, 2015). In their study, Jacoby, Dong, Beard, Wiebe, and Morrison (2018) found that firearm injury rates were highest in low-income areas that have been historically occupied by racial/ethnic minorities in Philadelphia. "Highly disadvantaged communities lack strong social control of crime, evidence crime-facilitating processes, and induce criminogenic cultural adaptations" (Krivo, Peterson, & Kuhl, 2009, p. 1768). Crime and violence are means for survival for many people living in low-income neighborhoods. Crime and violence can worsen people's mental health because it can contribute to depression and anxiety. Dealing with the loss of loved ones to violence and always being on edge can affect one's psychological functioning. In their critical literature review on racial/ethnic disparities and mental health, Maura and Weisman de Mamani (2017) concluded there is substantial evidence that indicates there are mental health disparities in America that disadvantage racial/ethnic minorities. This supports the notion that racial/ethnic minorities experience more mental health problems compared to their White counterparts. Living in low-income areas with high rates of crime and violence is one explanation for this. Crime and violence contribute to the already high amount of stress that is common in people who live in

low-income neighborhoods. Stress can contribute to many physical health problems such as stroke, heart disease, obesity, and asthma (Mendez, Hogan, Culhane, 2014).

Furthermore, studies have found that stress due to neighborhood environment conditions can affect women's reproductive health. "Adverse neighborhood conditions such as inadequate housing, neighborhood poverty, neighborhood violence, exposure to toxins and pollution, and the lack of social services may also negatively influence pregnancy and birth outcomes as a result of stress, material deprivation, and isolation" (Mendez et al., 2014, p. 480). Prather, Fuller, Marshall, and Jeffries (2016) created a socioecological model (see attached) to described how racism affects sexual and reproductive health outcomes among African American women. Their model highlights how social determinates of health that are impacted by racism influence individual behaviors and interpersonal relationships which can affect sexual and reproductive outcomes (Prather et al., 2016). Prather et al. (2016) note there are three levels of racism: institutional, personally mediated, and internalized.

"Institutional racism is characterized by large organizations or governments that impose practices that negatively affect access to health services, resulting in differences in the quality of healthcare for racial/ethnic minority groups. Personally mediated racism occurs when healthcare providers' preconceived notions about racial groups result in the provision of substandard healthcare to racial/ethnic minorities. Last, internalized racism involves the embodiment and acceptance of stigmatizing messages from society by racially oppressed groups" (Prather et al., 2016, p. 665).

Racial/ethnic minorities experience these three levels of racism on a regular basis. Prather et al. (2016) suggest that these three levels of racism play a factor in the sexual and reproductive health of African American women. In addition, Prather et al. (2016) claim that the interactions

people have with themselves, their close friends and family, their neighborhood/community, and society influence their overall well-being.

Racial/ethnic minorities who live in low-income areas tend to have higher levels of stress because there are many factors out of their control. Pevalin, Reeves, Baker, and Bentley (2017) conducted a study on the impact of persistent poor housing conditions on mental health. Their study found that living in poor housing conditions for extended periods of time resulted in poor mental health (Pevalin et al., 2017). Living in low-income houses can be defeating at times. Low-income houses are typically not of the best quality; residents often have problems with their house and do not have the money to fix them which intensifies the problem which leads to more stress. Residents who do not own their house but rather rent may have conflict with their landlord due to a lack of autonomy (Pevalin et al., 2017). Residents living in low-income areas often stress because they do not know how they will be able to pay their bills every month. Greder, Peng, Doudna, and Sarver (2017) analyzed the role of family stressors on rural low-income children's behavior. The stress the parents or guardians express is noticed by the children and affects them. Children who grow up with stressed parents are more likely to express inappropriate and aggressive behaviors (Greder et al., 2017). These behaviors can influence children in the future and lead to other mental health related issues.

Low-income neighborhoods and environments often lack adequate resources such as grocery stores, quality schools, healthcare facilities, and other services needed for individuals to have a healthy lifestyle. Whether in urban or rural low-income environments, having adequate access to affordable, healthy food options is rare. Areas that lack these options are known as food deserts (Zhang & Ghosh, 2016). Zhang and Ghosh (2016) examine the implications of supermarket redlining on urban, low-income neighborhoods. "Supermarket redlining is a term

used to describe a phenomenon when major chain supermarkets are disinclined to locate their stores in inner cities or low-income neighborhoods and usually relocate existing stores to the suburbs" (Zhang & Ghosh, 2016, p. 79). Many supermarkets do not want to be located in urban or rural environments because of a lack of profit compared to suburb environments (Zhang & Ghosh, 2016). Many racial/ethnic minorities who live in low-income areas often get their food from gas stations or convenient stores that typically lack nutritional value and are over-priced. This often leads to obesity-related health problems. Also, racial/ethnic minorities lose money because they are spending more but getting less; twenty dollars at a supermarket is a lot more valuable than twenty dollars at a gas station or convenient store.

It may be difficult for people living in urban low-income areas to have adequate access to medical care facilities, but it is typically more difficult for people living in rural low-income areas due to geographic isolation (Ellen & Glied, 2015). Medical care facilities are typically found in high density populations. Racial/ethnic minorities living in rural low-income areas may have to drive for over an hour to get a routine exam and that is if they have adequate transportation. It can be difficult for people living in urban and rural low-income areas to find adequate transportation to medical care facilities due to economic reasons (Mendez, Hogan and Culhane, 2014). In urban environments, a medical care facility may only be a couple blocks away from a person's house, but it may take them up to an hour to get there if they are using a public transportation system.

Quality schools are also a rarity in low-income neighborhoods. Since public schools are funded by residents' taxes, many schools in low-income areas lack quality teachers and facility, school supplies, food services, and extracurricular activities. Low-income neighborhood schools present many barriers for racial/ethnic minority children to become successful. "Students from

high-income families have a 16% higher graduation rate compared with their peers from low-income families. In 2012, the immediate college enrollment rate for high school graduates from high-income families (82%) was 29 percentage points higher than the rate for those from low-income families (52%)" (Williams, Bryan, Morrison, and Scott, 2016, p. 74). Racial/ethnic minority children begin with a disadvantage before they are even able to comprehend racism. If racial/ethnic minorities receive low quality education, their chances of continuing their education are low. Without a college degree or even a high school diploma it can be difficult to find a quality-paying job. This leaves racial/ethnic minorities right where they started- in low-income neighborhoods. It is a repeating cycle that can be hard to break.

Low-income schools make it difficult for racial/ethnic minorities to have high health literacy because of the low-quality education they receive. "Health literacy is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (U.S. Department of Health and Human Services, 2018). lack of health literacy, which is common in racial/ethnic minorities due to the environment within which they live, can negatively impact health. Adebajo, Shikoh, Kumar, and Walker (2018) examined the influence of health literacy on the musculoskeletal health of racial/ethnic minorities. Their results showed a positive correlation between increased musculoskeletal health and higher health literacy (Adebajo et al., 2018). Furthermore, Stewart et al. (2014) conducted a study to examine whether or not low health literacy predicts smoking relapse among racial/ethnic minority smokers with low socioeconomic status. Stewart et al. (2014) claim that racial/ethnic minorities with low socioeconomic status are affected by low health literacy. Higher rates of smoking and relapse are common within this population. Therefore, they claim lower health literacy may be associated with higher rates of relapse. Their

results indicated that smokers with low health literacy were more likely to relapse than smokers with high health literacy (Stewart et al., 2014). Not having the ability to obtain and understand basic health information and services can have a tremendous negative impact on health. If a person does not know or understand what to do or where to go for a health-related issue, then their health is only going to worsen. Racial/ethnic minorities often have low health literacy for a number of reasons which all stem from their environment.

Healthcare facilities are another factor of environment that is impacted by racism and affects health. Within healthcare facilities, there is often bias, language barriers, a lack of cultural competency, a lack of trust, and little racial/ethnic minority representation. In their integrative literature review, Drewniak, Krones, and Wild (2017) concluded that healthcare providers' attitudes and behaviors towards racial/ethnic minorities contribute to health disparities. They found six potential barriers to adequate healthcare for racial ethnic minorities: biases, stereotypes and prejudices, language and communication barriers, cultural misunderstandings, gate-keeping, and statistical discrimination (Drewniak et al., 2017). More times than not, the racial/ethnic minority's healthcare provider is of a different race than him or her (usually White). This can lead to bias. Although it is unethical, healthcare providers may have bias towards racial/ethnic minority patients because they are of a different race or ethnicity. This can contribute to a lack of trust between healthcare provider and patient. There are often language barriers within healthcare settings between the healthcare provider and the racial/ethnic minority patient. Wolz (2015) argues that trust and quality of language interpretation are key for a minority patient to receive optimal care. Language barriers along with bias and a lack of trust prevent racial/ethnic minorities from going to healthcare facilities on a regular basis. If there is a medical problem they feel they can tolerate and not have to seek treatment for then racial/ethnic minorities will

because they would rather do that than not have to visit a healthcare provider who does not understand them or respect them and their wishes and needs. Racial/ethnic minorities then experience prolonged health problems that could have been easily treated. Chaitoff, Wickizer, and White (2015) conducted a study to determine if racialized healthcare settings created a preference from Black and White participants. Their results showed that Black participants felt a lack of trust in the healthcare system and preferred a hospital with an advertisement featuring Black healthcare workers. This was not seen in the White participants (Chaitoff et al., 2015). Chaitoff et al. (2015) concluded that racial/ethnic minorities would most likely prefer healthcare facilities that have the outward appearance of being diverse. Malat (2001) assessed the role of social distance from healthcare providers and whether that accounts for Whites' higher rating of healthcare providers compared to non-Whites. Malat (2001) examined whether "Having higher socioeconomic status, like most healthcare providers, and racial concordance with healthcare provider account for the gap in satisfaction between Whites and African Americans" (p. 360). Malat (2001) concluded that "Socioeconomic status and racial concordance accounted for a portion of Whites' higher rating of the respect shown by their healthcare provider" (p. 360). This study supports the argument that racial/ethnic minorities experience a lack of respect from their healthcare provider. Racial/ethnic minorities feel more appreciated and respected when they are in the company of people similar to them. Because there is a lack of racial/ethnic minority representation in healthcare settings, it is important for healthcare providers to be culturally competent. Behar-Horenstein, Warren, Dodd, and Catalanotto (2017) note there are profound oral health disparities in America with the most affected groups being racial/ethnic minorities. "For example, among non-Hispanic Black and Mexican American adults (aged 35–44 years) untreated tooth decay is nearly twice that of their non-Hispanic White counterparts, and

periodontal (gum) disease predominantly affects Mexican American and non-Hispanic Black

men" (Behar-Horenstein et al., 2017, p. 18). Behar-Horenstein et al. (2017) express the need to

educate dental students on the importance of identifying and implementing effective strategies

that meet the oral health needs of racial/ethnic minorities in order to decrease oral health

disparities. Doorenbos, Morris, Haozous, Harris, and Flum (2016) assessed cultural competence

among oncology surgeons and found that most surgical providers perceived and measured

cultural awareness were highly correlated in their analyses. They concluded that exposure to

diversity (cultural competency) training "Was the single most important contributor to culturally

congruent care, indicating a substantial need to continue existing diversity training intervention"

(Doorenbos et al., 2016, p. 61-62).

The sociocultural context of racial/ethnic minorities environments is grounded in racism

and is experienced in healthcare. Pardasani and Banyopadhyay (2014) note that health disparities

are increasing as poverty remains an issue, especially among racial/ethnic minorities. 21.5% of

Latinos live below the federal poverty income level and nearly 32.1% lack health insurance.

24.5% of African Americans live below the federal poverty limit and 19.5% do not have health

insurance. 10.2% of Asians live below the federal poverty level and nearly 16.8% are uninsured

(Pardasani & Banyopadhyay, 2014). Many racial/ethnic minorities are underrepresented in data

regarding consumers receiving public healthcare services such as Medicaid because they are

below the poverty line (Pardasani & Banyopadhyay, 2014). Therefore, healthcare and public

service providers are unable to adequately meet the needs of racial/ethnic minorities. Pardasani

and Banyopadhyay (2014) urge public service and healthcare providers to take the time to

understand the experiences, opinions, and specific needs of racial/ethnic minorities to effectively

serve and treat them. Healthcare and public service providers often do not try to understand and

effectively communicate with racial/ethnic minority clients. "The most common barriers to receiving services are consumers' lack of knowledge about services, distrust of providers who may be from different socio-economic and ethnic backgrounds, reluctance of providers to incorporate a consumer's spiritual and religious beliefs into care, and communication barriers" (Pardasani & Banyopadhyay, 2014, p. 91). It can be difficult for racial/ethnic minorities to find the motivation and courage to go to healthcare facilities regularly because of these multiple barriers. If healthcare providers do not take the time to understand and meet the specific needs of racial/ethnic minorities, the health status of the minorities may actually worsen. Self-reported racial discrimination in healthcare settings has been associated with worse health outcomes (Peek, Wagner, Tang, Baker, & Chin, 2011). Whether intentionally or unintentionally, healthcare and public service providers as well as policy makers have allowed racism to impact healthcare.

The five social determinants of health: economic stability, neighborhood and built environment, education, healthcare, and social and community context consume one's environment. These social determinants of health are grounded in racism; therefore, racial/ethnic minorities tend to have negative health outcomes compared to their White counterparts. Many factors of these social determinants of health are out of the individual's control. It is up to policy makers to elicit change. However, change cannot be made until policy makers take into consideration that these social determinants of health are grounded in racism. Therefore, it is important to establish the relationship between racism and the five social determinants of health that consume individuals' environments to provoke change that will reduce the health disparities gap in America.

Purpose/Hypotheses

The purpose of this study is to determine if there is a relationship between racism and the environment that affects the health of Eastern Kentucky University (EKU) students and if so, to compare the results to existing studies and literature.

1. Is there a relationship between racism and the environment that affects the health of EKU students?

   a. The hypothesis is that there is a relationship between racism and environment that affects the health of EKU students.

2. If there is a relationship between racism and the environment that affects the health of EKU students, are the results found in the EKU student population similar to results found in existing studies?

   a. The hypothesis is that the results found in the EKU student population will be similar to results found in existing studies.

Methods

A survey of 22 questions, two being open ended and 20 being multiple choice, was created. Questions pertained to individual's race, health status, healthcare access, education, income, neighborhood environment, and personal views on racism today. Questions were created based off knowledge from existing literature relating to racism and the five social determinants of health. Prior to survey dissemination, a list of registered student organizations from the Student Government Association were obtained through OrgSync, which is an online campus portal. From this list, 10 organizations were randomly selected. The lead contacts of these 10 organizations were contacted via email about recruiting members to be participants for the survey. To assure adequate representation of diverse populations, the lead contact of student organizations whose primary membership is a majority non-White population, such as the Latino

Student Association, were specifically contacted. The aim was to get at least 50 participants of which approximately half are non-White. A recruitment script (see attached) was emailed to the lead contact of the registered student organization to ask permission to attend an organizational meeting to discuss the purpose of the research study. Once approved to attend a meeting of said organization, the recruitment script was presented to the members to recruit for the study. The surveys were then distributed. The survey (see attached) consisted of an introductory statement with the following details: the purpose of the research, the potential risks, statement of voluntary participation, statement about how data will be kept anonymous, and statement that participants must be at least 18 years of age to complete the survey. The first question on the survey required participants to consent prior to participation. The second question required students to verify that they are at least 18 years of age. Following their consent to participate and verification that they were 18 or older, participants filled out the survey. Once the data was collected, the responses were coded and entered into a database for statistical analysis.

Results

Out of the 60 participants in the study, 26 identified as White, 19 identified as Hispanic/Latino/a, eight identified as Black, and seven identified as two or more races (see Table 1). All of the participants were between 18-34 years old.

More non-White participants marked their overall health status as 'fair' than White participants (see Table 2). More non-White participants (19, 56%) experienced days of not good physical and mental health within the past month than White participants (8, 31%). Many participants (47, 78%), regardless of race/ethnicity, marked that they experienced many days (as many as 25) of not good mental health within the past month. There was almost an even amount of White (7, 27%) and non-White (10, 29%) participants who said that they had smoked tobacco

more than five days within the past month. More non-White participants (21, 62%), especially

Hispanic/Latino/a, marked that they drank alcohol more than five days within the last month than

White participants (11, 42%). Out of the 60 participants, only nine marked that they did not have

health insurance; however, out of those nine, eight were non-White (see Table 3). Majority of the

non-White participants who did have health insurance either had Medicare or Medicaid (18,

69%) whereas majority of the White participants who did have health insurance, had Private

insurance (20, 80%). Out of the 26 White participants, 14 marked that they do not visit a family

physician for a yearly check up and out of those 14, four marked they did not have a family

physician (see Table 4). Out of the 34 non-White participants, 16 marked they do not visit a

family physician for a yearly check up and out of those 16, 10 marked they did not have a family

physician (see Table 4). Of the participants who had a family physician, more of the White

participants (19, 86%) were of the same race as their family physician than the non-White

participants (7, 29%). Also, of the participants who had a family physician, non-White

participants (13, 54%) demonstrated less trust and respect for their family physician than White

participants (4, 18%). Out of the 17 participants who marked that they grew up in an urban

environment, three were White and 14 were non-White (see Table 5). Out of the 17 participants

who marked that they grew up in an urban environment, eight marked that their access to

affordable, healthy food options was either poor or fair (see Table 6). Seven out of the 24

participants who marked they grew up in a rural environment were non-White (see Table 5). Out

of the 24 participants who marked that they grew up in a rural environment, 15 marked that their

access to affordable, healthy food options was either poor or fair (see Table 7). Majority of the

non-White participants had lower income levels than the White participants (see Table 8).

Majority of the parents of White participants had completed higher levels of education than the

parents of non-White participants (see Table 9 and 10). Out of the 60 participants, 12 marked the quality of their K-12 education as either 'poor' or 'fair' (see Table 11). Of those 12 participants, eight were non-White (see Table 11). Participants were asked how often they personally experience racial discrimination (for example, having something bad happen to you solely because of your race and/or ethnicity). Out of the 60 participants, 17 marked that they experience racial discrimination either once a month or more. Of those 17 participants, 17 were non-White. Out of the 60 participants, 58 either agreed or strongly agreed that racism still exists today; the other two participants marked neutral. One of those participants was White and the other was Hispanic/Latino/a. Lastly, all of the participants gave a definition of racism, each very similar to one another. For instance, many of the definitions touched on the idea of racism as being the mistreatment of people solely because of their race.

Conclusion and Discussion

The results support both hypotheses: there is a relationship between racism and the environment that affects the health of college students and the results found in the college student population are similar to results found in much of the literature that was reviewed for this thesis.

The major conclusion to take away from the results of this study is that the White participants typically had overall better health outcomes than the non-White participants because they had a more supportive environment that was not interfered with by racism. The five social determinants of health typically had more negative influences on the non-White participants than the White participants especially in term of healthcare, income, and education. A few of the results may be associated with the fact that the respondents were all college students. For

example, I believe the results regarding the poor mental health of many of the participants is common within college-aged students regardless of race/ethnicity because of the level of stress they experience daily due to the societal demands placed on them. Also, the participants lack of health insurance regardless of race/ethnicity may be due to the fact that they cannot afford it because they are currently enrolled in college and supporting themselves financially for the first time. Overall, the results of this study are meaningful and can be generalized to other college student populations and to the much larger adult population as a whole.

The results from this study have significant future implications regarding the overall health status of America. If there is evidence to suggest that health disparities are already present between White college-aged students and non-White college-aged students, what does this imply their future health outcomes and differences will be? Examining health disparities in younger populations and conducting research within these populations is an effective way to demonstrate to people that changes need to be made. The more research and evidence that is available to suggest that there is a relationship between racism and the environment that affects the health of racial and ethnic minorities, the more likely changes will be made to reduce the health disparities gap. "We must use our tools to carry out more critical research on racism to help us identify and act on long-standing barriers to health equity" (Bassett, 2017, p. 667).

It can be difficult to act on barriers to health equity because there are a large number of them; it is difficult to know where to start. Evidence suggests that socioeconomic status affects the health of racial and ethnic minorities greatly. This may be an effective place to start. A study conducted by Muennig and Murphy (2011) found that socioeconomic status has a profound influence on the mortality rates of African Americans. It is important to note that in general, racial and ethnic minorities tend to have lower life expectancies and higher rates of infant

mortality compared to their White counterparts. In 2014, non-Hispanic African Americans had a

10.9 infant mortality rate per 1,000 live births whereas non-Hispanic Whites only had a 4.9

infant mortality rate per 1,000 live births (Office of Minority Health, n.d.). Furthermore, in a

study conducted on the effects of socioeconomic status and child health outcomes, researchers

concluded that "Family socioeconomic status is the strongest single predictor of diminished

health and well-being for children" and that this is most true for African Americans (Perkins,

2016, p. 60). African Americans may be the most racially discriminated against population. CBS

News reported the results from a survey conducted by the Consumer Federation of America that

examined car insurance rates between African Americans and Whites.

> "The survey looked at good drivers who live in ZIP codes mainly populated by African
>
> Americans and compared them to those in largely White areas. It found that quoted
>
> premiums were 70 percent higher for African Americans. The average premium for those
>
> with similar incomes and driving records was $1,060 for black drivers compared to $622
>
> for Whites, the CFA found" (Lipka, 2015, para. 2).

Another study examined the cross-sectional and longitudinal effects of racism on mental health

among residents living in predominately Black neighborhoods in New York City. The

researchers concluded that depression, anxiety, distress, and PTSD are all symptoms of declining

mental health for African Americans due to their experiences with racial discrimination (Kwate

and Goodman, 2015). The accumulation of constant, unjust treatment takes a toll on both a

person's mental and physical health.

Examining the socioeconomic status of all racial and ethnic minorities is an effective way

to begin removing barriers to health equity because this determinant profoundly affects the other

determinants of health, especially neighborhood and build environment. Since many racial and

ethnic minorities have low socioeconomic status, their neighborhood environment tends to be of low status as well. Many racial and ethnic minorities live in low-income, urban neighborhood environments. My results were conclusive with this statement. 41% of the non-White participants in my study lived in an urban environment compared to only 12% of White participants. In a study conducted on early adolescent behavioral health risks among urban American Indian/Alaska Natives and their peers, researchers found that American Indian/Alaska Natives had "Significantly more depressive symptoms than non-Hispanic Whites. They also reported more discrimination, more generalized anxiety, and were more likely to have initiated substance use, in comparison to non-Hispanic Whites" (Serafini, Donovan, Wendt, Matsumiya, and McCarty, 2017, p. 11). In my results, there was a higher percentage of non-White participants who had marked that they had consumed alcohol more than five days within the last 30 days than White participants.

Understanding how all five of the social determinants of health intersect with privilege and racism to create an effect on the health of racial and ethnic minorities is crucial for understanding how to reduce the health disparities gap. It is therefore also important to identify the variety of health disparities that exist within racial and ethnic minorities. For instance, "More non-Hispanic White people experience higher income levels than Hispanic and African American members of society" (Shlovevar & Baron, 2009, p. 271). "Students from high-income families have a 16% higher graduation rate compared with their peers from low-income families" (Williams et al., 2016, p. 74). "Nearly 32.1% of Latinos, 19.5% of African Americans, and 16.8% of Asians lack health insurance" (Pardasani and Banyopadhyay, 2014, p. 23). "Seventy-nine percent of African Americans had health coverage in 2009 compared to 88 percent of White Americans," "Nearly 15 percent of African Americans have diabetes compared

with 8 percent of Whites," "Hispanic women contract cervical cancer at twice the rate of White women," and "Native Hawaiians and Pacific Islanders are 30 percent more likely to be diagnosed with cancer compared to non-Hispanic Whites" (Russell, 2010, p. 1-4). These are a few statistics out of many that are congruent with the results of my study. This demonstrates that there is a consistent pattern of evidence to suggest that there is a relationship between racism and the environment that is creating an effect on health that is difficult for racial and ethnic minorities to overcome.

It is imperative that America take action towards reducing the health disparities gap for numerous reasons. For one, it is unjust for all people living in America to not have equal opportunities for maximized health. It is contradicting for America to pride itself on freedom and equality but not provide equal opportunities for all its people. Another reason why it is imperative that America take action to reduce the health disparities gap is, America is already ranked lower than many other developed countries in terms of overall health and many other specific health outcomes. A 2014 study found that America had the worst overall healthcare ranking compared to 10 other developed countries (Davis, Schoen, Squires, Stremkis, 2014). Another study found that "Out of its 34 economic peer countries in Europe, Asia and North America, the U.S. ranked 27th in disease burden brought on by dietary factors, 27th in high body mass index (BMI) and 29th in blood sugar levels" (Murray, 2015, p. 2290). If the current health disparities gap does not improve, America will continue to rank lower and lower in health compared to other developed countries. Also, the United States spends the most amount of money on healthcare than any other developed country, yet it ranks 50th out of 227 in life expectancy (Davis et al., 2014). What this means is, America is spending large amounts of tax payer money on healthcare but has little to show for it. In terms of expenditure as share of GDP,

the United States spends 2.4% on infrastructure, 3.2% on military, 5.7% on education, and 16% on healthcare (Davis et al., 2014). The issue is not that the United States does not have enough money for an adequate, universal healthcare system. The issue is that the United States is not efficient in terms of healthcare spending. 75 cents of every healthcare dollar is used for chronic diseases such as type 2 diabetes, lung disease, and heart disease (Davis et al., 2014). This illustrates that America's healthcare system does not prioritize acute illnesses which are also important. The healthcare industry needs to not be profit driven but rather ethically driven, meaning, the industry's primary purpose should be to deliver efficient, affordable, quality healthcare to all people rather than trying to make a profit off of its people.

It can be difficult to find ways to begin reducing the health disparities gap because there are many moving parts. Each social determinant of health is complex in its own way, making it difficult to reduce the health disparities gap efficiently. This is not a social issue that can be resolved within a year or even within five years. The current health disparities gap is the result of years and years of racial discrimination. Positive change can not occur until racial discrimination is addressed as the core issue in the health disparities gap. The reduction of the health disparities gap begins by advocating on local, state, and federal levels urging policy makers to make health and environmental changes that benefit all people living in America, not only the rich and the White. Effective change can occur within small communities and expand to larger communities and reach greater amounts of people. Ideally, this study along with many other existing and continuing studies will help support the need to advocate for changes that will reduce the health disparities gap in order to create health equity in America.

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Appendix

Figure 1: Social Determinants of Health Model

(HealthyPeople2020, 2018)

Figure 2: Socioecological Model of Racism
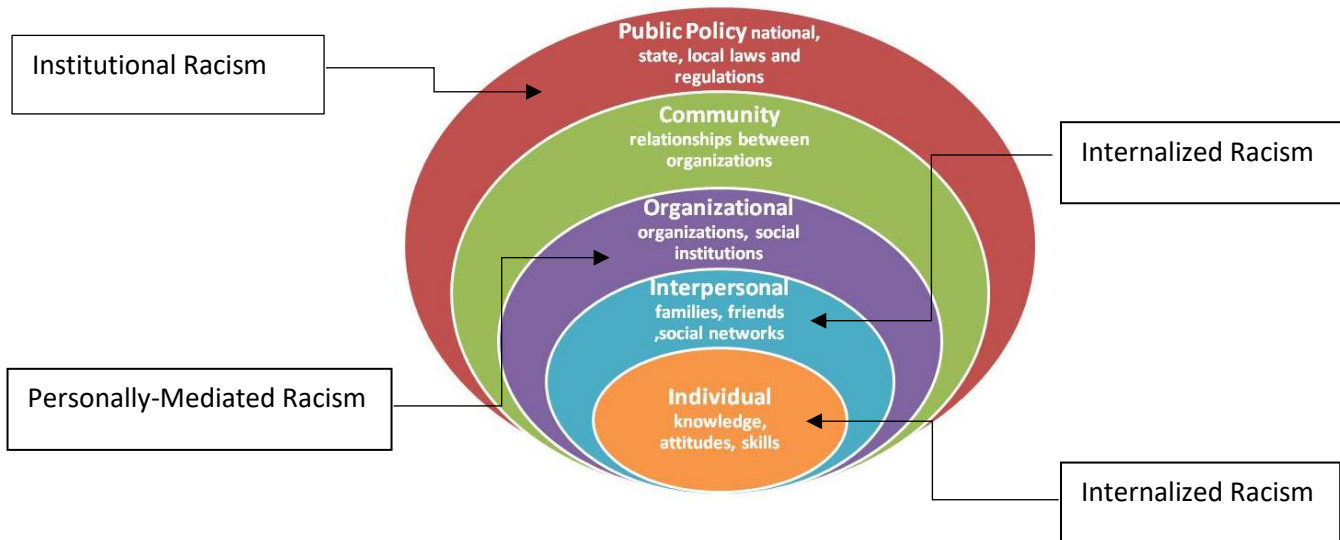
(Prather et al., 2016)

Table 1: Sample Population

White	26
Hispanic	19
Black	8
Two or more races	7
Total	**60**

Table 2: Participant's Overall Health Rating

Categories	White	Non-White	Total
Fair	2 (8%)	8 (24%)	10 (17%)
Good	2 (8%)	10 (29%)	12 (20%)
Very Good	21 (80%)	14 (41%)	35 (58%)
Excellent	1 (4%)	2 (6%)	3 (5%)

Table 3: Health Insurance among Participants

Categories	White	Non-White	Total
Insurance	25 (96%)	26 (76%)	51 (85%)
No Insurance	1 (4%)	8 (24%)	9 (15%)

Table 4: Family Physicians among Participants

Categories	White	Non-White	Total
Family Physician	22 (85%)	24 (71%)	46 (77%)
No Family Physician	4 (15%)	10 (29%)	14 (23%)

Table 5: Participant's Neighborhood Environment

Categories	White	Non-White	Total
Urban	3 (12%)	14 (41%)	17 (28%)
Rural	17 (65%)	7 (21%)	24 (40%)

*The 19 participants excluded from this table marked Suburban as their Neighborhood Environment.

Table 6: Participant's Living in Urban Neighborhood Environments Rating of Access to Affordable, Quality Food

Poor or Fair	Good, Very Good, or Excellent
8 (47%)	9 (53%)

Table 7: Participant's Living in Rural Neighborhood Environments Rating of Access to Affordable, Quality Food

Poor or Fair	Good, Very Good, or Excellent
15 (63%)	9 (37%)

Table 8: Annual Income Levels of Participants or Participant's Parents

Categories	White	Non-White	Total
<$20,000	3 (12%)	12 (35%)	15 (25%)
$30,000-50,000	6 (23%)	16 (47%)	22 (37%)
$60,000-80,000	9 (35%)	2 (6%)	11 (18%)
$90,000-100,000	4 (15%)	2 (6%)	6 (10%)
>$100,000	4 (15%)	2 6%)	6 (10%)

Table 9: Level of Education Completed by Participant's Father

Categories	White	Non-White	Total
Not Sure	0 (0%)	5 (15%)	5 (8%)
No School	0 (0%)	7 (21%)	7 (12%)
Some High School	1 (4%)	3 (9%)	4 (7%)
High School Diploma or GED	6 (23%)	5 (15%)	11 (18%)
Some College	4 (15%)	4 (12%)	8 (13%)
Technical/Trade	4 (15%)	0 (0%)	4 (7%)
Associates Degree	2 (8%)	1 (3%)	3 (5%)
Bachelor's Degree	7 (27%)	1 (3%)	8 (13%)
Master's degree	2 (8%)	3 (9%)	5 (8%)
Doctorate Degree	0 (0%)	1 (3%)	1 (2%)

Table 10: Level of Education Completed by Participant's Mother

Categories	White	Non-White	Total
Not Sure	0 (0%)	3 (9%)	3 (5%)
No School	0(0%)	5 (15%)	5 (8%)
Some High School	1 (4%)	4 (12%)	5 (8%)
High School Diploma or GED	5 (19%)	9 (35%)	14 (23%)
Some College	4 (15%)	3 (9%)	7 (12%)
Technical/Trade	0 (0%)	1 (3%)	1 (2%)
Associates Degree	4 (15%)	0 (0%)	4 (7%)
Bachelor's Degree	7 (27%)	5 (15%)	12 (20%)
Master's degree	4 (15%)	3 (9%)	7 (12%)
Doctorate Degree	1 (4%)	1 (3%)	2 (3%)

Table 11: Participant's Rating of the Quality of Their K-12 Education

Categories	White	Non-White	Total
Poor or Fair	4 (15%)	8 (24%)	12 (20%)
Good, Very Good, or Excellent	22 (88%)	26 (76%)	48 (80%)

Recruitment Script

Dear _____,

My name is Hannah Batsche and I am a Junior at EKU. I am an honors student majoring in Occupational Science. I am conducting research for my Honors Thesis in which I am examining the relationship between racism and environment on an individuals' health and how that influences the overall health of the United States population. I am writing to ask your permission to attend one of your organization's meetings to discuss the research and seek volunteers to take a survey that is part of my research study. Participation in this survey is completely voluntary and would take around ten minutes to complete. Participants must be of 18 years of age or older. Responses will be anonymous. There may be minimal emotional risks due to some of the survey questions pertaining to racial discrimination. Contact information for the EKU Counseling Center is included at the end of the survey in case needed. The survey includes a statement that explains that participation in the survey in no way affects a student's standing in a course, with a professor and/or with the club/organization. Students will be given my contact information (hannah_batsche@mymail.eku.edu) and my faculty thesis mentor (Dr. Michelyn Bhandari at (michelyn.bhandari@eku.edu) in case they have any questions regarding the research study or their rights as a participant.

Please respond to this email if you are willing to allow about 15 minutes of time for me to attend your organization's next meeting to discuss my research objectives and to administer the survey to those who volunteer to participate.

Thanks for your time and I look forward to hearing back from you.

Sincerely,

Hannah Batsche

Survey Instrument

Honors Thesis Research: The Effects of the Relationship Between Racism and the Environment on Personal Health

This survey is a part of my honors thesis research examining the relationship between racism and environment on an individuals' health and how that influences the overall health of the United States population. Participation in this survey is completely voluntary and should take around ten minutes of your time. Participants must be of 18 years of age or older. Responses will be anonymous. There may be minimal emotional risks due to some of the survey questions pertaining to racial discrimination. Refusal to participate or discontinuation of participation will in no way affect your standing in this course or with your professor and/or with your club/organization.

If you have any questions regarding your rights as a participant or the current research, feel free to contact myself at hannah_batsche@mymail.eku.edu or Dr. Michelyn Bhandari at michelyn.bhandari@eku.edu.

Please read each question completely and answer honestly. The responses you provide are very important to understanding this topic. Select ONE response for each question unless instructions say to answer ALL THAT APPLY.

1. Do you agree to participate in this survey?
    - o Yes
    - o No

    If you answered NO, please STOP and do not answer any more questions. If yes, move to question 2.

2. Are you 18 years of age or older?
    - o Yes
    - o No

    If you answered NO, please STOP and do not answer any more questions. If yes, move to question 3.

3. What is your age?

4. Would you say that in general your health is
    - o Poor
    - o Fair
    - o Good
    - o Very good
    - o Excellent

5. Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health NOT good?
   - o 0
   - o <5
   - o 5-15
   - o 15-25
   - o >25

6. Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health NOT good?
   - o 0
   - o <5
   - o 5-15
   - o 15-25
   - o >25

7. Do you smoke tobacco?
   - o Yes
   - o No

   If yes, how many days out of the last 30 days have you smoked?
   - o 0
   - o <5
   - o 5-15
   - o 15-25
   - o >25

8. Do you drink alcohol?
   - o Yes
   - o No

   If yes, how many days out of the last 30 days have you drank?
   - o 0
   - o <5
   - o 5-15
   - o 15-25
   - o >25

9. Do you have health insurance?
   - o Yes, I am a dependent on my parent's health insurance.
   - o Yes, I have my own health insurance.
   - o No

   If yes, what type of health insurance do you or your parents have?
   - o Private

- o Medicare
- o Medicaid
- o Not sure

10. Do you visit a family physician for a yearly checkup?
   - o Yes
   - o No

11. My family physician is the same race as me.
   - o Yes
   - o No
   - o Not sure
   - o I don't have a family physician

12. I trust and respect my family physician.
   - o Strongly disagree
   - o Disagree
   - o Neutral
   - o Agree
   - o Strongly agree
   - o I don't have a family physician

13. Which of the following describes the area you grew up in?
   - o Urban
   - o Rural
   - o Suburban

14. In your hometown, how would you rate the access to affordable, healthy food options?
   - o Poor
   - o Fair
   - o Good
   - o Very good
   - o Excellent

15. What is your yearly household income? If still a dependent, what is your family's yearly household income?
   - o < $20,000
   - o $30,000-50,000
   - o $60,000-80,000
   - o $90,000-100,000
   - o >$100,000

16. What is the highest level of education completed by your father?
   - o Not sure
   - o No schooling completed
   - o Some high school, no diploma

- o High school diploma or the equivalent (for example: GED)
- o Some college credit, no degree
- o Trade/technical/vocational training
- o Associate degree
- o Bachelor's degree
- o Master's degree
- o Doctorate degree

17. What is the highest level of education completed by your mother?
- o Not sure
- o No schooling completed
- o Some high school, no diploma
- o High school diploma or the equivalent (for example: GED)
- o Some college credit, no degree
- o Trade/technical/vocational training
- o Associate degree
- o Bachelor's degree
- o Master's degree
- o Doctorate degree

18. How would you rate the quality of your K-12 education?
- o Poor
- o Fair
- o Good
- o Very good
- o Excellent

19. How do you usually describe yourself? (Mark all that apply)
- o White
- o Black
- o Hispanic or Latino/a
- o Asian or Pacific Islander
- o American Indian, Alaskan Native, or Native Hawaiian
- o Biracial or Multiracial
- o Other

20. How often do you personally experience racial discrimination (for example, having something negative happen to you solely because of your race and/or ethnicity)?
- o Never
- o Rarely
- o Once a month
- o Once a week
- o Once a day
- o More than once a day
- o Prefer not to answer

21. Racism still exists today.
- o Strongly disagree
- o Disagree
- o Neutral
- o Agree
- o Strongly agree
- o Prefer not to answer

22. What is your definition of racism?

If needed, the EKU Counseling Center is available to students. The website address is https://counselingcenter.eku.edu and the phone number is 859-622-1303.