EXAMINING PREVENTIVE HEALTH CARE UTILIZATION IN BLACK COLLEGE WOMEN THROUGH A BLACK FEMINIST-WOMANIST LENS

by

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ABSTRACT

Despite higher rates of disease and mortality compared to White women, Black women often experience low rates of preventive health care including recommended screenings and vaccinations that may have a protective effect. An increase in preventive healthcare utilization, has been posited as a way to offset health disparities. However, little is known about how different cultural aspects including lived experiences in the healthcare system, generational knowledge, and intersecting experience with oppression affect the ways that Black women engage with recommended preventive healthcare screenings and vaccinations broadly. Further, even less is known about how preventive healthcare habits are established while in college at a time when Black women are learning to establish a variety of lifelong habits. Thus, the current mixed methods study utilized a cross-sectional online survey to examine how Black college women define and learn about overall health and preventive health and whether applying a Black Feminist-Womanist lens to Andersen's Behavioral Model of Health Services Utilization would predict preventive healthcare utilization in Black college women. Applying a Black Feminist-Womanist lens included prioritizing qualitative data to learn about how Black college women defined their experiences and to contextualize quantitative data. Qualitative questions assessed

how Black college women defined health, how they engaged in preventive health for both acute and chronic conditions, their experiences with healthcare thus far, expectations for or messages received about the healthcare system, and the sources of this information. Quantitative questions assessed rates of preventive healthcare utilization while examining the ways that culturally relevant factors including medical mistrust, health literacy, social influence, religious salience, provider respect, and affirming provider behaviors predicted preventive healthcare utilization. Qualitative responses highlighted participant's holistic views of health that included both physical and mental health. However, when it came to acute and chronic illness prevention, few participants conceptualized preventive health screenings, vaccinations, or appointments as important parts of preventive healthcare. However, themes of health literacy, self-advocacy, and holistic preventive healthcare behaviors, were voiced across participants as ways to live healthier lives and get their needs met within the healthcare system. Quantitative responses indicated low rates of preventive healthcare utilization with only 30% of the same receiving 60% or more of the recommended preventive screenings and vaccinations for their individual demographics. Results indicated that some culturally relevant predisposing factors predicted healthcare utilization. Taken together, qualitative and quantitative results highlighted the importance of health literacy and evaluated need in relationship to utilization of preventive healthcare. Future studies should examine ways to incorporate screenings and vaccinations into Black college women's conceptualization of preventive healthcare, continue to examine facilitators to preventive healthcare utilization, and leverage the existing strengths of communities of Black women to continue to move towards health equity

Examining Preventive Healthcare Utilization in Black College Women Through a Black Feminist-Womanist Lens

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Chapter 1: Introduction

Prior studies have noted significant health disparities experienced by Black women compared to their white peers. In addition to having increased overall and maternal mortality compared to their peers of other races, Black women experience excess cancer mortality, obesity, hypertension, and diabetes compared to White women (Bazzi et al., 2015; Forney-Gorman & Kozhimannil, 2016; Williams, 2012). Compounding these disparities, Black women often lag behind in preventive health care such as screenings and vaccinations when compared to White women (Nolan et al., 2014; Pullen et al., 2014; Rambout et al., 2014). Often the Behavioral Model of Health Service Use (BMHSU) is employed to understand and predict both individual and contextual influences on health care utilization. The model postulates that knowledge of various predisposing, enabling, and need factors can help us to understand and predict health care utilization (Andersen, 2008; Babitsch et al., 2012). While a handful of studies have identified predisposing, enabling, and need factors of Black women and how they relate to healthcare utilization, few studies have examined healthcare utilization in Black women who are college students, specifically (Barnett et al., 2019; Prather et al., 2018; Pullen et al., 2014; Sadler et al., 2017; Tran & Silvestri-Elmore, 2020). This gap in the literature can limit the ability to which public health efforts can work towards establishing healthy habits for college age Black women.

The BMHSU is a comprehensive model of healthcare utilization. However, the model may not adequately address the lived experiences of Black women. To apply this model to the experiences of Black women, additional consideration is needed to address the way that cultural experiences related to various forms of oppression affect Black women's health behaviors. Viewing the domains of the BMHSU from the perspective of Black Feminist-Womanist (BFW)

thought could enhance its relevance to health care utilization in Black women. BFW thought posits that Black women have everyday lived experiences with intersecting forms of oppression that shape views, attitudes, behavior, and outcomes, both individually and collectively (Collins, 2002; Lindsay-Dennis, 2015).

To examine the BMHSU from a BFW perspective, the current mixed method study utilized a cross-sectional online survey of Black female college students. Hierarchical logistic regression was employed to help better understand the degree to which predisposing, need, and enabling factors predicted utilization of recommended preventive healthcare screenings and vaccinations. Qualitative questions were employed to explore how Black women learn about and define health and preventive healthcare and to help contextualize the quantitative data. Results of this study may help us to better understand preventive healthcare utilization among Black female college students and to identify ways to decrease existing disparities in healthcare utilization that can contribute to poor health outcomes.

Researcher Role

The researcher is a doctoral student in her late-20s. She identifies as a queer cisgender Black woman from the mid-Atlantic region of the United States. This researcher has experience interacting in a variety of healthcare settings. Her experiences growing up in a middle-class military family exposed her to the military healthcare system that was more aligned with what is traditionally thought of as universal healthcare where all healthcare was covered by her parent's job and there were no copays. In adulthood, the researcher experienced the traditional American healthcare system with co-pays and health insurance premiums. Further, the researcher's experiences as a Black queer woman accessing the healthcare system as well as the experiences of friends and relatives have influenced the perspectives and biases in this study.

Thus, the researcher recognizes the following beliefs and assumptions: (1): Many Black women experience the effects of racism and discrimination at various levels in society, but may not be aware of or readily acknowledge how these effects function in their lives; (2) Various medical, social, education and legal institutions perpetuate the oppression that Black women face in society; and (3) Within Black communities, health behaviors, health status, and health decisions can be taboo topics that may be discussed with varying degrees of reticence.

Chapter 2: Literature Review

Black Women's Health Disparities

Compared to their White peers, Black women experience increased mortality rates, controlling for a number of factors including age, socioeconomic status (SES), health history, and insurance status (Bazzi et al., 2015; Forney-Gorman & Kozhimannil, 2016; Williams, 2012).While the top three causes of death for Black women are heart disease, cancer, and stroke, they are more likely than women from any other race to die from breast and cervical cancer, cardiovascular disease and HIV/AIDS. There are a variety of disparate risk factors that make these causes of death more likely including obesity, hypertension, diabetes, and high cholesterol (Center for Diseases Control [CDC], 2021a). For example, Black women have the highest prevalence of obesity, with more than half of all Black women over 20 years of age being obese (CDC, 2021a). Biological vulnerabilities can increase risk for these health concerns, but health behaviors, and environmental factors, and epigenetics can all contribute to these complex disparities. Preventive care has been noted to decrease this disparate mortality. Though Black women have some of the highest mortality rates from diseases that are preventable and/or have proven methods for early detection, Black women often lag behind their white peers in utilization of preventive health care (LaVeist et al., 2009; Pullen, et al., 2014). However, even when Black women do seek preventive care, they still experience inequitable outcomes. For instance, for breast cancer, the second leading cause of death in Black women, Black women have higher rates of mortality compared to White women. This is due to several factors including variations in tumor biology that can lead to delays in diagnosis, different comorbidities that may complicate standardized treatment procedures, and longer delays from diagnosis to treatment that may allow for disease progression (CDC, 2021a; CDC 2021b; Hoppe et al., 2019; Moormeier,

1996; Sadler et al., 2007). When conceptualizing these disparities, racism, and discrimination broadly and in medical contexts, as well as underutilized preventive care are thought to play an influential role in disparities.

Racism and Black Women's Health

Black women are not a monolith and have a variety of lived experiences that span various geographic regions, countries of origin, income levels, education levels, occupations, etc., yet many Black women are affected by the deeply ingrained racism that proliferates the legal, educational, judicial, and health systems in our country. Racism is defined as an "organized social system in which the dominant racial group, based on an ideology of inferiority, categorizes and ranks people into different social groups called 'races' and uses its power to devalue, disempower, and differentially allocate valued society resources and opportunities to groups defined as inferior" (Williams et al., 2019).

In America, racism affects Black women and their health in a variety of often overlooked, yet insidious ways. Typically, three levels of racism are discussed in the framework of understanding racism: institutional racism, interpersonal racism, and internalized racism (Jones, 2000; Williams, et al., 2019). Institutional racism, also referred to as structural racism, is a system of unequal distribution based on race that is embedded in laws at the local, state, and federal levels as well as institutional policies and practices (Matoba et al., 2019; Williams et al., 2019). Institutional racism leads to disparities in income, education, employment, housing, access to health care, and more (Matoba et al., 2019). Further, institutional racism is composed of longstanding systems that do not require malicious intent or explicit action to be maintained. Instead, these systems are often maintained through inaction. Of note, an important part of the maintenance of these systems of racism is the exclusion of the history of institutional racism

from the conversation of health disparities (Hicken et al., 2018). There are a variety of different types of institutional racism, but one of the most relevant for this study is medical racism which refers to the systematic racism against people of color in the medical system (Williams et al., 2019.).

The second type of racism, interpersonal racism (sometimes called individual or personally mediated racism) occurs between individuals and is what is typically thought of when the term "racism" is discussed. Interpersonal racism is characterized by prejudice which involves differential expectations and assumptions based on race, and discrimination which refers to enacted racism or treating others differently due to race (Jones, 2000). Interpersonal racism can be intentional or unintentional and can manifest through a variety of ways including disrespect, suspicion and distrust, devaluation, scapegoating, and dehumanization. Interpersonal racism maintains institutional racism and is often tolerated and reinforced by societal norms (Jones, 2000).

Internalized racism is the third type of racism that occurs when members of stigmatized races accept negative messages about their own abilities and worth. This type of racism can manifest in elevating European standards of beauty, colorism that values lighter skin tones, de-valuing one's own racial identity and culture, as well as hopelessness and helplessness (Jones, 2000). This study will focus primarily on two types of racism that contribute to the health outcomes and disparities that Black women face: institutional racism with specific attention to medical racism, and interpersonal racism.

The Effect of Institutional Racism in Black Women's Lives

As institutional racism is embedded in the laws and policies that Black women interact with daily, there are a variety of interconnected concerns that relate to institutional racism. When

considering the effect of institutional racism on Black women's health, the environments in which Black women live and work must be considered. These environments have been shaped by discriminatory policies and procedures such as residential redlining and income inequality, that have widespread negative effects on the lives and health of Black women.

Residential redlining started in the 1930s during which the Federal Housing Administration designated areas with red lines on maps to determine where mortgages would be denied to racial minority groups to prevent the racial integration of neighborhoods (Matoba et al., 2019; Nardone et al., 2020). As a result of this discrimination, many areas that Black Americans were allowed to move to had lower property values. In the present day many redlined neighborhoods continue to have lower property values and often lack high quality resources such as jobs, grocery stores, and recreational areas (Bailey et al., 2017; Nardone et al., 2020). Additionally, residents in these areas tend to be disproportionally targeted by advertising for high calorie, high sugar food and they are exposed to higher levels of pollution compared to areas that were not historically redlined and often have predominately white residents (Kravitz-Writz et al., 2016; Lewis, et al., 2005; Nardone et al., 2020). This is particularly relevant to Black women's health because environmental hazards, lack of spaces for recreation, and limited access to healthy food, all prevalent in redlined areas, can put Black women at higher risk of chronic health conditions such as asthma, obesity, diabetes, cognitive deficits, and cancer (Bailey et al., 2017; Matoba et al., 2019; Nardone et al., 2020; Taft et al., 2009).

In addition to residential redlining, income inequality can negatively affect Black women's health. In 2016, the median family income for Black families was 56% of that of White families (Manduca, 2018). In 2020, Black women made 64 cents per every dollar of their White male counterparts which puts them at a disadvantage when it comes to financial security

(Hegewisch & Mefferd, 2021). Income inequality has been linked to health consequences as well including self-rated mental and physical health, pregnancy-related mortality, and underweight infants (Lopez, 2004; Vilda et al., 2019; Wallace et al., 2015; Zimmer & Bell, 2006). Income inequality also prevents Black women from spending as much money on leisure and recreational activities compared to their White peers (Lee et al., 2001; Moore et al., 2008). This can lead to less opportunity to mitigate stress and less opportunity for recreational fitness (Im et al., 2012).

Taken together, these examples of institutional racism create and maintain barriers for Black women including environmental hazards and income inequality that prevent them from experiencing a healthy quality of life. These barriers all contribute to lower life expectancy and increased mortality (CDC, 2021a; CDC 2021b; Hoppe et al., 2019; Moormeier, 1996; Sadler et al., 2007). Thus, institutional racism, especially the intertwined ideas of residential redlining and income inequality affect the health of Black women from racial, gender, and class standpoints. When Black women connect with the healthcare system to address their health needs, they are often met with another type of another type of institutional racism: medical racism.

Black women and the health care system: A history of medical racism

Medical racism is another type of institutional racism that affects Black women's health. Racism in American medicine has paralleled racism in American society. The history of medical racism in the United States has existed as long as our nation itself and has included racial inferiority stereotypes being taught in medical school, biased educational processes and testing, medical and scientific abuse, unethical experimentation, disproportionately using Black Americans as subjects for teaching and training in medical settings, and the exclusion of and/or mistreatment of Black Americans in research (Byrd et al., 2001; Spates, 2012). These effects have far-reaching consequences when it comes to screening, diagnosis, and treatment of various

diseases. For example, disproportionately using Black Americans as subjects for teaching and training can lead to Black patients being subject to unproven and potentially unsafe treatments as well as painful procedures (Gary et al., 2015; Jacobs et al., 2006). Another example of these consequences lies with breast cancer disparities. When examining the differences in survival rate between Black and white women with breast cancer, delays in screening alone do not account for discrepancies. Instead, some Black women have different tumor biology, different comorbidities, and longer delay from time of diagnosis to time of first treatment when compared to White women (Hoppe et al., 2019; Moormeier, 1996). Given the various disparities that Black women experience in medical settings, it is unsurprising that medical mistrust is a theme in the research regarding health disparities in Black Americans.

When discussing medical racism, the Tuskegee syphilis study is frequently referenced. In this study of Black men in Alabama, almost 400 Black men with syphilis were studied and involved in research without their knowledge. They were told that they were being treated for "bad blood," a vague colloquialism used to reference a multitude of medical conditions. Ten years into the study penicillin was introduced as a widely available treatment, but it was not offered to study participants by researchers and physicians outside of the study were instructed to deny this treatment to study participants. The study continued for an additional 30 years, allowing for transmission of syphilis to intimate partners and premature death for many affected by the disease (CDC, 2021c). This study is often referenced by the Black community as a cautionary tale of medical mistreatment and institutional deceit. More recently, there are three health crises that have come into public discourse: the medical community's dismissal and disbelief about Black patients' pain, the disproportionate maternal mortality rate for Black women, and the disproportionate rates at which Black patients have died from COVID-19.

Beliefs about pain. Black Americans are systemically underassessed and undertreated for pain in the United States (Green et al., 2003). For example, it has been noted in the literature that physicians are less likely to prescribe Black patients pain medication (Green et al., 2003; Tamayo-Sarver et al., 2003). One reason for this treatment disparity may be the misinformation and inaccurate beliefs about pain that are prevalent in the medical community. A frequently cited and discussed study regarding the ways in which the health care system inadequately address pain in Black patients is the 2016 study by Hoffman and colleagues (Hoffman et al., 2006). In this study white medical students were asked about their beliefs about pain between Black and White individuals. Half of the sample of White medical students in the study endorsed at least one inaccurate belief about biological differences between Black and White patients with regard to pain tolerance. Many of the medical students believed that Black patients had thicker skin and a higher pain tolerance and thus made less accurate and appropriate recommendations for treatment (Hoffman et al., 2016). This was particularly concerning as it suggests that even among individuals with some medical training, there are false beliefs about biological difference that inform medical decision making and can contribute to health disparities.

Maternal health. The maternal mortality rate for Black women in the United States is 3.5 times higher than that of White women (Adebayo et al., 2021; National Center for Health Statistics, 2019). Racialized pregnancy stigma and associated assumptions of low income, being unpartnered, and having multiple children are experienced by Black women across parity (i.e., number of births), SES, and marital status. Black women report experiencing this stigma across settings including their day-to-day activities, in health care settings, and with social services (Mehra et al, 2020). While these factors likely contribute to increased stress in pregnancy, Black women's interactions with the health care system during pregnancy also have much more severe

consequences. In addition to structural racism limiting Black women's access to quality health care, racially insensitive medical approaches, unfair treatment due to health insurance, and dismissed pain due to the stereotype of being a "strong Black woman" have all been cited as contributing to the inequitable healthcare that Black women receive in pre-, peri-, and post-partum healthcare (Adebayo et al., 2021). Further the odds of dying due to a preventable pregnancy-related complication have been shown to be up to 14 times higher for Black women than for White women (Mehta et al., 2020). Quality improvement in hospital systems and improvements in racial inequity have been suggested as ways to improve maternal mortality in Black women (Mehta et al., 2020).

COVID-19. One of the most recent health crises disproportionately affecting the Black community is the novel coronavirus 2019 (COVID-19) pandemic (Yancy, 2020). Early into the pandemic, there were very drastic disparities in COVID-19 cases and deaths. For example, in Chicago, where Black individuals made up 30% of the population, they made up almost 70% of the COVID-19 deaths. On average, the death rate for predominantly Black counties in the U.S. was six times higher than that of predominantly White counties. While comorbidities play a role in the cases and deaths, socioeconomic factors play an important role as well. High housing density areas put individuals at increased risk of COVID-19 and these areas often have high proportions of Black residents (Yancy, 2020). Additionally, many Black Americans have jobs that do not support working from home and rely on public transportation in order to get to work, both of which increased risk of COVID-19 infection, especially before vaccinations were available (Holder et al., 2021; Yancy, 2020). Further, though men have a higher chance of dying from COVID-19, this differs by race. In some states, Black women were shown to have a significantly higher mortality rate than White and Asian American/Pacific Islander men

(Rushovich, 2021). In addition to mortality, there are other potential lasting effects of COVID-19 that may affect Black women, including economic distress and mental health concerns. Black women were overrepresented in service industries as well as low-wage jobs that have both been heavily affected by the pandemic (Holder et al., 2021). Due to concern about providing financial support to their families, worrying about contracting the virus, and worrying about the health of the people they care about, Black women are under significant stress. The additional intersectional disadvantage and systemic racism that Black women face put them at an even higher risk of poor psychological health (Walton et al., 2021).

While vaccines were developed and disseminated in order to help end the pandemic, vaccine hesitancy in the Black community has been very high with some studies showing vaccine hesitancy as high as 50% (Willis et al., 2021). This hesitancy is justified based on centuries of medical exploitation of Black Americans by the health care system. There have been a handful of proposed solutions to decrease vaccine hesitancy in the Black community. Some of the most widely discussed suggestions include targeted public health campaigns and increasing the amount of Black healthcare workers and physicians so that Black patients feel more comfortable discussing their concerns about getting vaccinated (Willis et al., 2021; Yancy, 2020).

Interpersonal racism

The majority of research discussing racism and Black women's health, focuses on interpersonal racism. Interpersonal racism does have some overlap with medical racism as it often takes place in medical settings. For example, there are instances of disrespect, stereotyping, providers failing to communicate options for prevention and treatment, and providers being surprised at patient competence (Jaiswal & Halkitis, 2019; Jaiswal, 2019; LaViest et al., 2009;

Scharff et al., 2010). Further, there is a documented history of medical residents and physicians dismissing Black women's experiences about their bodies and failing to understand the beliefs and values of Black patients (Adebayo et al., 2021; Ejaife & Ho, 2019; Freedman, 1999). However, the majority of research on interpersonal racism focuses on everyday experiences with racism and discrimination and postulates that these experiences are psychosocial stressors that enact stress on the body in variety of ways resulting in physiological, emotional, and behavioral responses that can affect both physical and mental health. Since Black women are a diverse and heterogeneous group, there is variability in the degree to which the experience of interpersonal racism and discrimination affect Black women's health. Different amounts of exposure to racism and chronic discrimination as well as variations in coping may contribute to the within-group variability regarding the role of racism on the body (Clark et al., 1999).

Physiological Consequences of Racism

When the effect of racism on Black women's' health has been examined, it has been conceptualized as a psychosocial stressor (Bailey et al., 2017). Racism has been primarily connected to mental health concerns and has been shown to have negative relationships to mental health such that when there are higher amounts of self-reported racism, there are increased negative outcomes including depression, anxiety, distress, negative affect, and post-traumatic stress and decreased positive mental health experiences including self-esteem, life satisfaction, and wellbeing (Bailey et al., 2017; Paradies et al., 2015).

From the physiological perspective, experiences of discrimination and racism are consistently associated with poor health outcomes (e.g., obesity, hypertension) which reflect the changes in the body due to chronic stress (Cozier et al., 2014; Cozier et al., 2006). Chronic stress, including that from prolonged interpersonal racism and chronic financial strain that often

stems from institutional racism, activates the hypothalamic-pituitary-adrenal (HPA) axis which can increase the amount of cortisol in the body (Clark et al., 1999). Increased cortisol can suppress the immune system which can leave individuals vulnerable to disease and can slow their healing processes. Further, higher amounts of cortisol in the blood can also increase cardiac activity and place additional stress on the heart and circulatory system. Perceived racism, experiences of chronic discrimination, and financial strain have also been linked to epigenetic manifestations of chronic stress including increased allostatic load, telomere shortening, increased inflammation, and chronic pain (Aroke et al., 2019; Bailey et al., 2017).

Epigenetic effects refer to the ways in which both behaviors and environment can change the ways that genes are expressed (Beauchaine et al., 2008). From the behavioral perspective, coping responses to perceived racism and chronic discrimination vary and may either buffer or exacerbate the negative impacts of these stressors (Bowleg et al., 2003). A coping response that may buffer negative impacts of stress might look like going on short walks with a friend to talk about recent stressors and help maintain a positive outlook. Coping responses that may exacerbate the negative impacts of stressors might involve emotional eating or smoking cigarettes and watching a favorite TV show. These coping mechanisms are often influenced by environment (i.e., what coping resources coping are accessible) as well as experience (e.g. where someone learns a coping mechanism, consequences to using coping mechanisms). When considering behavior, it is important to remember that there are often complex interactions between biological vulnerabilities and environmental risks that contribute to behavioral patterns. For example, some individual's brains are predisposed to sensation seeking, irritability, or low motivation. This could act as a genetic risk to ineffective or unhealthy coping strategies such as the emotional eating and watching TV over exercise (Beauchaine et al., 2008; Bowleg et al.,

2003). However, there is also the risk that ineffective or unhealthy coping strategies can be modeled and directly or indirectly reinforced in a familial or community environment in which coping strategies are passed down. In our previous example, if family and friends are not as supportive about healthy behaviors or if caregivers did not have access to safe places to walk during their upbringing, it is less likely that this coping strategy of walking would be passed down.

Environments including adverse experiences or prolonged stressful conditions can shape and maintain biological vulnerabilities as well. For instance, adverse experiences, prolonged stressful conditions, even exposure to environmental pollutants in the prenatal and early childhood periods can lead to changes in gene expression as well as structural and functional brain changes that can have consequences for nervous system development and behavior (Aroke et al., 2019; Beauchaine et al., 2008). These epigenetic interactions can be positive as well as neural plasticity and synaptic pruning can allow for positive adaptation to stress and resilience in the face of adversity. However, there has been less research into positive adaptations and epigenetic responses that Black women have as a response to racism in general (Aroke et al., 2019; Beauchaine et al., 2008). Instead, much of the literature about the epigenetic effects of racism suggest that there are both behavioral and physiological responses to the various types of racism that Black women experience that lead to increased health risk and poorer health outcomes.

To summarize, racism in its various forms has had negative effects on Black women's health for centuries. Importantly, much of the enacted discrimination that Black women faced centuries ago, is still enacted today and continues to contribute to health disparities for Black women. Institutional racism has resulted in Black women facing broad barriers to equitable

health outcomes including income inequality and environmental hazards. More specifically, in interactions with the healthcare system, Black women continue to experience disparate assessment and treatment of pain, devastating disparities in preventable pregnancy-related mortality, involuntary sterilization, and disproportionate deaths due to COVID-19. On an interpersonal level, racism in medical settings and in everyday experiences are especially detrimental to Black women's health. Interpersonal biases in medical settings can discourage Black women from interacting with the healthcare system and often results in delayed care and other disparities. The literature about interpersonal racism and Black women's health highlights the psychological and physiological effects of racism including poor mental health outcomes and chronic stress. As a result, there are behavioral and physiological responses to the various types of racism that Black women experience that often lead to increased health risk and disparate health outcomes. One strategy that has been proposed to address some of the health existing disparities is increased preventive healthcare. To address the potential for improved health outcomes in Black women, it is important to better understand and contextualize Black women's experiences with preventive healthcare.

Preventive Healthcare Utilization

The Encyclopedia of Behavioral Medicine defines healthcare utilization as "the quantification or description of the use of services by persons for the purpose of preventing and curing health problems, promoting maintenance of health and well-being, or obtaining information about one's health status and prognosis" (Gellman & Turner, 2013). While this definition can cover a wide range of behaviors, preventive healthcare utilization is more focused on recommended vaccinations and screenings that are meant to prevent health problems, maintain well-being, and inform patients and providers of patients' health status. While

preventive healthcare utilization in the forms of screenings and vaccinations will not solve disparities alone, preventive health care can help to catch signs and symptoms of poorer health earlier and provide health care providers with different areas in which they can intervene. In order to contextualize Black women's experiences with preventive health behaviors it can be helpful to have an understanding about the barriers and facilitators to healthcare utilization.

Barriers and Facilitators to Healthcare Utilization

Improving preventive healthcare utilization in racial and ethnic minority groups is one of the objectives related to eliminating health disparities and achieving health equity in Healthy People 2030 goals (Office of Prevention and Health Promotion [ODPHP], n.d.). As previously stated, increasing preventive care includes increasing screenings and vaccinations and have been presented as a goal related to decreasing morbidity and mortality. To better understand how to increase preventive healthcare utilization in the population of Black women, it makes sense to identify the barriers and facilitators to healthcare utilization in the larger community of Black women. Often studies that examine these barriers and facilitators are qualitative and many studies report that they may not be generalizable. However, these studies still provide important insight to the health behaviors of Black women. The following section provides a summary of key barriers and facilitators related to healthcare utilization that focus more prominently on the thoughts, feelings, behaviors, and social processes of Black women.

Barriers.

Medical Mistrust. Race-based medical mistrust can be defined as the belief that a racial group will not receive equitable, quality care from the healthcare system (Brenick et al., 2017; LaVeist et al., 2009). Medical mistrust in the Black community in general is often tied to histories and current practices of medical racism in the American healthcare system. Mistrust of

the healthcare system in Black communities has been thoroughly documented and for Black women mistrust is often tied to the passage of transgenerational knowledge, community knowledge, and negative personal experiences (Brenick et al., 2017; Jacobs et al., 2006). Overall high levels of medical mistrust are related to a variety of health care behaviors that can negatively impact health including, lower treatment adherence, poorer management of health conditions, lower healthcare satisfaction, and less participation in biomedical research (Brenick et al., 2017; Jaiswal, 2019; Jaiswal & Halkitis, 2019; LaVeist et al., 2009; Scharff et al., 2010).

One important contributor to medical mistrust is an unsatisfactory patient-provider relationship. Misconceptions and negative experiences are two primary contributors to unsatisfactory patient-provider relationships. It is important to note that some misconceptions about care are influenced by the historical and ongoing mistreatment of Black women in the medical system. Two notable examples of misconceptions are the inaccurate beliefs that doctors benefit financially by meeting a certain quota and beliefs that vaccinations are meant to sterilize Black women. While the former does not seem to be readily connected to the historic treatment of Black women, the latter seems to stem from a history of forced sterilization of Black women and other women of color in the early to mid 1900s and continuing into recent years (Byrd et al., 2001; Joyner & Lee, 2020; Spates, 2012). For example, there have been examples of unlawful sterilization in California prisons as recently as 2013 (California State Auditor,2014). Unlawful sterilization was also reported by a whistleblower in a California immigration detention center as recently as 2020 (Fofana, 2021). The continued disregard and mistreatment of women of color at the hand of government-run institutions for centuries allows for misinformation about the COVID-19 vaccines to seem plausible. Misinformation can be especially convincing given the

relevant historical and current practices. This misinformation often leads to fear, a poor patient-provider relationship, and mistrust and acts as a barrier to preventive care.

In addition to misinformation, negative patient experiences with providers can contribute to unsatisfactory patient-provider relationship. The literature has noted themes of inattentiveness and disengagement, lack of comfortable atmosphere, poor bedside manner, and lack of cultural competency as factors that can contribute to unsatisfactory interactions between Black women and their healthcare providers (Baptiste-Roberts, et al., 2017; Gary et al., 2015; Shelton, 2017). Unconscious biases that providers exhibit, such as stereotypes or overlooked or inaccurate information in patient charts, can understandably, be perceived as dehumanizing (Byrd & Clayton, 2001; Nolan et al., 2014; Prather et al, 2018).

Care setting can also complicate the patient-provider relationship setting by determining the type of provider that a patient is assigned to. For instance, community health centers where many Black women receive care, are often affiliated with teaching hospitals and have rotating medical students or residents that can lead to a disruption in continuity of care and make it difficult for patients to establish longstanding relationships in which they have time to build trust (Nolan et al., 2014). Further, when healthcare settings are in small towns, confidentiality concerns paired with the lack of opportunity to develop relationships with providers often act as barriers to care (Gary et al., 2015). Medical mistrust is a major barrier to the utilization of healthcare by Black women and it is complicated by challenges that they face in their patient-provider relationships. This combination of factors lessens the trust that Black women have in the health care system and serve as barriers to care.

Social Influence. Social influence refers to the way an individual's thoughts, feelings, attitudes, or behaviors change after interacting with another individual or a group (Walker,

2015). Social influence can come from a variety of sources not limited to an individual's friends, family members, religious community, and the media (Gibbons et al., 2010). Social influence has been examined in the context of health behaviors including obesity, exercise, eating habits, alcohol use, and preventive health screenings (Ackerson, 2010; Gibbons et al., 2010; Pullen et al., 2014). When considering the negative impact of social influence on preventive health it can be helpful to consider the effects of messages from friends, family, and even religious communities.

For example, Nydegger and colleagues (2021) found that lack of social support was seen as a barrier to pre-exposure prophylaxis (PrEP) adoption for Black women who were at higher risk of HIV. When Black women experienced negative reactions about the HIV prevention pill, PrEP, from friends or family members, they were less likely to want to take this medication (Nydegger et al., 2021). Pullen and colleagues (2014) found that high levels of social support from family, specifically was associated with a lower likelihood of seeking preventive care. However, the researchers were unsure whether Black women in their study were substituting or delaying their preventive health care because they were relying on service or if they were being discouraged from using services.

When examining social influence in the Black community, religiosity and/or spirituality have received significant attention in the literature (Chandler, 2010; Pullen et al., 2014). Some Black communities practice religions that do not mesh with preventive health recommendations. For instance, there are religions that do not approve of immunizations and religions that frown upon discussing sexual activity outside of a spousal relationship (i.e. with healthcare professionals). In both instances, the social influence of religion can prevent women from meeting preventive health recommendations. Religion and preventive care have also been

examined in terms of locus of control. Kinney and colleagues (2002) examined Black women's adherence to screening recommendation for Black women at high risk for breast cancer and found that Black women who were at high risk for breast cancer who also believed that God was primarily in control over their health, were less likely to adhere to screening recommendations. Though Black communities can frequently be close-knit groups that value community, care, and congregation, there can be misconceptions, stigma, and differing values that can conflict with recommendations about preventive health care utilization.

Inadequate Health Literacy. Health literacy has been defined as the degree to which patients can attain, process, and understand basic health information and navigate services in order to make appropriate healthcare decisions (Davis et al., 2020). In order to be health literate, there are a variety of other skills needed including, but not limited to: written and oral literacy, numeracy, self-advocacy, interpreting health-related guidelines and recommendations, decision making, and communication skills to actively participate in appointments (Gazmararian et al., 2005). When examining a sample of older Black adults, Davis and colleagues (2020) found that 52% of participants had limited health literacy. In their discussion of the potential impacts of limited health literacy they noted that it would likely be more difficult for these individuals to use preventive health services, evaluate preventive health information, and understand the risk and benefits of preventive health behaviors (Davis et al., 2020). These concerns were illustrated in a focus group of Black women ages 35 and older conducted by Nolan and colleagues (Nolan et al., 2014) which identified a number of concerns related to health literacy that served as barriers in preventing Black women from getting cervical cancer screenings and follow ups. A lack of understanding of the purpose of cervical cancer screenings (i.e. Pap smears) and confusing them with sexually transmitted infection (STI) screenings led to a lack of preventive

health care for some women. Further, insufficient knowledge of cervical cancer was associated with a high incidence of cancer. There was a lack of understanding about where cervical cancer came from. In older women, there was a misconception that cervical cancer was associated with sexual activity. Thus, older women who believed this misconception and were not sexually active inaccurately perceived their risk of cervical cancer and the benefits of a Pap smear as minimal (Nolan et al., 2014). Further, women in this study had a difficult time finding reliable and understandable health information. Many women reported that information that they received from their healthcare providers was confusing, but they did not know the "right" questions to ask or where to find accurate information in order to answer their questions about cervical cancer and cervical cancer screenings.

While there were no broad health literacy studies focused on younger, college aged Black adults, it is likely that the implications are similar. During this developmental period, young adults start to form patterns of behavior that they maintain through adulthood, thus a lack of health literacy may prevent young adults from starting preventive care at recommended ages, evaluating preventive health information to inform decision making regarding preventive health recommendations like vaccines, and make it more difficult to understand the benefits of preventive healthcare and establishing habits related to preventive care early into adulthood. These consequences can potentially lead to missed screenings, later diagnoses, and poorer health outcomes in general.

Financial barriers. Financial concerns are one of the more frequently cited barriers to preventive healthcare utilization. Lack of health insurance is frequently cited as structural barrier to healthcare access as being uninsured leads to affordability issues (Baptiste-Roberts et al., 2017). In fact, a systematic review of barriers and facilitators to the preventive HPV vaccine in

adolescent women, found that when cost is a factor involved in vaccine uptake, it dominates as a barrier. While insurance status dominates, other financial barriers remain. When women do have health insurance, Black women view their quality of care as being directly related to the type of insurance that they have, with women who have Medicaid and Medicare insurance reporting a lower quality of care. Other financial barriers include difficulty paying for transportation to appointments, taking time off work, and childcare concerns (Baptiste-Roberts et al., 2017; Roberts et al., 2021). For Black sexual minority women, financial barriers may be more pronounced as sexual minority women in general tend to be more likely that their heterosexual peers to miss their routine health exams due to cost (Blosnich et al., 2014). Financial barriers and inadequate health literacy can exist as concurrent problems as some women are unaware of what preventive services their insurance covers and are unsure how to find what services their insurance may cover (Phipps, et al., 2019; Roberts et al., 2021).

In summary, Black women face a variety of obstacles that contribute to their disparate outcomes related to preventive health. For instance, medical mistrust influenced by institutional racism and negative experiences in the patient-provider relationship may discourage women from interacting with the healthcare system. Stigma and lack of support from sources of social support and inadequate health literacy including limited or inaccurate knowledge of health conditions and lack of awareness of preventive care may lead to decreased utilization. Even in instances where these other barriers may not exist, financial barriers such as lack of insurance, lack of transportation, or inability to take time off work or access childcare due to financial need, may prevent Black women from utilizing preventive healthcare.

Facilitators

***Interpersonal Trust with Provider*.** Interpersonal trust between healthcare providers and patients is a predictor of recommended care (Jacobs et al., 2006). In fact, in studies involving Black women's preventive health behaviors, clinical recommendation and patient-provider relationship are the most cited facilitators to care (Ogedegbe et al., 2005; Rambout et al., 2014). Understandably, trust between patients and their physician is especially important for preventive care as a patient's perceived need for medical intervention may be at a mismatch with recommendations.

Jacobs and colleagues (2006) conducted focus groups with Black adults in Chicago and found that a variety of different aspects contribute to the trust between Black patients and physicians, but primarily interpersonal and technical competence. This study found that once this trust was established, participants reported being more likely to engage in health promoting behaviors such as being more likely to seek care, be honest with their provider, and more likely to adhere to recommendations provided by their providers. Other literature is consistent with this and suggests that lower levels of mistrust are associated with increased utilization, patient honesty, and adherence (Brenick et al., 2017; Jacobs et al., 2006). Interpersonal trust improves the likelihood that individuals will have a usual source of care which in turn, increases the chance of meeting preventive health recommendations (Hammond et al., 2010). The literature has suggested increasing cultural competence and increasing the number of Black providers as ways to improve both interpersonal and institutional trust between Black patients, their providers, and the medical system (Gary et al., 2015; Jacobs et al., 2006).

Social Influence. Though social influence can serve as a barrier to healthcare utilization, positive interactions with sources of social support can facilitate utilization as well. When considering the positive impact of social influence on preventive health it can be helpful to

examine the context of communication with friends and family about preventive health, where Black women learn about preventive health, and what preventive health behaviors are valued and seen as normative in Black women's social support systems. For Black women, community plays an important role when it comes to matters of preventive health. For example, Ackerson (2010) examined the role of social influence on Black women's Pap smear testing and found that Black women who routinely received Pap smears were taught to value preventive health care by people that they trusted such as their mothers and/or trusted health care providers. Black women in the study either frequently utilized health care during which a routine pap smear was suggested, or they were taught about routine pap smears and viewed them as normative and expected. Similarly, Rambout and colleagues (2014) found that having discussions about the benefits of HPV vaccinations with influential source (i.e., parents and healthcare providers) along with normative beliefs about vaccinations were associated with HPV vaccinations. Further, Pullen and colleagues (2014) found that social support from friends was associated with a higher likelihood of having an annual routine exam.

Religion and spirituality have also been shown to be related to increased healthcare utilization. Specifically, high levels of religious involvement and religious beliefs have been associated with health and health behaviors in Black women (Kinney et al., 2002; Van Olphen et al., 2003). The relationship between religion and Black women's preventive healthcare utilization broadly has been examined less frequently. However, Felix Aaron and colleagues (2003) found that for Black churchgoers, church attendance was related to dental visits and blood pressure screenings such that the more frequently an individual attended church, the more likely they were to have received this routine care. The effect of religious salience, or how important religion is in someone's life, has been examined broadly for its association with healthcare

utilization but has also been looked at in a study specifically examining Black college students conducted by Bowen and Smalls (2004) in which they found religious salience to be positively associated with health promoting behaviors.

Adequate Health Literacy. As previously stated, adequate health literacy extends beyond literacy and numeracy and encompasses self-advocacy, interpretation, communication, and decision-making skills. There are a variety of skills that are siloed within the realm of adequate health literacy that are associated with increased likelihood of preventive healthcare utilization. For instance, accurate perceptions of risk of HPV health consequences were found to facilitate HPV vaccinations in adolescent women (Rambout et al., 2014). Confidence in obtaining health information is also associated with increased likelihood of preventive healthcare usage (Lee et al., 2021). Specifically, in college students, being able to seek and understand health information was also associated with increased healthcare utilization (Tran & Silvestri-Elmore, 2020). Further, health education and community-led and community-centered outreach have been generated as proposed solutions related to health literacy that may increase preventive health care in communities of Black women (Gary et al., 2015; Jacobs et al., 2006; Roberts et al., 2021).

Health insurance. Health insurance is also a facilitator in seeking preventive care for young adults. Though it does not completely remove financial barriers, health insurance tends to make healthcare more affordable, accessible, and available (Gary et al., 2015; Lau et al., 2014). In fact, preventive care utilization rates increased in young adults after the Affordable Care Act (ACA) which expanded insurance coverage for young adults. Rates of blood pressure screenings, cholesterol screenings, and dental visits all increased after the ACA went into effect and insurance status was found to fully explain these increased rates (Lau et al., 2014). Further,

having health insurance also makes it easier to have a usual source of care which is also associated with receiving preventive care (Gary et al.,2015; Lau et al., 2013; Lau et al., 2014; Phillips et al., 1998). College enrollment often includes access to healthcare for young Black women and other students thereby reducing some of the logistical and financial barriers to healthcare noted above.

Black women experience a variety of barriers to utilizing preventive health care including medical mistrust, social influence, inadequate health literacy, and financial barriers. These barriers make it more difficult for Black women to understand whether they need care, how to access care, whether healthcare utilization would be a safe and affirming experience, and whether they will be able to afford care. Conversely, facilitators such as interpersonal trust with medical providers, support from social networks, adequate health literacy, and health insurance are associated with increased likelihood of preventive care utilization. One framework that aims to clarify and predict healthcare utilization based on the thoughts, feelings, behaviors, and social processes that Black women experience is Andersen's Behavioral Model of Health Service Use.

Andersen's Behavioral Model of Health Service Use

According to the Encyclopedia of Behavioral Medicine, the definition of healthcare utilization includes preventive, secondary, and tertiary health care, health, and well-being promotion, as well as learning about one's health status (Gellman & Turner, 2013). One of the most widely used models of healthcare utilization is Andersen's BMHSU (Lederle et al., 2021; Ricketts & Goldsmith, 2005). Andersen's model addresses three broad categories of factors that influence health service use: predisposing factors, enabling factors, and need factors. Within each broad category, there are both individual and contextual influences of health care utilization. Individual influences focus on the factors that are related to an individual's

experience including thoughts, feelings, behaviors while contextual influences often have to do more with an individual's environment or community (see Table 1).

Predisposing factors. Predisposing factors can be described as those that make someone more inclined to use healthcare services. Individual influences that may predispose individuals to health care utilization include demographic characteristics such as age, sex, education, occupation, ethnicity, and race. Health beliefs such as attitudes, values, and knowledge related to health and health services also fall under individual predisposing influences. Contextual influences that predispose individuals to use health services include the demographic and social make up of community, collective values, and cultural norms (Babitsch et al., 2012).

Enabling factors. Enabling factors include financial and organization influences that affect the amount of healthcare access. Individual financial influences can include overall income, disposable income, and insurance status. Contextually, financial influences include the resources available within the community and the rate of health insurance coverage for the area in which the individual lives. Individual organizational influences include having a regular source of care, access to transportation, travel, and wait time associated with different types of care. Contextually, organizational influences can include locations and distribution of health care service and personnel in the community. It includes hours the office is open, competency of providers (cultural and otherwise), outreach and education, and health policy (Babitsch et al., 2012).

Need factors. Need factors include both the perceived and evaluated need for health.

Table 1. Andersen's Behavioral Model of Health Service Use from a Black Feminist-Womanist Perspective

Model Components	**Commonly assessed areas:**	**Black Feminist- Womanist Theory Ideals**	**Key Variables of Interest**
Predisposing factors: *Factors that make someone inclined to use healthcare services*	**Demographic influences**: gender, sex, race, ethnicity age, education, marital status, children, immigrant status, residency (location/rurality)	**Demographic influence:** Sex, gender, race, and class are prominent. However, SES is more aligned with enabling factors. Relevant influences related to other types of oppression (i.e., (dis)ability and chronic health conditions) align more with need factors	Sex/Gender Race Nationality Ethnicity Age
	Mental influences : attitudes, values, knowledge related to health and health services, experiences	**Mental influences:** Cultural attitudes and values, personal and/or relational experiences with healthcare affecting utilization; pressure to avoid stereotypes or legal consequences; individual cultural alignment with alternative medicine; health literacy; provider communication	Importance of preventive care Health Literacy (including provider communication)
	Cultural influences: Collective values, cultural norms around preventive health behavior, religion	**Contextual:** collective values and cultural norms **Collective Values about women's bodies:** Biologic or symbolic motherhood; values about shape/weight **Collective values about healthcare:** history of medical racism and medical mistrust; health outcomes seen as a typical aging or inevitable **Collective values about preventive health:** Preventive health behaviors are routinely discussed due to high prevalence; some screenings and vaccinations declined or not discussed due to stigma, misinformation; religion can either encourage or discourage preventative care; varying views about stress management	Medical Mistrust Religiosity

Enabling: *factors that affect healthcare access*	**Financial influences:** price, insurance, income, accessibility of care, social/emotional support, availability of information	**Financial influences:** income inequality; health insurance, affordability of care; time and transportation for care	Health insurance SES Barriers to care
	Organizational influences: regular source of care, nature of the sources of care, health policies	**Organizational influences:** Culturally competent and respectful providers and organizations with affirming policies regarding diverse identities (e.g. race, gender, ethnicity, sexual orientation, body size) that enable having a PCP/ regular source of care,	Regular source of care PCP PCP respect LGBT+ affirming policies Culturally competent behaviors
Need	**Perceived need:** how they view & experience their own health, functional state, illness symptoms- self reported limitations, report of sx, limitation in daily activities, risk factors	**Perceived Need:** influenced by cultural ideas, cultural values, and personal experiences (e.g., caregiver perceptions of illness, cultural values about how much weight is "healthy")	Self-rated health Self-rated activity limitations
	Evaluated need: assessments, objective measurements, and need for medical care. Self-report distress measures	**Evaluated need:** Chronic conditions and diagnoses potentially more relevant than BMI as BMI is not as culturally relevant, though it is correlated with health conditions.	Chronic conditions (including disability)
Health Behavior	**Healthcare utilization**		age- and anatomy- appropriate vaccinations and screenings that typically take place in primary care settings

services. At the individual level this includes how people view and experience their health, their functioning, and their illness symptoms, along with professional assessments and objective measurements of their health status Contextually, there exist both environmental need and population need. Environmental need reflects health-related conditions of the environment such as crime, traffic, accidents, but also pollution and exposure to toxins. Population needs are overall measures of community health which include epidemiological indicators of risk, disability, morbidity, and mortality. Need is frequently the most important predictor of healthcare utilization (Babitsch et al., 2012).

Model History. Andersen's initial behavioral model has evolved since its introduction in the 1960s. In the first iteration of the model, healthcare utilization was seen as a function of predisposing factors, enabling or impeding factors, and a need for care. Andersen hoped that this model would both explain and predict healthcare utilization (Andersen, 2008). Originally, there was a focus on consumer satisfaction as the outcome variable. However, after five formal iterations, the latest model aims to display the interplay of the environment, population characteristics, health behaviors, and outcomes (Figure 1). This model suggests that the environment (both the health care system and the external environment) contribute to population characteristics which includes the predisposing, enabling, and need factors, which affect health behavior including personal health practices, and use of health services, and outcomes included are perceived and evaluated health status, as well as consumer satisfaction. This version of the model includes feedback loops like the previous version that suggest that there are outcomes that can affect predisposing factors, perceived need, and health behavior (Andersen, 2008).

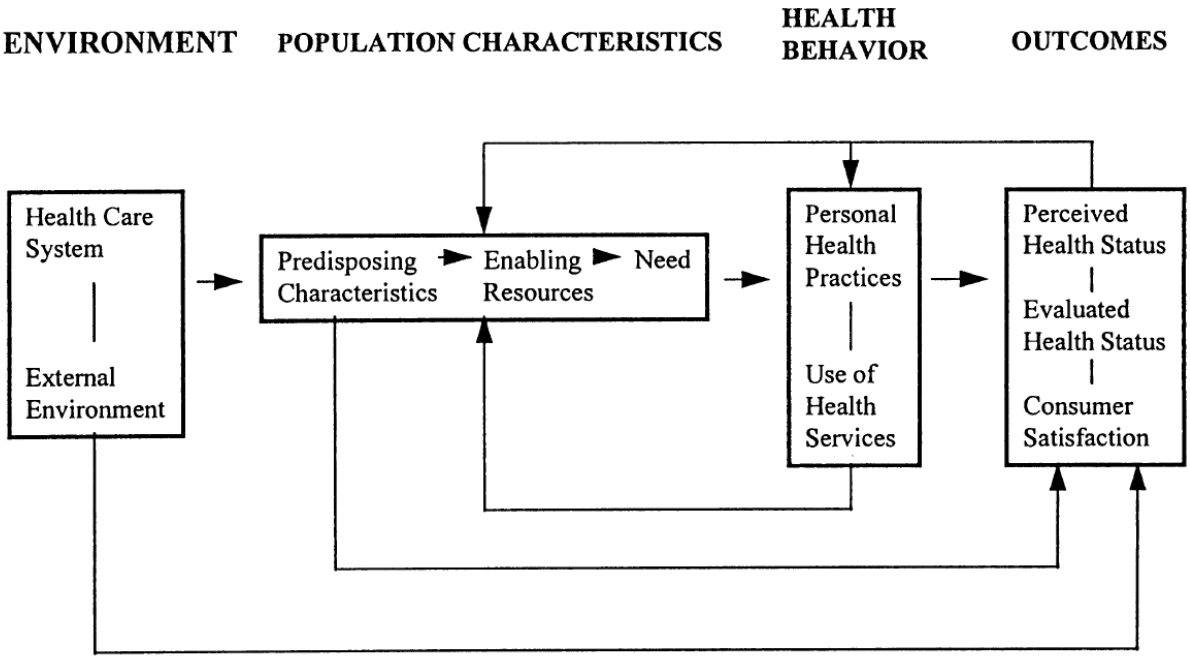

Figure 1. From Andersen, R. M. (2008). National health surveys and the behavioral model of health services use. *Medical care*, 647-653.

Model Critiques. As expected with one of the most used theoretical models of utilization, there have been numerous critiques across iterations of the model. Most critiques can be categorized as falling into categories of predisposing factors, enabling factors, need factors, and outcomes. Regarding predisposing factors there has been a recurring complaint about a lack of focus on social structure. This concern was addressed in Andersen's 2008 article where he suggested that understanding beliefs, examining need, and examining service utilization related to specific diseases would likely lead to stronger relationships in the model than if there is a focus on general health beliefs and global measures. Andersen discussed the idea that in nonemergent care, social structure is already accounted for with some demographic factors. Regarding enabling factors, Andersen discussed the importance of community enabling resources. In his 2008 article he acknowledged that understanding organizational factors should

help the model more aptly explain and predict health care utilization. Andersen also addressed the idea that social relationships can fit into enabling resources (Andersen, 2008).

Andersen also addressed the common critique related to overemphasis of need as the primary determinant of healthcare utilization without being contextualized in the model. He suggested that health beliefs and social structures play a large role in need. Additionally, he suggested that he never wanted perceived need to be represented without a social context especially as he saw perceived need as a social phenomenon. He went as far as to say that when modeled appropriately perceived need should be largely explained by both social structure and health beliefs (Andersen, 2008).

Lastly, one of the major goals of the model is to predict and explain access to healthcare. This goal has been critiqued as potentially too broad to adequately address nuanced concerns. However, Andersen addressed these concerns by citing the increasing complexity of the model as well as the different ways that the model can be used. For instance, he reported that the model can be used to reflect equitable and inequitable access (Andersen, 2008). With equitable access, certain demographic factors that Andersen considers more in line with biological imperatives (e.g., age and sex), and need variables account for most of the variance in utilization. However, with inequitable access, demographics that are more influenced by social structure (e.g., race, and ethnicity), health beliefs, and enabling resources determine utilization.

Model Strengths. The model incorporates a variety of strengths as well. This model has been refined to address both individual and contextual influences of health across three areas: predisposing factors, enabling factors, and need factors. While the primary critiques of this model address concerns related to a lack of specificity of outcomes and an overemphasis of predisposing factors, the strengths of this comprehensive model and its applicability across

populations set it up to be an adequate framework to answer specific questions about health behaviors (Babitsch et al., 2012; Lederle et al., 2021). Additionally, the creator, a health services researcher and sociologist, encouraged the utilization of the framework for specific populations to learn more about health behaviors in a way that allows for relevant interpretation that helps to contextualize utilization (Andersen, 2008; Babitsch et al., 2012).

Thus, this model provides a framework to examine the area of preventive healthcare utilization in Black college women. However, Andersen encourages the model be applied to specific beliefs, behaviors, and cultures and encouraged nuanced and contextualized applications of the model for stronger relationships between factors (Andersen, 1998; Andersen, 2008). While Andersen's framework is an appropriate starting point to help explain and predict healthcare utilization in Black college women, it allows for an expansion about the influence of culture, oppression, and community on behavior. Black feminist-womanist thought can address this lack of focus on social structure and contextualize the experiences of Black women with regard to the healthcare system.

Black Feminist -Womanist influence in assessing healthcare utilization

When examining healthcare care utilization, rarely have the theories of Black Feminist or Womanism been used. These theoretical frameworks incorporate the intersections of oppression from race, class, sex, and gender, into analysis while acknowledging sociocultural barriers that perpetuate this oppression. In order to start applying these frameworks to healthcare utilization, it is important to understand how these different tenets are illustrated in a research paradigm. When these frameworks are translated into a research paradigm, there are common themes including intersectionality and community strengths such as resilience, commitment to social change and

community building, as well as the social and system context for behaviors of interest that become research foci (Bowleg, et al., 2013; Lindsay-Dennis, 2015).

Tenets of Black Feminist Thought. Black Feminist Thought focuses on the ideas that Black women's experiences should be centered in research and other modes of inquiry, and they should be able to define and interpret their own experiences. A foundational premise of this perspective is that both academic knowledge as well as the everyday lived experiences in the context of race, gender, and class should guide research theory about Black women. There is an assumption that intersecting experiences with oppression shape views, attitudes, behavior, and outcomes, both individually and collectively (Lindsay-Dennis, 2015).

Lindsay-Dennis lists four primary principles of Black Feminist Thought: 1) lived experience as a criterion of meaning, 2) use of dialogue in assessing knowledge, 3) ethic of caring, and 4) the ethic of responsibility. Lived experience as a criterion of meaning is the idea that knowledge that people have gained from their life experiences and life choices are valuable, credible, and meaningful even if they are not well documented as a phenomenon in the literature (Collins, 2002; Lindsay-Dennis, 2015). This idea is especially salient for Black women who have been historically excluded and overlooked in research.

Use of dialogue in accessing knowledge refers to the idea that there is a back-and-forth conversation between two individuals rather than a strict hierarchy. It is meant to be more humanizing and aims to give a voice to individuals involved in research (Collins, 2002; Lindsay-Dennis, 2015). The ethic of caring includes ideas of individual uniqueness, emotions in dialogue, and a capacity for empathy. From a research perspective this looks like acknowledging the rich, diverse experiences of participants in the study and maintaining empathy with regard to the nature of qualitative questions as well as the interpretation of the answers to those questions.

The ethic of responsibility is a broad principle that addresses the importance of personal accountability and holds individuals accountable for their knowledge claims. In a research paradigm this can translate to the researcher's stance on personal responsibility and accountability to ensure that studies on this population are rigorous, sound, and truthful (Collins, 2002; Lindsay-Dennis, 2015). Translating Black Feminist Thought into a research paradigm involves a purposeful focus on Black women's diverse, rich experiences while allowing for dialogue when accessing knowledge and acknowledges oppression.

Tenets of Womanism. Although Womanism is sometimes seen as a form of Black Feminism, it has been defined as its own concept with its own goals, characteristics, and methods that are distinct from Black Feminism. Womanism focuses more on social change, everyday experiences of Black women, and their strategies for overcoming practical barriers. The primary goals in Womanism are solving problems using the expertise of lay people, ending all forms of oppression, restoring a balance between humanity and nature, and reconnecting humans to spirituality (Lindsay-Dennis, 2015). When translated into a research paradigm, Womanism encourages the examinations of survival strategies that have been passed down through generations including mothering, dialoguing, using mutual aid and self-help, and spirituality. This could include examining the effects of transgenerational messages, incorporating the influence of community and cultural messages, and making sure to leave space for the inclusion of religion and spirituality.

Both Black Feminism and Womanism acknowledge the unique perspectives of Black women who inherit multiple forms of oppression and have learned to thrive in environments that denigrate Black women as being both gender and racial minorities. The Black Feminist-Womanist (BFW) framework is a culturally relevant framework that combines these two theories

and centers the experiences of Black women (Lindsay-Dennis, 2015). There are a variety of ways the BFW framework can guide the application of the Andersen BMHSU to the preventive health care utilization of Black women, as will be discussed below.

Black Feminism, Womanism, and the Behavioral Model of Health Services Utilization

Often when health disparities are discussed, ideas of racism, sexism, heterosexism, ableism, and other forms of oppression are excluded from the conversation. As such, it becomes difficult to contextualize these disparities and connect them to systems of oppression (Collins, 2002; Lindsay-Dennis, 2015). This misstep may be avoided by applying the BFW framework to Andersen's BMHSU to highlight potential areas of oppression that may affect Black women's preventive healthcare utilization. The BFW framework also prioritizes lived experience and qualitative data as just as important if not more so than quantitative data from measures that are not validated with Black women. In this section, the application of a BFW framework to the predisposing, enabling, and need factors of the BMHSU will be explored. This application is summarized in Table 1.

Predisposing Factors. The predisposing factors section of the BMHSU is typically composed of individual and contextual influences that make a person more inclined to use healthcare services (Andersen, 1995).

Individual Influences. Typically, when examining the individual influences in the model, demographic influences such as gender, race, sex, ethnicity, sexual orientation, age, education, marital status, location, and rurality are included (Babitsch et al., 2012; Currin et al., 2018; Lederle et al., 2021). BFW principles maintain that sex, gender, race, and class are intertwined for Black women as is their interconnected nature of disadvantage in society. This framework discourages researchers from putting women in boxes and encourages researchers to

allow for space for women to define themselves across multiple intersecting identities. This can take the form of using both close-ended questions as is typical in quantitative survey research as well as qualitative open-ended questions related to race, ethnicity, gender and sex, as BFW encourages, to allow participants to define themselves as they see fit (Collins, 2002; Lindsay-Dennis, 2015). In acknowledging the diversity within communities of Black women, it is also important to acknowledge the potential for cultural differences in individuals' healthcare utilization between women who are African American, but also Black women who may be of other nationalities (e.g., Caribbean/West Indian, African, etc.; Brown et al., 2011; Forney-Gorman & Kozhimannil, 2016; McDaniel et al., 2021;).

Mental Influences. Mental influences in the BMHSU are a type of individual influence that typically includes attitudes, values, and knowledge related to health services and experiences on an individual level. While individual views are often influenced by cultural attitudes and values, individual experience whether that be personal or relational affects utilization. For instance, if individuals have had experiences in healthcare settings that make them feel uncomfortable or disrespected, they may be less inclined to receive preventive care (Cuevas et al., 2016; McDaniel et al., 2021). Additionally, there may be pressure to avoid endorsing certain stereotypes (e.g., ideas about Black women and substance use, hypersexuality, or weight; Lichtenstein, 2003; Sacks, 2018). There may also be fear related to potential legal consequences related to drug use, abortion, immigration status, and intimate partner violence (IPV) situations to name a few (Nash, 2005). Further, individual values may be more in line with alternative medicine for a variety of different health issues. Lastly, individual knowledge such as health literacy and knowing how to communicate with providers may affect healthcare utilization as well.

Contextual Influences. Contextual influences in the BMHSU typically refer to collective values, and cultural norms surrounding preventive health. Cultural norms, values, and religion are typically assessed in this section of the model (Babitsch et al., 2012). When considering a BFW framework various cultural concerns and attitudes may influence how Black women view preventive health. Specifically, the BFW framework may be relevant in considering collective values surrounding women's bodies, experiences with healthcare, and collective values around preventive health.

Within BFW thought there are collective values about women's bodies that may affect preventive healthcare utilization (Collins, 2002; Flynn & Fitzgibbon, 1998; Lindsay-Dennis, 2015). For instance, BFW acknowledges the role of women as mothers and being able to fulfill the role of motherhood either biologically or symbolically. Wanting to fulfill the role of motherhood biologically, may lead women to engage in preventive health specifically related to their reproductive systems (e.g., weight management and/or pap smears). Whereas wanting to fulfill the role of motherhood symbolically, may mean that women make sure that they can be around for their children or younger community members as they grow up and this may encourage women to partake in preventive health behaviors. Additionally, BFW centers the experiences of Black women which includes taking into account the beauty norms and standards of the Black community, that Black women are often expected to live up to. For instance, Black culture holds values about shape/weight that often celebrate curves and there are expectations in some communities about having larger, breasts, buttocks, and thighs (Flynn & Fitzgibbon, 1998) This can play a role in preventive health behaviors as larger body sizes compared to white beauty and medical standards such as body mass index (BMI) may not align with what is viewed as normative in the Black community and thus weight might not be seen as a primary target for

intervention by Black women. Additionally, though not necessarily relevant to all forms of preventive care, literature has noted Black women's fear of disfigurement after screening positive for breast cancer as being connected with a loss of womanhood (Swinney & Dobal, 2011).

Regarding collective values around healthcare, the Black community has a long history of mistrust in medical providers and the larger American healthcare system. This lack of trust may lead to women avoiding preventive care or avoiding other healthcare that may lead to reminders about preventive care (Orji et al., 2020). Alternatively, having a trusting relationship with a provider in which they feel respected and feel that they are being heard would likely make Black women more likely to engage in preventive health care.

Additionally, within the Black community, some individuals view certain chronic health conditions as a normal part of aging or something that will be inevitable (e.g., cancer, hypertension, or diabetes; Franklin et al., 2007; Hotz, 2015). Having beliefs that there is little that an individual can do to prevent these health conditions would likely lead to lower preventive health utilization. Further, there are values about stress management that may be seen as acceptable or unacceptable due to cultural or religious values or experiences of others. For example, medication being seen as unnecessary or something that women do not trust. Certain types of stress management may be seen as unnecessary or as not aligning to cultural values (e.g., weightlifting, yoga, medication). Further, beliefs associated with religious healing and miracles have been noted in the literature as reasons that Black women do not adhere to screenings and medication (Swinney & Dobal, 2011). The beliefs that people have about these types of health behaviors may also influence whether or not people engage in preventive health.

Though there is medical mistrust in the Black community, a great deal of information about preventive health is still communicated among women in the Black community. Certain preventive health behaviors such as pap smears and mammograms are routinely discussed in the Black community often due to public health programming specifically targeting Black women as they have disproportionate outcomes related to breast and cervical cancer (Brown et al., 2011; Forney-Gorman & Kozhimannil, 2016; Nolan et al., 2014; Sadler et al., 2007). When it comes to other reproductive care this is often not the case due to stigma. Black women have a higher risk of STIs including HIV, but often forego screening and testing (Lichtenstein, 2003). Regarding preventive screening related to blood pressure and diabetes, these conditions are often viewed as inevitable or something that "happens with older age." While this can be true, this misconception is often reinforced by many older Black adults dealing with the downstream effects of these illnesses including heart attacks, amputations, and premature death. Lastly, religion can play a role in preventive health as well. Some Black women view religion and a higher power as having a significant amount of control in their lives and put their trust in religion rather than healthcare measures that they may or may not trust, understand, or know about (Franklin et al., 2007).

Enabling factors. In the Behavioral Model of Health Services Utilization enabling factors are those that effect healthcare access. Typically, this group of factors is separated into individual financial and contextual organizational factors. Financial factors typically include the price of healthcare services, whether folks have insurance, household income, accessibility of care, and availability of information. Black Feminist and Womanist thought would take into account income inequality and the variety of ways that this may affect access to care including, but not limited to having health insurance, having access and qualifications for jobs that offer health insurance, being able to afford co-pays, and having the time and transportation to attend

medical appointments (Orji et al., 2020). Organizational influences have a contextual focus and account for elements related to specific organizations and the healthcare system. Traditionally, they include whether an individual has a regular source of care, the nature of the sources of care, and any health care policies that are associated with the organization specifically or the larger health care system in the United States. The BFW framework would shift focus to examine ways that culturally competent and respectful providers and organizations with affirming policies regarding diverse identities (e.g., race, gender, ethnicity, sexual orientation, body size) might make Black women feel more comfortable maintaining a relationship with a primary care physician (PCP) or have a regular source of care.

Need Factors. Need factors in the BMHSU are composed of two categories: perceived and evaluated need. Typically, in Andersen's model perceived need is addressed by assessing participants view of their health, functional states, reported symptoms, self-related limitations, and risk factors. The BFW framework would acknowledge of the role of Black culture in the perceptions of health and illness. For example, if a Black woman is overweight or obese but carries most of her weight in a way that is aligned with cultural beauty standards, the perception of illness or health risk may be lowered. Additionally, if her weight is seen as normative compared to other individuals in her social environment, her perceived health may also be perceived as normative rather than unhealthy. In order to understand perceived need from a perspective that centers Black women, there needs to be an understanding of the various ways that Black women define optimal health, suboptimal health, preventive health, and what behaviors might be associated with each.

Evaluated need factors are typically measured by professional assessments and objective measurements. From a BFW point of view chronic conditions and diagnoses would probably

have a larger role in evaluated need than body mass index. Body mass index is a measure widely used in medical practices as a measure of health risk as it is free and easy to calculate (Dodgen & Spence-Almaguer, 2017). However, BMI, is difficult to change, fails to account for differences in body composition, fitness levels, and nutrition, and typically fails to act as a sufficient motivator for behavior change in Black women. Because of this, BMI is typically not as culturally relevant, though it does correlate with health conditions (Dodgen & Spence-Almaguer, 2017). A BFW perspective would prioritize a more holistic view of health that focuses on areas that are easier to change, better proxies for health, and motivate Black women to change their behaviors. Examples of evaluated need factors could include body composition measurements, chronic disease risk factors, or number of chronic disease diagnoses.

The application of BFW thought to the outcome of preventive health behaviors using the BMHSU framework provides the nuanced, contextualized view of a specific health behavior that Andersen described. In addition to informing the application of the BMHSU, BFW thought can also guide the research process in the areas of study design, data collection and interpretation, and dissemination of findings.

Study design. Regarding study design, two major considerations are the ideals of qualitative research and contextualizing experience. Qualitative research allows for the goal of self-definition as it is often ineffective to use quantitative research alone (Lindsay-Dennis, 2015). Being able to use qualitative methods in tandem with quantitative methods can help to provide a rich and more comprehensive understanding of the topic at hand. More broadly, additional benefits to using qualitative research from a Black Feminist-Womanist perspective are that using qualitative research acknowledges the idea that there is not one "correct" procedure with regard to research and that mixed-methods will add contextualized data to the underdeveloped literature

about healthcare utilization in this population (Lindsay-Dennis, et al., 2011). BFW theory highlights the idea that the individual is part of a large community and continues to develop through dialogue. Being able to contextualize the experiences and the quantitative data in terms of worldviews, lived experiences, and coping mechanisms gives a more comprehensive view of the real-world experiences of women with multiple minority statuses. Additionally, centering Black women to be the focus of exploration without needing to compare to heterosexual White women who are often the focus of research that too often gets generalized to all women.

Data Collection and Interpretation. Regarding data collection, BFW suggests the inclusion of participatory witness in which the researcher shares their lived experience, credentials, and professional obligations with participants ahead of data collection. An example of this could include an introduction about the primary researcher that includes their race, gender, sexual orientation, educational background, and credentials as this could provide insight into their lived experience. Black Feminist Thought values both lived experience and dialogue. Thus, providing an opportunity for qualitative responses where women can describe their lived experiences without having to classify them into a category that may not fit their cultural values is important. Black Feminist and Womanist theories both address the importance of community and culture. Allowing for data collection that addresses community and culture could help to contextualize participant response in research. Further, when interpreting results it is important to consider how thoughts, feelings, and behaviors might be affected by values and experiences of individuals, their immediate community, and the larger cultures that Black women are a part of (e.g., Black communities, LGBTQ+ communities, disability communities, etc.).

Dissemination. Regarding dissemination, part of the ethics of caring and responsibility in the BFW models include the responsibility to disseminate the results in both traditional and

nontraditional ways. Traditionally, findings are disseminated in a manuscript and/or a poster presentation at professional conferences. In keeping with BFW thought, disseminating findings more broadly and in accessible and non-traditional ways (e.g., social media, websites, local publications geared toward the Black community) allow for women to be centered as the key audience for research findings that reflect on their lived experiences.

Overall, the BFW perspective is one particularly appropriate area of scholarship to draw from in adapting Andersen's BMHSU for use with Black women and for conducting research with Black women more generally, as it gives a perspective that readily contextualizes the multiple intersecting oppressive lived experiences of Black women with regard to racism, sexism, classism, and heterosexism while taking into account their sources of strength and resilience.

Current Study

The purpose of the current study is to examine preventive healthcare utilization in Black college women using the BMHSU framework and applying a Black Feminist Womanist lens by addressing the following research questions:

Research Question 1: How do Black women define health, suboptimal health, optimal health, and preventive health?

Research Question 2: Where do Black women learn about health and preventive health?

Research Question 3: What are the rates of preventive healthcare among Black female college students?

Research Question 4: To what degree do predisposing factors, enabling factors, and need factors separately and collectively predict preventive health care utilization in Black female college students?

Hypothesis 1: Need factors will not contribute to utilization over and above predisposing factors.

Hypothesis 2: Need factors will not contribute to utilization over and above enabling factors.

Chapter 3: Methodology

Study Design

Participants

Participants included college students who were Black women at East Carolina University. Participants were at least 18 years of age and able to read and write English. Because this study focused on Black women, participants who identified as men or who did not endorse a Black/African American racial identity were excluded. Participants were recruited through the ECU Psychology department's online participant recruitment system, SONA, and through targeted email outreach in coordination with the ECU Survey Review and Oversight Committee. Participants recruited through SONA received required research credit for their psychology classes. Women recruited via email were incentivized by having the opportunity to participate in a gift-card drawing to receive one of five $25 dollar gift cards.

Procedures

Data Collection. This was a mixed methodological study with demographic questions, survey measures, and qualitative questions administered via Qualtrics.

Debriefing. At the completion of the survey, participants were provided an educational summary debriefing form (See Appendix B) with a list of local and national mental health resources as well as resources for the preventive health care services relevant to them. Finally, participants were reminded that they would receive research credit in their psychology courses in return for their participation (for SONA participants) or were invited to participate in the gift card drawing (for students recruited by email).

Qualitative Methods (Research Questions 1 and 2).

Data Collection Procedure. Qualitative questions were be employed in the online survey to gather information about the ways in which Black women learned about and defined health and preventive healthcare and to help contextualize the quantitative data.

Participants were asked two of the following 8 questions which were presented as one of four pairs:

Pair 1:

1. How do you define health?
2. Please describe one or two personal experiences in the healthcare system that stand out to you, this can be a positive, neutral, or negative experience. You can go into however much detail you would like.

Pair 2:

1. How do you define what it means to be healthy?
2. What does it mean to be unhealthy?

Pair 3:

1. What are some important things to do to prevent **short-term** illnesses and where did you learn about those?
2. What are some important things to do to prevent **long-term** illnesses and where did you learn about those?

Pair 4:

1. There are a lot of different messages that we may receive about health from a lot of different sources. What are some messages that you've received about health or the healthcare system?
2. What are some expectations (if any) that you have related to these messages?

Interpretive Phenomenological Research Approach. An interpretive phenomenological approach was employed for this study as it allowed for understanding of how individuals created meaning about certain experiences or phenomena (Creswell & Poth, 2018). Broadly phenomenological approaches focus on how people describe their life experiences outside of a predetermined criterion or definition (Smith & Shinebourne, 2012). Interpretive phenomenology allows for the understanding of behavior in relation to the participants' world including the society and systems in which they are situated (Lopez & Willis, 2004). This study used an interpretive phenomenological approach to more fully understand participants' perspectives on health, experiences and expectations with preventive healthcare, and how they came to learn about preventive health. Andersen's Behavioral Model of Health Service Use and Black Feminist-Womanist ideals guided the development of the open-ended questions that were included in the survey and used in the analysis of qualitative data as well. The questions aimed: to understand how Black college women define, come to know about, and utilize preventive healthcare; sought to understand their salient healthcare experiences; and learn about their expectations of healthcare related to their self-described identities.

Researcher Perspectives. Researchers using qualitative methods emphasize the importance of understanding how researchers think and understand and how they came to that understanding. This is typically referred to as reflexivity (Creswell & Poth, 2018; Patton, 2015). In order to inform the reader of my perspectives, biases, values, and experiences, I provided information at the beginning of the study and journaled in order to continually examine and develop my thoughts, biases, and assumptions. In order to ensure that the analysis team had an opportunity to engage in reflexivity, there was dedicated time during coding meetings to reflect on what we learned and openly discuss biases or concerns.

Quantitative Methods (Research Questions 3 and 4)

Demographic, Health, and Sexual Orientation Questionnaire. Participants were asked to provide general demographic affiliation (i.e., age, gender, sex, race, ethnicity, SES, education, relationship status) and information about sexual orientation to include their description of their sexual orientation and the sex and gender of the individual(s) that they had sexual contact with. They also provided information about their chronic physical and mental health diagnoses. See the survey in Appendix A.

Predisposing Factors. Quantitative measures were discussed in terms of predisposing, enabling, need factors, and the outcome variable, healthcare utilization. Predisposing factors make individuals more inclined to use healthcare services. For this population of Black women who were college students, predisposing factors included medical mistrust, health literacy, social influence, and religious salience.

Medical Mistrust. Medical Mistrust was measured using the 7-item Medical Mistrust Index (MMI) which assesses mistrust in the American medical system with 7 Likert-style items. The scale ranges from 1 (Strongly Disagree) to 5 (Strongly Agree). Scores were summed to compose a medical mistrust score that ranges from 7-35 with higher scores indicating greater mistrust. Sample items included "You'd better be cautious when dealing with health care organizations" and "Sometimes I wonder if health care organizations really know what they are doing." The Cronbach's alpha was acceptable at .83 in the current sample. The test-retest correlation for the overall scale was 0.69 suggesting a stable scale (LaVeist et al., 2009).

The MMI is one of the most widely used scales to measure medical mistrust and is frequently used with Black women. This scale primarily measures participant beliefs about medical personnel and organizations broadly using both personal and general referents

(Williamson & Bigman, 2018). This 7-item version is a shortened version of the original 17-item Medical Mistrust Index. The 7-item version was validated in a sample comprised of predominately Black women and it has been shown to predict six elements of underutilization of health services: failure to take medical advice, failure to follow up on a prescription, failure to follow-up on appointment, postponing needed care, failure to fill a prescription, and lower engagement in genetic testing and counseling (LaVeist et al., 2009; Sheppard et al., 2013). The measure was chosen based on its ability to measure mistrust in Black women while maintaining broad referents. Other measures focus more specifically on mistrust due to race, but this measure is broad and may capture multi-faceted mistrust in this population as mistrust may be due to race, gender, body size, sexual orientation, etc.

Health Literacy. Health Literacy was measured with the Newest Vital Sign (NVS) and questions about communication with providers. The NVS is a 6-item, self-report measure of health literacy. A nutrition label was presented with six questions assessing health literacy. A score of 1 was given for each correct answer with the total possible scores ranging from 0 to 6. Scores of 3 or less indicate possible limited health literacy. The NVS has been validated for use in Black women and has been shown to have good criterion validity, construct validity, and reliability (Miser et al., 2013; Weiss et al., 2005). The NVS is traditionally administered in-person and items are read-aloud to participants. This study deviated from the traditional administration as the measure was administered in an online survey. There were four additional Likert style items developed by the researcher that were added to the NVS score and summed for a total health literacy score. They addressed comfort speaking with their physician or other health care provider, understanding of patient educational materials, having questions answered during their medical visit, and understanding words used by their health care provider. The scale

ranges from 1 (Strongly Disagree) to 5 (Strongly Agree). Given the nature of the NVS, a Cronbach's alpha was unable to be calculated for the combined health literacy measure, instead Cronbach's alpha was calculated for the four additional health literacy items. The Cronbach's alpha was acceptable at .78 in this sample.

Social Influence. Social influence was assessed using six items that assessed how frequently during the past 12 months participants had discussions about their own or someone else's health-related problems across three different settings, including religious settings, their friend group, and with family. Questions were adapted from Benjamins and colleagues' (2011) items that examined the influence of religious communities on preventive health behaviors. They had to rate the frequency of discussions on a 5-point Likert style scale with 0 meaning never and 5 meaning always and this score was summed for a score ranging from 0-30. The Cronbach's alpha was acceptable at .78.

Religious Salience. Religious salience was assessed with two items asking about the importance of and participation in a religious community. The two questions were adapted from an article by Bowen and Smalls (2004) that looked at health-promoting behaviors and spirituality in Black college students. Both questions were presented on 5-point Likert style scales ranging from 0-4. The first question assessed how often participants attended religious services and the potential answer choices and value labels are as follows: never (0), less than once a year (1), a few times a year (2), a few times a month (3), and at least once a week (4). The second question asked participants how important religion is in their life and the potential answer choices and value labels were as follows: not important (0), slightly important (1), fairly important (2), important(3), and very important (4). The questions were summed for a score from 0-8 to

represent religious salience. Participants were also asked to specify their religious or spiritual affiliation, if any.

Enabling Factors. Enabling factors included financial factors for participants and organization characteristics of the places that they sought care. Financial factors were assessed by examining participants' family socioeconomic status and barriers to care.

Family Socioeconomic Status. Socioeconomic status was assessed by asking about participant family annual income and primary caregiver's education. There were 9 categories: under $15,000, $15,000-$24,999, $25,000-$34,999, $35,000-$49,999, $50,000-$74,999, $75,000-$99,999, $100,000-$149,999, $150,000-$199,999, and $200,000 and over. Primary caregiver's education was assessed by asking participants to choose the highest level of education their mother received from the following choices: some high school, high school diploma/GED, technical degree/certification, some college, associates degree, 4-year bachelors, masters, professional, doctoral degree, or other and they were asked to specify.

Barriers to Care. Barriers to care were assessed with multiple items. First participants were asked a about whether there was ever a time during the past 12 months when they were due for a preventive health screening or vaccination and did not receive the screening or vaccination. The options were *yes*, *no*, or *I don't know*. No or I don't know were coded as 0. If a participant answered yes, they were asked to indicate which barriers from a list of 8 barriers applied to them. The list of barriers to care was determined from the literature (Pullen, et al., 2014; Willis et al., 2021). Barriers included: dissatisfaction with available services, any financial reason, preventive health care being too time consuming, , being unsure where to go for preventive care, inability to get an appointment, being afraid to go to a provider due to COVID-19, preventive health not being a priority, distrust of a vaccine or screening, being afraid of potential side effects, and an

"other" option where participants could describe barriers that were not listed. The number of barriers that each participant endorsed was summed.

Organizational factors were assessed by asking about access to care, provider respect, and affirming provider behaviors.

Access to Care. Access to care was assessed by asking about whether participants had a PCP, obstetrician/gynecologist, and/or a typical location that they go to for their healthcare needs. The options were yes or no with yes being scored as 1 and no being scored 0.

Provider Respect. Participants were asked the degree to which they agreed with the statements that they usually feel respected and affirmed when they go to their healthcare provider. They responded to two 5-point Likert style questions rated from 1(Strongly Disagree) to 5 (Strongly Agree).

Affirming Provider Behavior. Participants were asked about different ways that their healthcare providers might have engaged in affirming behavior with regard to their identity not limited to race, ethnicity, gender, sexual orientation, body size, and language. They were asked to check off behaviors that apply from a list of 25 behaviors that were adapted from guidelines to support sexual minority women (National LGBT Health Education Center, 2019). Example items include: "I feel like I can ask questions," "My providers inform me about what is going on during procedures," "My providers acknowledge the stress that I may face as a Black woman," and "My providers make suggestions about health that fir into my budget or what I can afford." Each endorsed behavior was scored 1 and the items were totaled.

Need Factors.

Perceived Need. Need factors included both perceived and evaluated need. Perceived need was assessed using items from the Medical Expenditure Panel Survey from DHHS's

Agency for Healthcare Research and Quality (Agency for Healthcare Research and Quality, 2012). First participants were asked to rate their general health using a 1-item 5-point Likert-style scale from poor (1) to excellent (5). Participants were also asked about the number of days in the past month that poor physical or mental health limited their self-care, work, or recreation. Lastly, participants were asked to rate their agreement using a 1-item 5-point Likert-style scale with the following statement "It is important to you to take care of your health before you are seriously ill." The potential answers and value labels ranged from strongly disagree (1) to strongly agree (5). This statement was used to assess the importance of preventive health care. These items were summed for a total perceived need score.

Evaluated Need. Evaluated need was measured by three items. The first two items were participant's last measured height and weight which was used to create a BMI score that was stratified into either underweight, healthy, overweight, or obese ranges. Participants were given a score of one if they fell into the underweight, overweight, or obese categories. The third item asked about diagnosed chronic health conditions. They received the following question "Have you been diagnosed with or treated for any of the following health problems? Check all that apply." The options included the following: high blood pressure/hypertension, overweight/obesity, depression, anxiety, PTSD, sleep disorder, substance use or addiction, HIV/AIDS, compromised immune system/immunodeficiency, any chronic condition or disease, other (with a fill in the blank), eating disorder, long haul or chronic COVID, or I have not been diagnosed with any of these. If participants were already given a score of one for being in the obese, overweight, or underweight categories from the first two items, their endorsements of being overweight, obese, or underweight were not counted again in item three. The three items were summed to create an evaluated need score.

Healthcare Utilization. The outcome healthcare utilization was assessed using a preventive healthcare utilization score that assesses whether participants are up-to-date on age- and anatomy- appropriate vaccinations and screenings that typically take place in primary care settings (Whitehead et al., 2016). Like the Whitehead and colleagues' study (2016), screening and vaccination schedules were compiled from the U.S. Preventive Services Task Force & Centers for Disease Control guidelines for the general population as well as targeted screenings and vaccinations based on participant age, sex, and sexual orientation (e.g., HPV vaccinations for participants assigned female at birth who are between the ages 18 and 26, gonorrhea/chlamydia screenings in the past year for participants assigned female at birth ages 18 to 24, past flu vaccines for all participants, etc.). Since the outbreak of the novel coronavirus 2019 (COVID-19) was an ongoing public health threat at the time of this study, the COVID-19 vaccines were included in this healthcare utilization score. Though this vaccine was obviously not included in the Whitehead and colleagues' study, it is now a vaccine recommended by the CDC (CDC, 2021d). A single outcome variable of "healthcare utilization score" was calculated to denote the percentage of health tasks that each participant completed within the time period specified in the recommendations and guidelines (Whitehead et al., 2016). In past studies where this measure was utilized, a 60% cutoff was used as it was the average preventive health screening uptake (Whitehead et al., 2016; Williams, 2020).. The same 60% cutoff was utilized in this study.

Quantitative Analysis Plan

In order to address research question 3 which aimed to explore rates of preventive healthcare utilization in Black college women, descriptive statistics including frequencies for each type of preventive health vaccination and screening and total percentages of recommended screenings and vaccinations were calculated.

To test hypotheses 1 and 2 under research question 4, hierarchical regressions were run to predict healthcare utilization. Healthcare utilization was the dichotomous outcome variable (at or above and below the 60% utilization cutoff). Covariates associated with healthcare utilization including age, gender (cisgender woman or other gender), ethnicity (Hispanic/Latina/x/e or Not Hispanic/Latina/x/e), race (monoracial or multiracial), nationality (African American only or other nationality), and sexual orientation (heterosexual or other sexual orientation) were entered into step 1. Age was a continuous variable while all other covariates were dichotomous variables. Predisposing variables (medical mistrust, health literacy, social influence, religious salience) were entered in step 2. Enabling variables (family socioeconomic status, barriers to care, access to care, provider respect, affirming provider behavior) were entered into step 3. The need variables (perceived need and evaluated need [BMI and number of health conditions]) were entered in step 4. The assumptions of multiple regression—linearity, homoscedasticity and multicollinearity—were assessed.

The variables in the study have been shown to be significantly predict preventive healthcare but there have been a range of effect sizes from small effects (typically with demographic variables including age and gender) to small to medium effect sizes in mistrust, income, and chronic health conditions to medium to large effect sizes with religion, environmental and provider-related variables, and chronic health conditions (Babitsch et al., 2012; Benjamins, 2005; Brown et al., 2009; Musa et al., 2009; Phillips et al., 1998). An a priori sensitivity analysis was conducted with G*Power 3.1.9.3 where a linear multiple regression was used as a proxy for logistic regression in order to determine sample size. It was indicated that a sample size of 153, with 80% power, at the 0.05 level of significance, would detect a medium effect size of $F2 = 0.15$.

***Covariates*.** There are a variety of demographic characteristics that have been found to be associated with healthcare utilization. This study included age, gender (cisgender woman or other gender), ethnicity (Hispanic/Latina/e/o or Not Hispanic/Latina/e/o), race (monoracial or multiracial), nationality (African American only or other nationality), and sexual orientation (heterosexual or other sexual orientation).

Qualitative Analysis Plan

Transcription. Since participants were answering qualitative questions in the Qualtrics survey there was no need for transcription. Text taken directly from the Qualtrics survey was used for data analysis.

Data Reduction. Data were analyzed by reducing qualitative answers into codes and condensing those codes as described by Creswell and Poth (2018). I worked with trained graduate students in order to read qualitative responses and documented any thoughts, ideas, and assumptions experienced while reading. I then organized and summarized codes into initial themes. In order to ensure similar coding strategies, the coding team met together to code the first set of qualitative answers. Prior to the first meeting, each individual coded the transcript of answers and document potential codes. Next, we identified codes from the transcript and came to an agreement about a best fit. This process allowed for a codebook to be formed. As coding continued, there was flexibility in adding new codes, removing current codes, and editing existing codes in order to capture the essence of participant experiences (Creswell & Poth, 2018). There were two coders for all responses and discrepancies in coding were addressed among pairs. In the event, that coding pairs could not come to an agreement, the researcher was to act as a tiebreaker. However, the coding pairs were able to reach agreements on all codes upon discussion.

Representation. The final product to represent the data included a narrative that described and interpreted Black college women's experiences with preventive healthcare utilization. This narrative and qualitative data were used to contextualize the quantitative data from the study.

Chapter 4: Results

Sample

A total of 235 participants initiated the survey. Inclusion criteria included being Black undergraduate women at East Carolina University who were at least 18 years old and able to read and write English. There were a total of 79 individuals who were excluded from the final sample for the following reasons: only completed informed consent (30), only completed demographic information (27), not Black/African American (7), did not complete the outcome variable (6), graduate students (5), male sex and gender (3), did not complete informed consent (2), inconsistent responding (2), did not complete SES or education so unable to include SES proxy (1), noted that they filled out the survey a second time as they did not think their original answers saved when they did (1). This resulted in a total of 155 participants.

All participants (N = 155) were recruited through the ECU Psychology department's online participant recruitment system, SONA, or through targeted email outreach in coordination with the ECU Survey Review and Oversight Committee. Participants ranged in age from 18 to 51 with the mean age being 20.9 years old. Participant demographics are summarized in Table 2. Of note, all participants were assigned female at birth, and all participants identify as a woman at least some of the time in health care settings. The majority of participants were monoracial (96.8%), not Hispanic/Latina/e/o (94.2%), heterosexual (73.5%), and women (98.1%) aged 18-24 years old (86.5%).

Table 2

Participant Demographics

Demographics	%	*n*
Age		
18-24	86.5%	134
25-34	9.0%	14

35-44	2.6%	4
45-54	1.9%	3
Year in School		
1st year	64.5%	100
2nd year	13.5%	21
3rd year	9.7%	15
4th year	6.5%	10
5+ years	5.8%	9
Gender		
Female/Woman/Transwoman	98.1%	152
Trans*/Genderqueer/nonbinary	1.9%	3
Sexual orientation		
Heterosexual/Straight	73.5%	114
Bisexual/Pansexual	16.1%	25
Lesbian	3.2%	5
Gay	0.6%	1
Asexual/Demisexual	3.2 %	5
Questioning/Not sure	1.9%	3
Queer	1.3%	2
Estimated Household Income		
Under $25,000	17.4%	27
$25,000-$49,999	29.7%	46
$50,000-$74,999	15.5%	24
$75,000-$99,999	9.7%	15
$100,000 and over	10.3%	16
Missing	16.8%	26
Highest education level of primary caregiver		
Some high school	7.7%	12
High school diploma/GED	24.5%	38
Technical degree/certification	4.5%	7
Some college/Associate's degree	29.0%	45
4-year bachelors	20.6%	32
Master's, Doctoral, or Professional degree	13.5%	21
Ethnicity		
Not Hispanic/Latina/e/o	93.5%	145
Latina/e/o	5.8%	9
Missing	0.6%	1
Race		
Monoracial	96.8%	150
Biracial	3.2%	5
Nationality		
American	92.9%	144
Other	7.1%	11
Are you religious or spiritual?		
Yes	85.8%	133
No	14.2%	22

Religion		
Christian	71.6%	111
Blank/Missing	14.8%	23
Spiritual	8.4%	13
Agnostic Theism	1.9%	3
Unsure	1.3%	2
Muslim	0.6%	1
Pagan	0.6%	1
None/NA	0.6%	1

Physical and mental health conditions endorsed by participants as well as self-rated health and provider information are summarized in Table 3. More than half of the sample reported that they had one or more chronic health conditions (51.0%). Overweight/obesity was the most endorsed physical health condition (21.3%). Anxiety was the most frequently reported among mental health conditions (23.7%) followed by depression (17.4%). When asked about self-rated health, the majority of participants (76.1%) rated their health as good, very good, or excellent. The majority of participants (71.2%) had received at least one dose of a COVID vaccine. COVID-19-related variables are summarized in Table 4.

Table 3

Health-Related Characteristics

Chronic Health Condition	%	*n*
Physical Health		
High blood pressure/Hypertension	7.1%	11
Overweight/Obesity	21.3%	33
History of concussion or loss of consciousness	3.2%	5
Compromised immune system/immunodeficiency	0.6%	1
Diabetes	1.3%	2
PCOS	1.9%	3
Asthma	1.9%	3
Anemia	1.3%	2
Long-haul COVID, Long COVID, or chronic COVID	0.6%	1
Other	4.5%	7
No chronic health conditions	49.0%	76

Mental Health		
Anxiety	23.2%	36
Depression	17.4%	27
ADHD/ADD	3.2%	5
PTSD	5.2%	8
Sleep Disorder	1.3%	2
Substance Use Disorder or Addiction	0.6%	1
Eating Disorder	1.3%	2
Bipolar Disorder	0.6%	1
Self-Rated Health		
Poor	3.2%	5
Fair	21.2%	33
Good	45.5%	71
Very Good	25.0%	39
Excellent	5.1%	8
BMI (calculated)		
Underweight range (<18.5)	5.8%	9
Healthy weight range (18.5 to <25)	29.0%	45
Overweight range (25.0 to <30)	30.3%	47
Obesity range (30.0 +)	34.8%	54
Primary Care Provider		
Yes	84.5%	131
No	15.5%	24
OB/GYN		
Yes	42.2%	67
No	56.8%	88
One place that they typically go for healthcare needs		
Yes	143	92.3%
No	12	7.7%
Location of PCP		
In their hometown/family doctor	65.2%	101
Missing	13.5%	21
ECU Family Medicine/Vidant Health/Another place in Greenville	12.2%	19
Other NC location	6.5%	10
Student Health Services	1.9%	3
Military Treatment Facility	0.6%	1

Table 4

Summary of COVID-19 Vaccine Information

	%	*n*
Have you received any of the COVID-19 vaccines?		
Yes	71.2%	111
No	28.3%	44

If No, were you told by a doctor that you should not get the COVID-19 vaccine?		
Yes	3.2%	5
No	23.9%	37
Does not apply	72.4%	113
Which vaccine did you receive?		
Johnson & Johnson	1.3%	2
Moderna	14.2%	22
Pfizer	55.5%	86
Other	0.6%	1
Does not apply	28.3%	44
How many vaccines did you receive (not including boosters)?		
1	9.0%	14
2	60.0%	93
3	3.9%	6
Does not apply	28.7%	42
Up-to-date COVID vaccinations		
Yes	27.1%	42
No	72.9%	113

Qualitative Results

A total of 154 participants provided responses to one of four pairs of randomly assigned qualitative questions. Participants' responses were extracted verbatim to avoid compromising the integrity of the data. All data were coded and analyzed via the Dedoose qualitative management software. Interpretive phenomenological analysis (IPA) was utilized as an analytic approach within this study, using a Black feminist womanist lens aimed to understand the way that Black women: 1) defined health and health experiences; 2) described what it means to be healthy and unhealthy; 3) conceptualize prevention for both short and long term illnesses; and 4) describe expectations and messages related to the health care system and the sources of this information.

The coding team was comprised of four cisgender women, three identifying as Black/African American and one identifying as Hispanic/Latina. All coders completed coding while utilizing reflexivity and discussing, either through a verbal or written format, their thoughts, biases, and assumptions of the data, which were noted and discussed during subsequent

group coding sessions. Coders noted their reactions to participant responses that resonated with them. Experiences that resonated with coders were classified as salient incidents. The subjectivity awareness statements captured the awareness of both individual coders and coding pairs. Subjectivity awareness statements were recorded during individual and pair coding sessions. Highlighted reflexive journal excerpts can be found in Table 5.

Table 5

Reflexive Journal Excerpts

Salient Incident	Reflexive Journal Entry	Subjectivity Awareness
Noticing patterns in sources of health information	*Many of the participants stated that they received their health information from their mother or their entire family. There were no participants who specifically identified their father as a health resource*	We wonder if this may be due to the transgenerational legacy of fathers in Black communities being displaced from their home environment due to a variety of reasons (i.e., mass incarceration, police brutality). Or there may be a cultural gender role in which mothers take on the responsibility of teaching their children about health.
Noticing patterns of participants classifying illness as unhealthy	*Many participants classified people with an illness (i.e.,. diabetes) as unhealthy. We started to discuss friends and family members with other chronic illnesses that we believe are living a healthy lifestyle.*	Maybe the word "illness" to many of these participants seemed to hold a negative connotation?

	Multiple participants described health as the absence of any disease or condition while others noted being able to live without limitations/restrictions. The latter seems more inclusive but still seems to be a bit of a narrow view. This seems to inadvertently suggest folks with various conditions can't be "healthy." My exposure to a supportive and accessible environment for folks with disabilities while I was in college likely influences my view of this.	Interesting to see the ways that participants viewed health as an all or nothing aspect. I wonder how exposure to accessible environments and folks with disabilities may influence these perceptions.
Participant reported wanting to go into the healthcare field to make a difference so that other women do not have to feel the ways that she has felt in medical settings	*This seems protective and like a reflection of mistrust*	This is one of the many ways that Black women respond to medical mistrust. This seems like a way for Black women to be community advocates on a larger scale in response to medical racism.

Themes & Subthemes by Question Pairs

Pair 1(P1)*:* The first question pair focused on defining health and health experiences. There were 40 randomly assigned participants who answered these questions.

Question 1(Q1). The first question in P1 was "How do you define health?" There were five themes that highlighted salient thematic elements of participants' view of health: physical health, mental health, mind-body connection/wellness, health as freedom from injury or illness, and health literacy. Questions, themes, and subthemes are displayed in Table 6 below.

Table 6

Themes and subthemes for Q1: How do you define health?

Theme	Subtheme

Physical health	Nutrition and physical activity
	Less traditional physical health
Mental health	
Mind-body connection/ wellness	
Health as being free from injury or illness	Avoiding health complications
	Limited need for doctor's visits
	Mobility and longevity
Health Literacy	Health knowledge
	Health communication
	Application of health knowledge

Physical Health. The physical health theme is characterized by subthemes of more general elements of physical health such as nutrition and physical activity as well as specific elements of physical health to include a focus on topics like pH balance and the immune system. The nutrition and physical activity subtheme is exemplified in the following quote:

"Health is having the resources available to maintain a balanced diet, see a physician when necessary and engaging in regular physical activity."

The less traditional physical health subtheme is illustrated with the following participant response:

"…some of the things I keep as a healthy thing is my Ph balance that's one of my biggest concerns I have to keep it up to date also my immune systems and also this might seem silly but my hair also the way I have to keep it healthy so it can grow."

Mental Health. Mental health was mentioned by a variety of participants as well. For question one, as well as the other questions, participants referred to elements of mental health by different names and components including mental health, mental well-being, emotional health, spiritual health, spiritual well-being, and social well-being. While all these terms are not

necessarily synonymous, they can fall under the umbrella of mental health. Throughout the qualitative coding process, mental health was used to synthesize these terms. Many participants referred to mental health broadly, while some participants provided specifics including,

"being peaceful with…the thoughts you allow in your mind."

For both physical and mental health these themes were often mentioned in more of a broad sense with participants mentioning the following:

"physical and mental well-being," "mental or physical condition," and "mental and physical health."

Mind-Body Connection. The theme of mind-body connection and wellness was included to acknowledge the way that some participants framed health as more of a holistic experience of wellness that covered additional elements beyond physical and mental health and connected the relationship between physical and mental health. This was exemplified with the following quote:

"I would define health as a way of taking care of your body. How well you feel mentally, physically, and emotionally. The things we input in our bodies affect our health. How we treat our body with things like dental hygiene, bathing, exercising, and ways to destress. I factor all of those things into health."

Health as Freedom from Injury or Illness. The theme of health as freedom from injury or illness included the subthemes of avoiding health complications, limited need for doctor's visits, and mobility and longevity. For example, one participant responded by stating that

"*health refers to maintaining a 'healthy' lifestyle to avoid health complications."*

Another participant stated that health means

"not having to worry about going to the doctor all time for check ups."

Lastly, another participant stated that health is

"something that determines your longevity of life and the mobility of your body."

These themes and subthemes focused more on the long-term elements and appear to associate health with the absence of medical intervention and disability.

Health Literacy. The theme of health literacy included subthemes of health knowledge, health communication, and the application of health knowledge. The health knowledge subtheme focused on participants noting the importance of health in their lives. Health communication focused on being able to communicate with others about health. One participant described this as "asking questions no matter how silly they seem to you." The application of health knowledge subtheme was focused on participants being able to utilize what they knew about preventive health in a positive way. One participant described this as "how a person takes care of themselves and making sure they're keeping their body healthy."

Overall participants saw being healthy as a multifactorial experience involving both physical and mental health and being free from health conditions or disease. Participants also saw being able to understand, communicate, and apply health knowledge as a part of their understanding of health as well.

Question 2(Q2). The second question asked participants to describe one or two personal experiences with the healthcare system that stand out to them. These responses were coded and separated by valence into positive, negative, and neutral experiences. There were three participants that noted that there were no experiences that stood out to them. Of note, there were a few participants who responded to this question stating that their experiences seemed neutral but went on to describe an objectively negative experience (e.g., lack of follow-up from providers and lack of information). These experiences were coded as negative. Overall, there were fewer positive experiences than negative experiences reported. Many participants answered

the question by reporting both positive and negative experiences. Questions, themes, and subthemes are displayed in Table 7 below.

Table 7

Themes and subthemes for Q2: Please describe one or two personal experiences in the healthcare system that stand out to you, this can be a positive, neutral, or negative experience. You can go into however much detail you would like.

Theme	Subtheme
Positive	Positive experience with specific treatment
	Positive provider behaviors
	Better experience in US
Negative	Medical mistreatment of Black patients
	Financial barrier
	Reproductive health concerns
	Negative provider behaviors
	Long wait times for appointments
	Poor experiences with specialty
	Awareness of disparities
	Better experience outside US
	Discomfort with male providers
	Preference for providers of color
Neutral	Importance of doctors and nurses
	Increased agency
	Limitations of universal healthcare
	Importance of health

Participants reported positive experiences with specialty care, positive provider behaviors, and having a better experience in the United States compared to other countries. Regarding positive experiences with specialty care participants specifically mentioned experiences with treatment during sickle cell treatment, surgery after amputation, physical therapy, and obstetrics and gynecology. Participants focused primarily on their interactions with

medical professionals. For example, one participant focused on the relationship between them and their medical team stating,

> *"a positive thing for me would be how i have a big team of doctors who care about how [I'm] feeling and they do everything they can to make me feel better whenever [I] am hurting."*

The positive provider behaviors subtheme mirrors some of the same sentiments of caring providers being held in high regard. One participant recounted their experiences with both surgery and physical therapy in a positive light as follows:

> *"I've had pretty good health related experiences so far. I had to get surgury one time and the doctors were really nice and made sure i understood everthing that would go on while i was unconcious instead of just going through the process to get it over with. When i had to go to physical therapy the PTs were also amazing and id definetly go there again; they were patient and worked well with me and made things fun*."

Lastly, one participant reported healthcare experiences in the United States being superior to their experiences in other countries. Treatment, relatively short wait times, and having concerns addressed.

The negative experiences covered somewhat contrasting themes including mistreatment of Black patients, financial barriers to quality care, negative provider behaviors, long wait times for appointments, reproductive health concerns, poor experiences with specialty care, discomfort with male providers, and preference for providers of color. Participants mentioned multiple general instances of mistreatment of Black patients. Most of these were more general feelings including some of the following quotes:

“as I got older it’s been hard trying to find a doctor who cares about African American Women or Men.”

“Black people aren’t taken seriously in healthcare.”

“The other doctors sometimes think Im faking the pain just for strong medication when actually i dont like to take strong meds unless i have to and the only time i do is if im in unbearable pain”

Financial barriers to quality care included both person experiences and experiences that participants had learned about. Examples include:

“This is not a personal problem for me or my family but I see many people who don't have enough money for surgery or treatment and their insurance doesn't cover it either. Insurance is supposed to help you they say "Nationwide is on your side" and they should cover your care.”

“My first experience with the health care system was when my mother died from a heart attack, her third heart attack. Both she and my father decided to not get the test done that would have revealed the major blockage in her heart because they could not afford it.”

The next subtheme of negative provider behaviors focused on lack of transparency, lack of care for patients, and not taking concerns seriously. Participants focused on the poor communication experiences between them and their providers.

“*My family and I were pushed and pulled around about whether his surgery was today, tomorrow and then eventually they just came in and took him to surgery. It left us shocked--it was so disorganized and non-communicative that an institution that is supposedly there to care for others is so...unprofessional.”*

Participants also reported multiple experiences where they felt those in the healthcare system did not care for their patients or were negligent in their care. Examples are provided below:

"A personal experience I've had is with a rude nurse who refused to help me when I was on the verge of passing out until her boss came in the room."

"The heath care system does not care about their custumers."

"About 3-4 years ago I had a primary doctor who only cared about my weight. Anytime I had a serious problem she would just blame it on my weight. There was a time when my mental health wasn't that great and I went to talk to her about it and she completely ignored it. After that I didn't really go to the doctors b/c I felt like they didn't care about me."

"I happened to go to the doctor for sick symptoms and my doctor replied 'She's just sick, its something all kids go through' and didnt prescribe me any medicine. I later found out I had bronchitis.

Lastly, multiple participants reported feeling that their concerns were not taken seriously.

"An experience that has stood out to me is the lack of follow-up and information given concerning birth control when visiting the OBGYN from previous appointments."

"A lot of my doctors have dismissed or ignored my concerns about my mental health, which has been very frustrating."

"Doctors are kind of lazy when it comes to going in-depth with someones concerns"

The reproductive health concerns subtheme focuses on both national related to reproductive healthcare access as well as person experiences related to reproductive health. One participant stated their concerns related to the current status of reproductive rights stating:

"*I don't like how some states are trying to ban abortions I'm pro-life. Anything could have [happened]to the woman who wants to abort her baby if she wants to let her."*

Other participants focused on their own experiences navigating reproductive health. One participant discussed difficulty navigating abnormal vaginal bleeding that while another noted difficulty with navigating painful periods, described below:

"For years my primary doctor has always been a male. Ever since I got my period, I have always had awful cramps. They would make me so sick. I was missing school, throwing up, and was in so much pain. When I turned 18, I started seeing a woman doctor. For the first time, I finally felt like a doctor understood me. She is someone that I feel safe with."

The subtheme focused on long wait times for appointment elicited responses stating difficulty with limited appointment availability. For example, one participant noted arriving 10 minutes late to an appointment due to traffic and having to reschedule for the next soonest appointment which was "months later."

The poor experiences with the specialty care subtheme focused on some of the same specialty areas as the positive valence subthemes. Some of the specialty care experiences with obstetrics and gynecology were illustrated in previous quotes. Regarding an experience with amputee clinics and rehabilitation, a participant reported,

"treatment in Fayetteville NC is mediocare [mediocre] and not up to a person that would like to be active in life. They make ok prosthetics but not ones that you can be active and work and have living."

"I went to the hospital and they gave me a pap smear to check for an infection but that didn't make any sense. Not only was it my first ever pap smear. It was done by a man, it was very uncomfortable to me. The bleeding also continued after that."

The discomfort with male providers subtheme was primarily illustrated by participants' favor for women providers. Participants mentioned feeling understood and safe with women providers as illustrated by the following quote:

"When I turned 18, I started seeing a woman doctor. For the first time, I finally felt like a doctor understood me. She is someone that I feel safe with."

The preference for providers of color subtheme was notable as it was typically paired with a negative experience with White providers as follows,

"My mom just recently switched me to her regular (black female) doctor rather than my old pediatrician and I was automatically so much more comfortable sharing what was going on with me."

"I went to the doctor with my mom and it was difficult because I went with my white mom and my doctor was white, it didn't really feel as comfortable because I would rather have a black doctor."

Responses that did not focus on individuals' experiences with the American healthcare system were coded as neutral. One response focused on the importance of doctors and nurses, one focused on the individual work a participant engaged in with respect to improving her health, and the last response discussed the limitations of universal healthcare, but this was not in comparison to the healthcare system in the United States.

Participants reported a variety of positive, negative, and neutral experiences in the U.S. healthcare system. There were more negative experiences reported, than positive experiences though many participants reported both positive and negative experiences within the healthcare system.

Pair 2 (P2) The second question pair focused on what it means to be healthy and unhealthy. There were 41 randomly assigned participants who answered these questions.

Question 3 (Q3). The third question asked what it means to be healthy, and the themes were physical health, mental health, health as the absence of disease, health as a lifestyle, preventive care, and individualized experience. Questions, themes, and subthemes are displayed in Table 8 below.

Table 8

Themes and Subthemes for Q3: How do you define what it means to be healthy?

Theme	Subtheme
Physical health	Nutrition
	Physical activity
	Energy/stamina
	Healthy weight
	Rest/sleep/breaks
Mental health	Happy, cheerful, good attitude
	Stress management
	Avoiding negativity
	Self-care
	Doing things, you enjoy
Absence of condition or disease	Health leads to a lower risk for disease
	Health as the absence health conditions, pain, and functional difficulty
Health as a lifestyle	Behaviors, habits, choices, and effort
Preventive care	
Individualized experience	

The physical health theme included various subthemes of: nutrition, physical activity, energy/stamina, healthy weight, and rest. The nutrition subtheme included comments related to not only quality but quantity of food and hydration. Participants used the following language to address these elements:

"eating enough nutritious foods without overeating"

"balanced diet"

"proper dietary and nutritional values"

Physical activity was addressed in a variety of ways by participants using words and phrases including

"being active"

"moving your body"

"staying in shape"

Of note, a few participants mentioned daily movement, but there were not mentions of specific types of physical activity. Energy was also seen as an important element of physical health in this sample as participants referred to feeling energetic and having stamina. One participant gave a rather illustrative example by mentioning "*not huffing and puffing when you go up the stairs.*" Another participant reported that being healthy means

"being in some level of fitness, like being able to run for at least 10 minutes before getting tired."

Responses to this question only mentioned weight within the phrases "safe weight" and "healthy weight." Rest was mentioned by two participants and stood out as an important part of physical health that is often unacknowledged.

The mental health subtheme was collapsed from other themes that all seemed to address mental health as complex. Subthemes in mental health were having a cheerful attitude, stress management, avoiding negativity, self-care, and enjoyable activities. Illustrative examples included *"being happy in general," "avoiding negative energy," and "doing things that make you feeling good."* One participant summarized her view of health that focused on self-care with the following quote:

"Being healthy means taking care of myself and putting my needs first. Some of these needs include self-care, such as: getting my nails done, getting my hair done, shopping, listening to music, working out occasionally, and spending time with friends and family."

The two subthemes under health as the absence of disease were health leading to a lower risk of disease and health as the absence of pain and functional difficulty. One participant responded citing the way that a healthy lifestyle could lead to a "reduced risk for disease" while others focused on the absence of pain, health conditions, or functional difficulty. Some examples were participants mentioning that being healthy means

"*being free from diseases"*

"not having any conditions or disease that can harmfully affect your life in a negative manner"

"not hurting"

"being able to do everyday tasks without any restrictions/limitations"

The idea that health is a lifestyle was another important theme for participants as it acknowledged behaviors, habits, choices, and effort involved in being healthy. There was an overarching theme of repetitive choices that turn to habits that were associated with being healthy. Participants mentioned "*good food choices," "good eating choices,"* and a more generic overview of healthy "*lifestyle choices*."

Preventive care was addressed by multiple participants as well. A couple participants noted that "*regular checkups,"* and "*yearly physicals*" were part of being healthy as well. Lastly, a handful of participants contextualized their answers and framed health as an individualized experience, suggesting that healthy is "*being in the best state that a person can be in,"* acknowledging healthy "*does not mean a specific size, but a sense of well-being."*

In summary, participants saw health as an individualized sense of well-being stemming from lifestyle choices that address physical, emotional, and spiritual health.

Question 4(Q4): The second question in the pair asked what it means to be unhealthy. Many of the participants provided general and overarching answers such as

> *"I think unhealthy means to be sick or in poor health. Unhealthy could be one not taking care for themselves with mentally, physically, emotionally, or spiritually."*

The majority of the answers included some element of mental health as well as physical health. However, during the qualitative analysis process, additional themes emerged including physical health, mental health, the presence of disease as unhealthy, and lifestyle choices. Questions, themes, and subthemes are displayed in Table 9 below.

Table 9

Themes and Subthemes for Q4: What does it mean to be unhealthy?

Theme	Subtheme
Physical health	Poor nutrition (quality and quantity)
	Lack of exercise
	Lack of energy/stamina
	Unhealthy weight
	Role of genetics
Mental health	Depressed
	Stress
	Toxic environments
	Not taking pride in appearance
Presence of disease or condition	Having a condition
	Having pain or functional difficulty
Lifestyle choices	Healthcare avoidance
	Risky behaviors

The physical health subthemes were largely the opposite of the physical health subthemes for the previous question. Subthemes included poor nutrition that addressed both quality and quantity, lack of exercise, lack of energy and stamina, unhealthy weight and the role of genetics.

Regarding nutrition, participants mentioned elements "*not meeting said nutritional standards*," "*not eating*," "*eating the wrong foods*," and "*eating things that [are not] good for your wellbeing.*" A few participants mentioned types of unhealthy food, naming "*junk food*," foods "*high in sugar*," and "*consuming a lot of snacks but no actual food, and consuming soda."*

A handful of participants mentioned lack of physical activity or the effects of lacking physical activity stating that being unhealthy means having "*no exercise*," "*being physically unfit,*" and "*being out of shape*." Some participants described what this might look like to them and mentioned "*being sluggish*" and "*being physically unable to do certain things that require a high amount of energy*."

Weight was commented on throughout the responses as well with participants. Overall, there seemed to be more of a focus on higher weight as illustrated by the following responses, *"being overweight and not exercising or eating correctly to get down to a healthy weight*" and unhealthy meaning "*being extremely overweight and on medications*." However, other participants mentioned more expansive definitions that also included being at the other end of the weight spectrum and mentioned unhealthy as "*being over or underweight*," and to "*waste away physically… [by] not eating."* One participant acknowledged the role of genetics in this question as they mentioned the idea that people can be born with qualities that lead to being unhealthy, stating that being unhealthy included "*suffering due to the things that you consume, inflict upon yourself, or are born with*."

Subthemes under the mental health theme included depression, toxic environments, stress, and not taking pride in appearance. The depression subtheme focused on participants specifically mentioning depression in their definitions of unhealthy (i.e., "d*epression or bad thoughts,*" "*having depression*," "*depressed*"). Of note participants also mentioned answers that

may allude to symptoms of depression (e.g., "*not taking care of yourself mentally*," "h*aving a bad mindset,*" "*constant negative feelings*" and "*not looking your best*") as well as anxiety, a commonly co-occurring condition. The toxic environments subtheme included responses in which participants mentioned environmental aspects including the environment and people close to them that might contribute to negative mental health outcomes. For example, participants mentioned "*hanging out with people who don't uplift you*," "*being in toxic situations*," and being "*around toxic people*." Stress was another subtheme mentioned by a couple of participants. One participant mentioned being under "*constant stress*" as unhealthy while another participant mentioned stress as a consequence of being unhealthy. Lastly, the subtheme of not taking pride in appearance stood out as it was a subtheme that could have fit into both physical and mental health. Though only one participant mentioned not taking pride in their appearance, it was a salient quote that illustrated the way the participant saw their appearance as a reflection of their health and was a contrast from the self-care response under question three. Part of the responses includes the following: "*Not caring about yourself in ways that make you feel fit. When you are not looking your best. You have a lot of problems that are ailing you*." Participants' overall view of mental health in healthy and unhealthy contexts was consistent overall.

Mirroring the absence of disease as healthy, the presence of disease or health condition was a common theme for this question as well. Similar to question 3, there were also mentions of functional difficulty, illustrated by participants' mentions of "struggle to do everyday tasks," being "*unable to perform needed actions to stay alive*," and "*undue pain, limitations*" as components of their definitions of unhealthy.

Lastly, the theme of lifestyle choices was a common theme across responses to question four. The prominent subthemes were risky behaviors and healthcare avoidance. The lifestyle

choice theme highlighted the idea that individual choice played a large role in what the participants saw as being unhealthy. The risky behaviors subthemes were centered around drugs and alcohol and unsafe sexual behavior with participants using the following language when describing what it meant to be unhealthy: "*engaging in risky sexual behaviors*" and "*doing things that will harm your body such as drugs and alcohol*." Healthcare avoidance was shown primarily through the ideas of neglecting one's body or health showed up throughout participant responses. For example, one participant described this with their response, "*what it means to be unhealthy is that you are putting your body in harm's way by not taking care of it*." Multiple other participants described not taking care of oneself as being an unhealthy behavior.

In summary, participants saw being unhealthy as a combination of poor physical and mental health, having a health condition or disease, and certain lifestyle choices. Participants reported that this health status could be caused by genetics, toxic environments, lifestyle choices, and/ or a combination these elements.

Pair 3 (P3) The third question pair focused on ways participants conceptualized preventing both short-term and long-term illnesses. There were 39 randomly assigned participants who answered these questions.

Question 5 (Q5). Q5 assessed behaviors that participants engaged in to prevent short-term illnesses. Answers were categorized into the subthemes of general physical health, COVID-related precautions, and mental health. Questions, themes, and subthemes are displayed in Table 10 below.

Table 10

Themes and Subthemes for Q5: What are some important things to do to prevent short-term illnesses?

Theme	Subtheme
Physical health	Medicine and supplements
	Nutrition and exercise
	Holistic practices
	Sleep/rest
	Prevention behaviors
COVID-related precautions	
Mental health	Stress management

The general physical health theme had subthemes of medicine and supplements, nutrition and exercise, holistic practices, sleep, routine physicals, and prevention behaviors. The medicine and supplements subtheme was comprised of participants' responses focused on taking medicine and taking vitamins broadly there was also a mention of getting sunlight and it was unclear whether this suggestion was more focused on the COVID-19 advice to spend more time in the sun in order to fight vitamin D deficiencies that were thought to be associated with COVID, or whether this was focused on getting sunlight broadly for mood purposes or getting sunlight for exercise purposes. Specific vitamins including vitamin C, zinc, iron, and "*women's supplements*" were mentioned. Medication and medication adherence were mentioned as well with participants stating that they made sure that they use the "*correct medicine*" and "*stay on top of things like taking vitamins and medicine.*"

The nutrition and exercise subtheme was comprised of responses that included primarily healthy diet, exercise, and hydration. One participant summarized this with their response of "*to prevent short term illnesses, its best to eat good, drink LOTS of water, and workout*." A few participants mentioned home remedies or practices that are often thought of when thinking about practices that are not typically practiced in Western medicine. In order to accurately represent participant descriptions, this subtheme was described as holistic practices. One participant illustrated what this can look like with the following response: "I prevent short-term illnesses by

taking care of my gut health through foods, natural remedies, holistic measures, rest, exercise, and herbal teas. I learned those behaviors from my family. We didn't believe in medicine/hospital visits unless absolutely necessary."

The sleep subtheme focused on the ideas of getting enough sleep and getting enough rest to maintain health and prevent short-term illnesses. Of note, many participants referred to getting enough rest, but there was rarely an amount given. One participant cited the importance of "*sleeping as much as I can*," while another mentioned "*the proper amount of sleep (7-10) hours*."

The prevention behavior subtheme focused primarily on safe sexual behavior, avoiding substances, and annual physicals. A few participants mentioned the importance of condom use and contraception with the goals of STI and pregnancy prevention. Other participants mentioned the importance of avoiding or limiting substance use. Finally, one participant mentioned the preventive health measure of routine physicals. This subtheme addressed annual preventive health visits and this participant mentioned the importance of completing testing at their routine physical.

The COVID-related precautions theme is made-up of various behaviors that were promoted by healthcare agencies including the CDC and local healthcare agencies during the height of COVID. Among participants in this study those behaviors included frequent hand washing, using hand sanitizer, coughing in the elbow, avoiding touching your face, avoiding contact with people who have been sick or ill, cleaning surfaces, wearing masks, avoiding large crowds, and getting vaccinated.

Lastly, the mental health theme focused on elements of stress management. For participants in this study stress management focused on avoiding toxic people and behavior,

avoiding stressful environments, and actively engaging in activity to relax. For example, one participant provided suggestions including "*taking a day to yourself and relax*" and engaging in "yoga and meditation" as ways to prevent short-term illnesses.

The second part of question five asked where participants had learned ways to prevent short-term illnesses. There were five primary categories of information sources including family, health resources, school, and the media. Many participants reported learning this knowledge from multiple sources. Themes and subthemes are displayed in Table 11 below.

Table 11

Sources of information for Q5: Where did you learn about important things to do to prevent short-term illnesses?

Theme	Subtheme
Family	Extended family
	Parents
	Mother
Health resources	provider
	CDC
School	
Media	
Self	

The family subthemes were extended family, parents, and mother. Some participants noted that they received information about short-term health from family members who worked in the healthcare field. Of note, there were no participants that mentioned receiving healthcare information about how to prevent short-term illnesses only from their fathers. Regarding health resources participants reported learning this information from their health care providers as well as health care organizations including the CDC or Centers for Disease Control and Prevention. Many participants reported receiving information about short-term illness prevention from their health classes as well as their majors in college. A few participants noted that they did their own

research and learned about healthcare behaviors from things that they saw on the Internet or behaviors that they learned during the pandemic.

When asked about ways to prevent short-term illness, participants noted a variety of strategies in the area of physical health, emotional health, and COVID-related precaution. They learned about these strategies from a variety of sources, primarily family members, health resources, courses in school, media, and personal experiences.

Question 6 (Q6). Question six assessed behaviors that participants engaged in order to prevent long-term illnesses**.** Similar to Q5 answers were categorized into the subthemes of general physical health, COVID-related precautions, sexual health, mental health, and health literacy. Of note, some participants stated that they did not know how to prevent long-term illnesses. Questions, themes, and subthemes are displayed in Table 12 below.

Table 12

Themes and Subthemes for Q6: What are some important things to do to prevent long-term illnesses?

Theme	Subtheme
Physical health	Medicine, vaccines, supplements
	Nutrition and exercise
	Holistic practices
	Sleep/rest
	Preventive behaviors
COVID related	
Sexual health	
Emotional/ mental health	Stress management
Health literacy	Find the right doctor
	Knowledge of family history
Don’t know	

Similar to Q5 the general physical health theme in question six included subthemes of medicine, vaccines, and supplements, nutrition and exercise, holistic practice, sleep/rest, and

preventive behaviors. In the first subtheme participants mentioned the importance of "*taking daily medications*," "*receiving vaccines*," and taking vitamins. Of note, one participant shared about using medication sparingly stating one of the things they do to prevent long-term illnesses is "*not taking medicine, at least for soreness and pain*." Like previous questions, participants responded with fairly broad suggestions about nutrition and exercise. One participant mentioned exercising three to four times a week and another participant mentioned walking every day, but there were no other mentions of the intensity of exercise or quantity of food. Regarding nutrition, certain types of food were mentioned with participants stating the importance of "*a healthy diet*," "*eating the right foods*," "*eating health*," and more specifically, "e*ating more vegetables and fruits*."

Holistic practices were again classified as elements that are not typically promoted in Western medicine. In Q6 these suggestions were minimal, but one participant mentioned detoxes which was classified as a holistic health practice. Sleep and rest are mentioned as a subtheme and a handful of participants focus on this as a part of a larger "*healthy lifestyle*." Lastly, the preventive behaviors subtheme covered responses related to avoiding substance use, avoiding risky sexual behavior, and preventive health screenings. Within preventive health screenings, participants specifically mentioned pap smears, breast exams, "*cervical checks*," physicals, and blood tests.

The COVID-related precautions theme contained comments similar to those in question five including suggestions of wearing masks, hand washing, and avoiding contact with sick or ill people. Some participants referenced COVID precautions broadly to prevent long-term illnesses. It was notable that COVID precautions were listed under both acute and chronic illness prevention questions. The sexual health theme focus on the importance of pap smears, safe sex

practices including condom use, getting tested between partners, and STI prevention broadly. Similar to Q5 the mental health theme again focused on stress management. Being mindful of and taking care of mental health was also mentioned by participants. The health literacy theme was not in the responses for Q5, but this subtheme focused on skills and information that would be useful to navigate the healthcare system. The two elements that stood out among the responses from participants were finding the right doctors and being aware of family history.

The second part of Q6 was nearly identical to question five in the sense that the themes and subthemes were shared (summarized in Table 13).

Table 13

Sources of Information for Q6: Where did you learn about important things to do to prevent long-term illnesses?

Theme	Subtheme
Family	Family
	Parents
	Mother
Health resources	Provider
	CDC
School	
Media	
Self	

The primary difference was that under the family theme, participants stated that they received information from family members through witnessing their experiences with chronic health conditions in addition to learning from family members who were educating participants more broadly. Additionally, some participants acknowledged that they learned about chronic illness prevention as they learned about their family history and familial risk factors. One participant provided an example of this, stating

"*some of my family suffers with diabetes and heart problems, I take their actions and learn from them*."

Overall, participants learned about health primarily from family, healthcare resources, school, media, and their own experiences. When asked about ways to prevent long-term illness, participants noted a variety of strategies in the area of physical health, emotional health, COVID-related precautions, sexual health, and health literacy. Similar to the previous question, they learned about these strategies from a variety of sources, primarily family members, health resources, courses in school, media, and personal experiences.

Pair 4 (P4): The fourth question pair focused on messages participants had received from the health care system and their expectations of the health care system. There were 34 randomly assigned participants who answered these questions.

Question 7 (Q7). Question seven assessed messages that participants received about health and/or the healthcare system. Themes were categorized into broad themes of positive, negative, and neutral messages. Questions, themes, and subthemes are displayed in Table 14 below.

Table 14

Themes and Subthemes for Q7: What are some of the messages that you've received about health or about the health care system?

Theme	Subtheme
Positive	Health care system as a tool
	Importance of health and preventive care
	Insurance increases access
	Receipt of healthcare information
Negative	Inequity
	For-profit nature of health care
	Medical mistrust
	Negative provider behaviors
	Maternal mortality

	Need for health care advocates as well as self-advocacy
	Information about health disparities
Neutral/factual information	Personal health status
	Medical mistrust as warranted and unwarranted
	Mixed messages of positive personal experiences and hearing about other Black women who have had negative experiences
	That my weight can have a bad affect on my health.
	Info about covid and infectious disease
	Received generic information
No messages	

Notably a few participants noted that they had not received any messages about the healthcare system. Positive messages were categorized into subthemes of healthcare as a tool, importance of health and preventive care, receipt of healthcare information, and insurance increasing access. The subtheme of the healthcare system as a tool summarized positive feelings that participants had about the healthcare system, touting the healthcare system as a great resource, and noting that financial assistance exists to make sure that patients have access to care. The importance of the health and preventive care subtheme is exemplified by the following quote:

"Health is very important and should be taken seriously. There are a lot of things in the world that can affect one's health and without proper knowledge what's going on with one's body it could cause lifelong problems."

This quote acknowledges the importance of overall health knowledge and preventive actions as it alludes to avoiding lifelong problems. The insurance access subtheme focuses on the idea that the quality of insurance increases access to quality healthcare. The receipt of health care information subtheme focuses on messages that appeared more literal and focused on instructions and information from healthcare providers. For example, one participant stated, "*Doctors often give me instruction on how to check and be on the lookout for these things."*

Negative themes were coded more frequently in response to this question and subthemes included inequity, the for-profit nature of healthcare in the U.S., medical mistrust, negative provider behaviors, maternal mortality, the need for advocates in healthcare settings, and information about health disparities. The inequity subtheme focused primarily on racial and gendered racial inequity. While some participants responded about messages of inequity based on their race or their status as a Black woman, no participant responses about inequity were focused solely on their identity as a woman. Participants noted the "*systemic racism in our healthcare system*" and reported their understanding that "the healthcare system is rigged against Black women." One participant acknowledged the inequity in the BMI specifically. The for-profit nature of the healthcare subtheme focused on the idea that

> "*I have heard that the health care history system is targeted towards making money and not getting people better*."

The medical mistrust subtheme focused on facts about the history of mistrust in the healthcare system such as the bias that providers have that Black Americans have higher pain tolerances, information about the Black maternal mortality rate, and the use of Black Americans as test subjects in the development of medical procedures. Responses coded for medical mistrust also highlighted other aspects of mistrust within the black community. For instance, one participant noted that "I have been told that we should not be organ donors."

The negative provider behaviors subtheme focused on the experiences of participants as well of experiences that they have learned about focusing on interactions with providers. These responses echoed previous experiences of lack of communication and transparency with providers, provider assumptions or inappropriate accusations, and provider negligence. One response that exemplifies this subtheme is the following:

"*Usually there is never a direct answer for what is going in with me and I am left in the dark. I have taken many different tests and still no results. The doctors share little to no information with me…I have been accused of doing drugs by a doctor as well, even after taking a blood test. I feel constantly ignored and that's why I do not go as often as I should because I already know the end result. I know many people of the black community who have shared "horror stories" about messages they've received from the health community. "*

The maternal mortality subtheme focused on participants feelings related to maternal mortality that included their fears and concerns about potentially giving birth in the United States as a Black woman. For example, one participant reported "

As a black woman, I am somewhat scared to give birth based on some of the negligence that we endure while seeking health care."

The need for advocates in healthcare settings subtheme focused on the idea that Black patients in the healthcare system often need advocates and have to advocate for themselves in medical settings. This is exemplified by the following quote:

"Every medical provider is not necessarily your advocate. As a minority we must have our own advocates while interacting with this system. The fact that black women are 4 times likely to die after giving birth is a sad reminder of why we need advocates around us, to take with us."

Lastly, the subtheme focused on information about health disparities is focused on the information that participants have learned about health disparities. For example,

"*I've heard that woman who are Black/African-American are more likely to have Breast Cancer than other races. Same with High Blood Pressure, Diabetes, and Covid*."

The neutral themes were those that did necessarily have a positive or negative valence, included mixed messages of both positive and negative experiences, generic comments about where individuals learned information or information regarding their personal health status.

Similar to participants' salient experiences in the healthcare system, participants reported receiving a variety of messages about the healthcare system. Their responses highlighted the importance of healthcare system, preventive care, and insurance, as well as the inequities in the healthcare system and among providers. There was also a significant amount of factual information, health advice, and/or information about personal health statuses that participants reported as well.

Question 8 (Q8). Question eight assessed expectations that participants may have about the health care system based on messages that they receive that they reported in Q7. There were five themes compiled using responses from question eight: medical mistrust, inequity, resilience, positive expectations of the healthcare system, and hope for the future. Similar to previous questions some participants stated that this question was not applicable or responded by stating that they did not have expectations. Questions, themes, and subthemes are displayed in Table 15 below.

Table 15

Themes and Subthemes for Q8: What are some expectations (if any) that you have related to these messages?

Theme	Subtheme
Medical mistrust	Being cautious
	Fear/Safety concerns
	Need to be proactive in healthcare settings
	Poor communication among providers
Inequity	Black women's experiences
	Maternal mortality
	General inequity

Resilience	Self-advocacy
	Proactive health behaviors
Positive expectations of the healthcare system	Nondiscrimination
	Needs met
	Positive provider communication
Hope for future	Universal health care
	Desire to work in healthcare
No expectations	

The first subtheme, medical mistrust, was compiled of the following subthemes: being cautious, fear and safety concerns, need to be proactive in healthcare settings, and poor communication among providers. The being cautious subtheme focused on participants feeling of needing to be vigilant in the healthcare system. These responses were often accompanied by concerns of inequitable treatment. One participant illustrated this by stating,

> " *I have to be careful of who I agree to go to for medical care because I may not be taken as seriously as my white counterparts.*"

The fear and safety concerns subtheme illustrates the negative feeling that participants endorse regarding their interactions with the healthcare system. Specifically, participants reported fear related to feelings of safety when comparing how they expected to be treated compared to White Americans. The inequity theme is comprised of subthemes of Black women's experiences, maternal mortality, and general inequity. These themes mirrored the experiences in Q7. The resilience theme is composed of the subthemes of self-advocacy and proactive health behaviors. Participants stated that they would "*fight for*" equal treatment and that they would "*have to be more forward to get [their] needs met.*"

The positive expectations of the healthcare system theme is composed of subthemes of nondiscrimination, needs being met, and positive provider communication. The nondiscrimination subtheme describes aspects of fair treatment of people given various

individual differences and individualized needs. One participant exemplified this with the following two-part answer:

> "*1. That they would help anyone regardless of their race, gender, sexuality, etc. 2. That they understand that people have different health needs."*

The needs being met subtheme expresses a desire for patients to receive adequate care to meet their needs including treatment and explanation of procedures. As one participant explained, they want to *"have all of [their] needs and questions answered while seeking physician care."* Lastly the expectation of positive provider communication subtheme included expectations about providers answering questions and having "*good bedside manner*." One participant provided a clear example of how she expects messages from her provider to make her feel and stated that

> *"When My OB-GYN gets in contact with me and sends me messages I expect it to be good, uplifting messages that would make me smile rather than a message that would make me nervous or scared to open the message "*

Finally, the hope for the future theme is composed of universal healthcare and desire to work in healthcare subthemes. The universal healthcare subtheme was expressed by one participant in which they stated "*I believe that if the government really tries that healthcare can be free for all Americans and especially the ones who are in need."* While only one participant mentioned this theme, there were other answers in other questions that expressed dissatisfaction with the costs and access to health care and this was the only response that addressed a potential system change in response. Thus, this response was highlighted.

The desire to work in healthcare was endorsed by a couple participants and one explained the way that the desire to work in healthcare influences their expectations of the system, stating

"*I am hoping that one day I will be apart of the healthcare system and I hope to make my patients feel like they are being listened to and taken care of. I don't think I have any expectations because I want to experience working within the system first."*

Both participants specifically mentioned positive and prosocial actions that they hope to exhibit as a part of the healthcare system.

Taken together, participants had a range of positive and negative expectations for their experiences in healthcare including medical mistrust, inequity, resilience, positive expectations of positive communication and adequate care that meets their needs, and hope for the future.

Qualitative Findings Summary

Participants defined health as an individualized sense of well-being stemming from lifestyle choices that address, physical, emotional, and spiritual health. Participants shared a variety of experiences in the U.S healthcare system. While many participants reported both positive and negative experiences, more negative experiences were described than positive experiences. Participants saw being healthy as a multifaceted experience involving both mental and physical health and having an absence of health conditions or disease. Participants also conceptualized being able to understand, communicate, and apply health knowledge as part of their understanding of health. Participants saw being unhealth as a combination of poor physical and mental health, having a health condition or disease, and poor lifestyle choices. Participants reported that this negative health status could be caused by genetics, toxic environments, lifestyle choices, and/or a combination of these elements.

When asked about ways to prevent short-term illness, participants noted a variety of strategies in the areas of physical health, emotional health, and COVID-related precautions. They learned about these strategies from various of sources, primarily family members, health

resources, academic courses, media, and personal experiences. When asked about ways to prevent long-term illnesses, participants mentioned strategies in the areas of physical health, emotional health, COVID-related precautions, sexual health, and health literacy. They learned long-term illness prevention strategies primarily from family members, health resources, courses in school, media, and personal experience.

Participants reported receiving messages about the healthcare system that highlighted the importance of the healthcare system, preventive care, and insurance, as well as the inequitable care for Black women within the healthcare system. Taken together, participants described a range of expectations for their experiences in health care including medical mistrust, inequity, resilience, positive expectations, and hope for the future.

Quantitative Results

Descriptive Statistics of Variables of Interest

All continuous variables, including medical mistrust, health literacy, social influence, religious salience, SES, barriers to care, provider respect, affirming provider behaviors, a perceived need for care, evaluated need for care, and healthcare utilization, were examined to assess variable distribution and issues related to skewness and kurtosis. All measures where reliability could be assessed showed acceptable internal consistency (α = .74 - .83). For healthcare utilization, skew and kurtosis were acceptable suggesting no data transformation was needed (See Table 16).

Table 16

Descriptive Statistics of Continuous Variables of Interest

Variable	*M*	*SD*	Min	Max	α	Skew	Kurtosis
Medical Mistrust	25.72	4.73	11.00	35.00	.83	-0.42	0.33

Health Literacy	19.96	3.07	13.00	26.00	.78	-0.24	-0.54
NVS	4.03	1.58	.00	6.00	-	-0.59	-0.55
Communication with Provider	15.94	2.73	7.00	20.00	.78	-0.37	-0.03
Social Influence	14.49	4.29	6.00	30.00	.73	0.28	0.44
Religious Salience	4.41	2.11	.00	8.00	-	-1.04	0.20
SES (proxy)	3.71	1.55	1.00	6.00	-	-0.19	-1.14
Barriers to Care	.22	.73	.00	5.00	-	3.96	17.03
Provider Respect	8.27	1.60	2.00	10.00	-	-1.13	2.06
Affirming Provider Behaviors	11.17	6.49	.00	25.00	-	0.18	-0.63
Perceived Need	12.45	6.05	4.00	39.00	-	1.74	3.43
Evaluated Need	1.15	1.45	.00	8.00	-	1.35	2.25
Healthcare Utilization	.51	.19	.00	1.00	-	0.12	-0.09

Note. N= 155

Predisposing Factors

The predisposing factors in this study included variables measuring medical mistrust, health literacy, social influence, and religious salience. For the medical mistrust variable, the mean score was 25.72 (SD = 4.73) which suggests that participants endorsed a moderate amount of medical mistrust. However, participant scores ranged from 11 to 35 out of a possible 35. It is notable that no participant endorsed the lowest possible score of 7 suggesting that every participant experienced some degree of medical mistrust.

Health literacy was calculated by summing the total score of the Newest Vital Sign and the score of four questions about communications with providers. Of note, since the NVS has typed answers, only the four questions related to communications with providers were included in calculating the reliability score in the table above. Regarding the NVS, scores of 3 or lower suggest limited health literacy, for this sample, 32.3% of the population had a score of 3 or lower. The average score on the NVS was a 4 (SD = 1.58) suggesting adequate health literacy. The four additional communication questions were rated on a Likert-style scale from 1 to 5 with

higher scores suggesting increased comfort with patient-provider communication, specifically speaking with their physician or other health care provider, understanding of patient educational materials, having questions answered during their medical visit, and understanding words used by their health care provider. The average score was 15.94 (SD = 2.73) out of a possible 20 with no participants endorsing the lowest possible score. When the two parts of the NVS were combined, the average score of the health literacy variable was 19.96 (SD = 3.07) out of a possible 26 suggesting a higher level of health literacy on average.

Social influence assessed the frequency of discussions about preventive health across different settings including religious settings, friend groups, and with family. Six items were rated on a Likert-style scale from 0 (never) to 5 (always). The average score was 14.49 (SD = 4.29) out of a possible 30 suggesting that preventative health was discussed approximately half the time across different social groups. The lowest score was 6, suggesting that every participant discussed preventive health in some setting.

Religious salience was assessed with two items asking about the importance of and participation in a religious community. The average score was 4.41 (SD = 2.11) out of a possible 8 suggesting moderate importance and participation of religion among participants. The majority (85.8%) of the sample identified as religious and 71.6% identified as Christian.

Enabling Factors

The enabling factors in the study included SES, barriers to care, access to care, provider respect, and affirming provider behavior. Due to missing data for the SES variable assessing annual family income in childhood , SES was measured using primary caregiver education as a proxy. The “average” category was technical degree or certification, and the most frequently reported category was some college/associate’s degree.

Barriers to care was assessed by asking if there was a time during the past 12 months that they did not receive a preventive health screening(s) or vaccination(s) when they were due. If participants said yes, they were asked to endorse different reasons that they may have foregone screenings or vaccinations. These different barriers were tallied for all participants ranging from 0, if they answered no to the initial question or if they denied barriers in the follow-up question, to a possible score of 9 if they endorsed all barriers as well as an "other" barrier. Only 17 participants, or 11.0% of participants, endorsed barriers to care and the number of barriers endorsed by any one participant ranged from 0 to 5. The following barriers were endorsed: did not trust a vaccine or screening (n = 8), fear of potential side effects of a vaccine or screening (7), unable to get an appointment (7), too time-consuming or inconvenient (4), unsure where to go for services (2), fear of going to a healthcare provider due to COVID-19 (2), preventive health was not a priority (2), dissatisfaction with available services (1), and any financial reason to include cost and/or lack of insurance coverage (1). Access to care was a dichotomous variable about whether participants have a typical location that they go to for their healthcare needs. A large majority, 96.1% or 149 participants had consistent access to care.

Provider respect assessed the degree to which the participants felt affirmed and respected when they go to their healthcare provider. Two questions were included, and participants were able to rate their agreement with items suggesting respectful provider behavior on a scale of 1 through 5 with higher scores suggesting increased affirming behavior by providers. The average score was 8.27 (SD = 1.60) out of 10 suggesting that most participants felt their provider was respectful. Affirming provider behavior assessed different ways that their healthcare providers may engage in affirming behavior with regard to their identity not limited to race, ethnicity, gender, sexual orientation, body size, and language.

There were 25 possible behaviors participants could have endorsed and they had the option to write in answers as well. Out of the 25 possible choices the number of affirming provider behaviors experienced by participants ranged from 0 to 25 behaviors with the average number of behaviors being 11.17 (SD = 6.49). The three most endorsed affirming behaviors were: friendly front desk staff that make participants feel welcome, participants feeling that they could ask questions at their medical appointments, and providers informing participants about what is going on during procedures. The three least commonly endorsed affirming behaviors were: my provider makes suggestions about health that fit into my budget or what I can afford, my provider makes suggestions about health that fit into my culture, and my provider acknowledges the stress that I may face as a Black woman. See Table 17 for full list of provider behaviors and frequency of endorsement.

Table 17

Affirming Provider Behaviors

Behavior	*N*	*%*
Friendly front desk staff that make you feel welcome	118	75.6
I feel like I can ask questions	113	72.4
My providers inform me about what is going on during procedures	104	66.7
I feel that my information is protected	103	66.0
My providers encourage me to ask questions	101	64.7
My providers ask me before touching me	100	64.1
I am addressed by the name that I want to be addressed by with correct pronunciation	89	57.1
My providers check to make sure I understand what was discussed during my appointment	87	55.8
A waiting area that caters to your body size, ability or disability	85	54.5
Assumptions are not made about my sexual or romantic partners	83	53.2
They have educational health brochures about different populations including women	78	50.0
Assumptions are not made about my body parts	74	47.4
I am addressed by the correct pronouns	71	45.5
My providers explain words that I don’t understand during my appointments	71	45.5

My providers talk about the way that stress and the way that I deal with stress affects my health	66	42.3
If I fill out a survey, someone discusses the results with me	60	38.5
They have educational health brochures about different populations including Black/African American individuals	56	35.9
Friendly front desk staff that don't try to guess gender	56	35.6
My provider makes suggestions about health that fit into my budget or what I can afford	55	35.3
My provider makes suggestions about health that fit into my culture	51	32.7
My providers acknowledge the stress that I may face as a Black woman	34	21.8
My providers acknowledge the stress that I may face due to other forms of oppression	32	20.5
They have educational health brochures about different populations including gender diverse individuals	30	19.2
They have educational health brochures about different populations including sexual minority individuals (LGBQ+ individuals)	26	16.7
It is easy to find or obtain an interpreter or translator for my appointments	23	14.7
None of these apply:	10	6.4

Need Factors

Perceived and evaluated need were examined as well. Perceived need was assessed by summing the scores of three items for a possible score of 40. Items included self-rated health rated from poor (5) to excellent (1), number of days in the past 30 days that poor physical or mental health limited usual activity including self-care, work, or recreation, and an item where they rated their agreement with a statement about the importance of preventive health from strongly disagree (1) to strongly agree (5). These items were summed, and higher scores represented higher perceived preventive health need. The average perceived health need of the sample was 12.45 (SD = 6.05) out of a possible score of 40. Representing a fairly low perceived preventive health need on average.

Evaluated health need was assessed by summing the number of chronic health conditions and whether individuals were at a healthy weight according to their BMI. The number of chronic health conditions endorsed and/or reported was summed and one point was added to participants'

score if they were in the underweight, overweight, or obese categories according to their reported height and weight. If a participant endorsed being underweight, overweigh, or obese in their chronic conditions, this item was not counted a second time. Higher scores in this category represented a higher evaluated need for healthcare. The scores in this category ranged from 0 to eight with the average being 1.15 (SD = 1.45), suggesting a low evaluated need for health care.

Healthcare Utilization

The outcome variable of healthcare utilization was assessed by first creating a single outcome variable of "healthcare utilization score" denoting the percentage of health tasks that each participant completed within the time period specified in the recommendations and guidelines for their age, sex, and health behaviors. The average healthcare utilization score for the sample was .51 (SD =0.19) suggesting that on average participants were receiving half of the recommended screenings and vaccinations. This variable was dichotomized using a cut-off of 60% of the recommended preventive health screenings and vaccinations as this has been the average preventive health screenings uptake when this measure was used in past studies (Whitehead et al., 2016; Williams, 2020). In this study, only 47 participants, or 30.3% of the sample received 60% or more of the recommended preventive vaccinations and screenings. There was variability in these scores, as the scores ranged from 0, meaning participants were not receiving any of the recommended preventative health measures to 1, meaning participants were receiving all recommended preventative health measures. The 25^{th}, 50^{th}, and 75^{th} percentiles were .40, .50, and .60, respectively.

Correlation analyses were conducted among continuous predisposing factors, enabling factors, need factors, covariates, and healthcare utilization. The results of the correlation analyses can be found in the correlation matrix presented in Table 18. All variables were significantly

correlated with at least one other variable. There were positive correlations between age and health literacy, $r(153) = .26$, $p = .001$ and religious salience, $r(1543) = .18$, $p = .028$. There were no significant correlations between the predisposing factors. There were significant positive and negative relations between enabling factors. Specifically, were negative correlations between barriers and SES, $r(153) = .19$, $p = .018$ and barriers and affirming provider behaviors, $r(153) = .20$, $p = .015$. There were significant positive correlations between barriers and evaluated need, $r(153) = .24$, $p = .003$, and perceived need, $r(153) = .17$, $p = .033$. Provider respect and affirming provider behaviors had a positive correlation, $r(153) = .45$ $p < .001$. The need variables had a positive relationship, $r(153) = .32$, $p < .001$.

Table 18

Pearson Correlations Between Continuous Covariates, Predisposing, Enabling, and Need Factors

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Age	—									
2. Medical Mistrust	.10	—								
3. Health Literacy	.26**	-.13	—							
4. Social Influence	.02	-.04	.01	—						
5. Religious Salience	.18*	-.10	.04	.05	—					
6. Barriers	.02	.21**	-.21**	.03	-.10	—				
7. SES	-.08	-.04	.12	-.05	.05	-.19*	—			
8. Provider Respect	.10	-.25**	.44**	.08	.04	-.12	.06	—		
9. Affirming Provider Behaviors	-.14	-.21**	.36**	.18*	-.05	-.20*	.04	.45**	—	
10. Evaluated Need	.05	.10	.09	.23**	-.09	.24**	-.08	-.10	.08	—
11. Perceived Need	-.10	.22**	-.14	.15	-.06	.17*	-.21*	.00	-.13	.32**

Note: *p<.05, **p<.01

Covariate Analyses

Age, gender (cisgender woman or other gender), ethnicity (Hispanic/Latina/e/o or Not Hispanic/Latina/e/o), race (monoracial or multiracial), nationality (African American only or other nationality), and sexual orientation (heterosexual or other sexual orientation) were the initial variables to be included in the covariate analyses. Gender, ethnicity, race, and nationality were excluded from the analyses due to insufficient sample size for the least frequent categories. Therefore, age and sexual orientation were the only covariates assessed. A phi-coefficient was utilized to determine whether sexual orientation needed to be controlled for in the primary analysis $\theta = .17$, $p = .728$.. Only age was included in the model for the primary analysis due to its correlation with healthcare utilization.

Primary Analyses

Hypotheses One and Two. Hypothesis one posited that, in a BFW-informed BMHSU, need factors would not contribute to predicting utilization over and above predisposing factors. Hypothesis two posited that need factors would not contribute to predicting utilization over and above predisposing factors and enabling factors, respectively. These hypotheses are consistent with Anderson's contention that, in the context of an inequitable society, culturally-relevant predisposing and enabling factors, respectively, predict preventive healthcare utilization more than perceived and evaluated need (Andersen, 2008). In order to examine hypotheses one and two, a four-step hierarchical logistic regression was conducted with the 60% utilization cut-off serving as the dichotomous outcome variable. Assumptions of logistic regression were evaluated. The provider respect variable was transformed (i.e., squared) to assure a linear relationship between this variable and the logit transformation of the dependent variable. The covariate age

was entered in step one. The predisposing variables of medical mistrust, health literacy, social influence, and religious salience were entered at step two. The enabling variables barriers to care, SES, provider respect (transformed version), and affirming provider behavior were entered in step three. Access was excluded from the model due to insufficient sample size for the least frequent category. The evaluated and perceived need variables were entered in step four. The regression statistics are presented in Table 19.

When logistic regression was used to evaluate the BFW-informed BMHSU, the model was not statistically significant, X^2 (11, N = 155) = 7.32, p = .77. The model explained 6.5% (Nagelkerke R^2) of the variance in preventative healthcare utilization at the 60% cutoff and correctly classified 69.7% of cases. None of the blocks of predisposing, enabling, or need factors significantly predicted 60% or more of healthcare utilization as defined by this study, indicating that enabling and predisposing factors were not statistically stronger predictors of healthcare utilization compared to need factors as hypothesized. Therefore, neither hypothesis one nor two was supported in testing the BFW-informed BMHSU corollary for an unequal society.

Table 19

Summary of the Hierarchical Logistic Regression Analysis for BFW- Relevant Variables Predicting Healthcare Utilization

Variable	B	*SE B*	Wald X^2	df	p	Nagelkerke R^2	Δ*R2*
Constant	-0.83	0.18	22.67	1	<.001		
Step 1				1	.25	.01	
Age	0.03	0.03	1.38	1	.24		
Step 2				4	.71		.02
Model				5	.63	.03	
Age	0.04	0.03	1.60	1	.21		
Medical Mistrust	0.00	0.04	0.01	1	.93		
Health Literacy	0.02	0.06	0.11	1	.74		
Social Influence	0.02	0.04	0.21	1	.65		
Religious Salience	-0.11	0.08	1.07	1	.18		

Step 3				4	.72		.02
Model				9	.78	.05	
Age	0.03	0.03	0.96	1	.33		
Medical Mistrust	0.00	0.04	0.00	1	.95		
Health Literacy	0.02	0.07	0.61	1	.81		
Social Influence	0.02	0.04	0.23	1	.63		
Religious Salience	-0.11	0.09	1.68	1	.20		
SES	0.00	0.12	0.00	1	.99		
Barriers	0.22	0.24	0.79	1	.38		
Provider Respect	0.01	0.01	0.89	1	.35		
Affirming Provider Behavior	-0.02	0.03	0.40	1	.53		
Step 4				2	.42		.02
Model				11	.77	.07	
Age	0.09	0.03	0.98	1	.32		
Medical Mistrust	0.00	0.04	0.01	1	.92		
Health Literacy^	0.01	0.07	0.02	1	.89		
Social Influence	0.01	0.05	0.01	1	.92		
Religious Salience	-0.10	0.09	1.42	1	.23		
SES	0.01	0.12	0.00	1	.97		
Barriers	0.14	0.26	0.29	1	.59		
Provider Respect	0.01	0.93	0.93	1	.34		
Affirming Provider Behavior	-0.02	0.41	0.41	1	.52		
Evaluated Need	0.15	0.14	1.09	1	.30		
Perceived Need	0.02	0.03	0.23	1	.63		

Note: N=155; *$p < .05$

Secondary Analyses

The BFW-informed BMHSU model was unable to predict 60% or more of recommended healthcare utilization operationalized dichotomously, however multiple variables across BMHSU categories were associated with the continuous version of the healthcare utilization score variable. Thus, secondary analyses were completed to see whether predisposing, enabling, and need variables would predict healthcare utilization as a continuous variable.

Secondary Covariate Analyses. Similar to the primary analyses, age was the only covariate assessed. Age was linearly related to and associated with differences in the outcome variable and thus it was controlled for in the model. Correlation analyses were conducted among the covariate age, predisposing factors, enabling factors, and need factors. Age had a positive

relationship with the predisposing factors health literacy and religious salience, such that older participants reported higher health literacy scores and religion being more important in their lives.

In order to examine the secondary analysis question, a four-step hierarchical multiple regression was applied to examine the BFW-informed BMHSU with healthcare utilization as the dependent variable. Prior to conducting a hierarchical multiple regression, the relevant assumptions of this statistical analysis were tested. First, a sample size of 155 was deemed adequate given them the number of predictors to be included in the analysis. The assumption of independence was met. An examination of correlations and collinearity statics were all within acceptable limits. There were no extreme univariate outliers. Residual and scatter plots indicated the assumptions of normality, linearity, and homoscedasticity were all satisfied once the barrier variable was removed. The regression statistics are presented in Table 20.

Table 20

Summary of the Hierarchical Regression Analysis for Variables Predicting Healthcare Utilization

Variable	β	*t*	sr^2	R^2	ΔR^2
Step 1				.06	.06*
Age	.25	3.19**	0.06		
Step 2				.10	.04*
Age	.24	2.89**	0.05		
Medical Mistrust	-.08	-1.00	0.01		
Health Literacy	.13	1.58	0.02		
Social Influence	.05	0.66	0.00		
Religious Salience	-.11	-1.43	0.01		
Step 3				.12	.02*
Age	.25	2.89**	0.05		
Medical Mistrust	-.06	-0.68	0.00		
Health Literacy	.08	0.87	0.00		
Social Influence	.03	0.36	0.00		
Religious Salience	-.11	-1.32	0.01		
SES	-.08	-0.95	0.01		

Provider Respect	.06	0.67	0.00		
Affirming Provider Behaviors	.08	0.86	0.00		
Step 4				.14	.02*
Age	.24	2.78**	0.05		
Medical Mistrust	-.07	-0.82	0.00		
Health Literacy	.06	0.64	0.00		
Social Influence	-.01	-0.06	0.00		
Religious Salience	-.09	-1.15	0.01		
SES	-.06	-0.76	0.00		
Provider Respect	.08	0.80	0.00		
Affirming Provider Behaviors	.07	0.73	0.00		
Perceived Need	-.03	-0.31	0.00		
Evaluated Need	.17	1.95	0.02		

Note: N=155; *$p < .05$, ** $p < .01$

The hierarchical multiple regression revealed that at step one, age contributed significantly to the regression model, F (1,153) = 10.16, $p < .01$) and accounted for 6.2% of the variation in healthcare utilization. Introducing the predisposing variables explained an additional 3.7% of the variation in healthcare utilization and this change in *R2* was significant, F (5,149) = 3.30, $p < .01$. Adding enabling factors to the regression model explained an additional 1.6% of the variation in healthcare utilization and this change in *R2* was significant, F (8,146) = 2.40, $p < .05$. Finally, the addition of need factors to the regression model explained an additional 2.3% of the variation in healthcare utilization and this change in *R2* was also significant, F (10,144) = 2.32 $p < .05$. As expected, age was the variable that uniquely explained the largest amount of variance, accounting for 6.2% of the variation in healthcare utilization. Together the predictor variables accounted for 13.9% of the variance in healthcare utilization. When exploring the original a priori hypotheses utilizing a continuous outcome variable, hypothesis one is supported such that in a context of an inequitable society predisposing factors account for more of the variance in healthcare utilization than need factors.

Tertiary Analyses

Though the model accounted for 13.9% of the variance in healthcare utilization, it is

unclear how these different elements of the BFW-informed BMHSU contributed to different aspects of healthcare utilization. There are different elements of various predisposing, enabling, and need factors that are associated with various types of preventive health behaviors. Thus, the tertiary analyses examine the descriptive statistics of the following categories of preventive health behavior: vaccines, screenings, mental/behavioral health, physical health, substance use, sexual health, and HPV/CC.

The vaccine category includes the following vaccines: flu, HPV, meningococcal meningitis, pneumococcal meningitis, chicken pox, shingles, hepatitis A, hepatitis B, and COVID.

The screening category includes blood pressure, height and weight, colonoscopy, depression, diabetes, hepatitis B, hepatitis C, HIV, alcohol use, tuberculosis, tobacco use, lung cancer, STIs, mammograms, cervical cancer, and intimate partner violence. Of note, no participants met criteria for osteoporosis screenings based on current guidelines, as such, this screening was not included. The mental/behavioral health category includes depression, IPV, alcohol use, and tobacco use. The physical health category included non-communicable diseases and included blood pressure screenings, height/weight screenings, colonoscopy, diabetes screening, lung cancer screening, and mammograms. The substance use category included alcohol and tobacco use. The COVID category included receipt of any covid vaccine and being up to date on covid vaccines at the time of the study. The sexual health category included HPV vaccine, STI screening, HIV testing in the past year, pap smear. Finally, the HPV/CC category included HPV vaccine and pap smear. A visual representation of categories are presented in Table 21.

Table 21

Categories of Preventive Health Behaviors and Associated Screenings and Vaccinations

	Vaccines	Screenings	Mental Health	Physical Health	Substance Use	COVID	Sexual Health	HPV/ CC
Flu vaccine	X							
HPV vaccine	X						X	X
Meningococcal meningitis vaccine	X							
Pneumococcal meningitis vaccine	X							
Chicken pox vaccine	X							
Shingles vaccine	X							
Hepatitis A vaccine	X							
Hepatitis B vaccine	X							
COVID vaccine	X					X		
Up to Date COVID vaccine						X		
Blood pressure screening		X		X				
Height/weight screening		X		X				
Colon cancer screening		X		X				
Depression screening		X	X					
Diabetes screening		X		X				
Hepatitis B screening		X						
Hepatitis C screening		X						
HIV screening (past year)		X					X	
Alcohol use screening		X	X		X			
Tobacco use screening		X	X		X			
Tuberculosis screening		X						
Lung cancer screening		X		X				
Syphilis screening		X					X	
Chlamydia and gonorrhea screening		X					X	

Mammogram		X		X				
Pap smear		X					X	X
IPV screening		X	X					

Descriptive Statistics. The mean utilization percentages of the categories of descriptive statistics ranged from 36% utilization for mental health screenings to 75% utilization of physical health screenings. The range of completed vaccinations and/or screenings in each category ranged from 0% to 100%. The descriptive statistics of healthcare utilization categories are summarized in Table 22.

Table 22

Descriptive Statistics of Healthcare Utilization Categories Variables of Interest

Variable	*M*	*SD*	Skew	Kurtosis
Vaccinations	.58	.28	-0.58	-0.41
Screenings	.46	.21	0.55	-0.17
Mental Health	.36	.30	0.52	-0.55
Physical Health	.75	.24	-0.53	-0.40
Substance Use	.39	.36	0.34	-1.02
COVID	.49	.36	0.02	-1.11
Sexual Health	.54	.36	-0.15	-0.81
HPV/Cervical Cancer	.72	.43	-1.00	-0.92

Tertiary Correlation Analyses. Correlation analyses were conducted among predisposing factors, enabling factors, need factors, age, and utilization categories. The results of the expanded correlation analyses can be found in the correlation matrix presented in Table 23. Only the relationships between preventive healthcare utilization categories, age, predisposing, enabling, and need factors are reported. Due to the non-exclusive nature of the categories, correlations between categories were not reported. All utilization categories were statistically significantly correlated with at least one covariate, predisposing, enabling, or need variable.

Utilization in the vaccine category had a negative correlation with age, $r(153) = .21$ $p = .008$, and a positive correlation with affirming provider behaviors ($r(153) = .22$ $p = .007$ such that vaccine utilization decreased as age increased, while vaccine utilization increased with a greater frequency of affirming provider behaviors. The screenings category had positive correlations with age ($r(153) = .37$ $p < .001$, health literacy, $r(153) = .18$ $p = .028$ .001, and evaluated need, ($r(153) = .17$ $p = .032$, such that as preventive health screenings increased as participant age, health literacy scores, and evaluated need increased. The mental health screenings category had positive correlations with health literacy, $r(153) = .22$ $p = .006$, and evaluated need $r(153) = .19$ $p = .017$, such that as preventive health screenings increased, health literacy scores and evaluated need increased. The physical health screenings had positive correlations with age, $r(153) = .25$ $p = .002$, health literacy $r(153) = .16$ $p = .002$, provider respect $r(153) = .16$ $p = .041$, and evaluated need $r(153) = .17$ $p = .032$, such that the receipt of preventive physical health screenings for noncommunicable diseases increased, as participant age, health literacy scores, endorsed levels of provider respect, and evaluated need increased. The substance use screenings had a positive relation to health literacy $r(153) = .20$ $p = .015$, such that the receipt of substance use screenings increased as health literacy scores increased.

The COVID category had a positive relationship to SES $r(153) = .32$ $p = < .001$, such that as primary caregiver education, the proxy for SES, increased, the likelihood of having received any COVID vaccines and being up to date with COVID vaccines increased. The sexual health category had a positive relationship to age $r(153) = .23$ $p = .004$, such that preventive sexual health screenings and vaccinations increased as participant age increased. Lastly, the HPV/cervical cancer (HPV/CC) category had a negative relationship to religious salience $r(153)$

= -.17 p = .033, such that as HPV/CC screenings and vaccinations increased, religious salience decreased.

Overall, there were some patterns that were illustrated in tertiary analyses that may have been obscured in previous analyses. The preventive healthcare utilization variable encompassed a variety of screenings and vaccinations that may be influenced by various elements of the BFW-informed BMHSU. Tertiary analyses showed that more of the model variables have relationships to screenings compared to vaccinations. Within the screening category, more of the model variables (e.g., age, health literacy, evaluated need) exhibited relationships between physical health screenings compared to mental health screenings.

Table 23

Pearson Correlations Between Covariates, Predisposing, Enabling, and Need Factors and Healthcare Utilization Categories

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Age	—									
2. Medical Mistrust	.01	—								
3. Health Literacy	.26**	-.13	—							
4. Social Influence	.02	-.04	.01	—						
5. Religious Salience	.18*	-.10	.04	.05	—					
6. SES	-.08	-.04	.12	-.05	.05	—				
7. Provider Respect	.10	-.25**	.44**	.08	.04	.06	—			
8. Affirming Provider Behaviors	-.14	-.21**	.36**	.18*	-.05	.04	.45**	—		
9. Evaluated Need	.05	.10	.09	.23**	-.09	-.10	-.01	.08	—	
10. Perceived Need	-.10	.22**	-.14	.15	-.06	.00	-.14	-.13	.32**	—
11. Vaccinations Only	-.21**	-.12	.09	-.09	-.11	.13	.14	.22**	.11	.05
12. Screenings Only	.37**	-.02	.18*	.11	-.01	-.14	-.12	.03	.17*	-.05
13. MH screenings	.15	.07	.22**	.10	.07	-.08	.10	.10	.19*	.02
14. PH Screenings	.25**	-.03	.16*	.12	-.09	-.10	.16*	.12	.17*	-.04

15. Substance use screenings	.08	.10	.20*	.08	.14	-.05	-.11	.11	.06	.04
16. COVID	.04	-.13	.07	.07	.12	.32**	.04	.08	.01	.09
17. Sexual health	.23**	-.09	.12	-.03	-.07	-.06	-.06	.06	-.04	-.15
18. HPV/CC	-.04	-.15	.09	-.15	-.17*	-.03	-.04	.09	-.05	-.15

*p<.05, **p<.01

Quantitative Findings Summary

Though most of the sample was college-aged, more than half of the population reported chronic health conditions with overweight/obesity and anxiety being the most prevalent. Regarding predisposing factors in this study, participants endorsed a moderate amount of medical mistrust, the majority of participants were found to have relatively high levels of health literacy, a moderate amount of social influence, and religion was moderately salient to participants though the majority identified as members of the Christian faith. Regarding enabling factors, the average family income for participants was in the $35,000- $49,999 range, most participants denied barriers to preventive health care, a large majority endorsed having a typical place where they received health care, most participants felt their providers were respectful, and many endorsed their providers regularly engaging in affirming behavior relative to various aspects of their identities. The sample overall had fairly low perceived and evaluated need for healthcare. Concerning preventive health care behaviors broadly, on average, participants were receiving about half of their recommended screenings and vaccinations based on their individual age, health status, and health behaviors. Only about 30% of the sample received 60% or more of the recommended preventive screenings and vaccinations.

Dichotomous covariates were not found to be significantly different regarding mean healthcare utilization scores and thus were not included in building the model for the primary analyses. The logistic regression model predicting health care utilization from age, predisposing,

enabling, and need factors in a BFW-informed BMHSU was not significant indicating that enabling and predisposing factors were not statistically weaker predictors of healthcare utilization compared to need factors as hypothesized, as such that neither hypothesis was supported.

Secondary analyses were conducted to examine the extent to which the model would predict healthcare utilization using a continuous variable. This model was significant and predicted about 13.9% of the variation in healthcare utilization with age as the strongest contributor accounting for 5% of variance and predisposing, enabling and need factors accounting for the remaining 8.9% of variance. These results provide support for hypothesis one which suggested that in an unequal society culturally relevant predisposing factors predict healthcare utilization more than need. However, there was not support for hypothesis two that posited that in an unequal society, culturally relevant enabling factors would predict healthcare utilization more than need factors.

Lastly, tertiary analyses were conducted to see if different categories of healthcare (i.e., vaccines, screenings, mental health screening, physical health screenings, substance use screenings, COVID, sexual health, and HPV/CC) utilization were related to the various predisposing, enabling, and need factors. The average utilization percentages of the categories of descriptive statistics ranged from 36% utilization for mental health screenings to 75% utilization of physical health screenings. While smaller, specific categories including substance use screenings, sexual health, COVID, and HPV/CC all had relationships with singular culturally relevant variables, the larger, more comprehensive categories of mental health screenings and physically health screenings had relationships with more culturally relevant variables (two and four, respectively). The broadest categories of vaccinations and screenings had relationships with

two and three culturally relevant variables, respectively. The culturally relevant variables most responsible for driving these relationships were health literacy and evaluated need.

Relationship between Quantitative & Qualitative Findings

Qualitative results complemented the quantitative findings and added additional context by illustrating the ways that definitions of health, the importance of preventive health, interactions with the healthcare care system, and expectations of the healthcare system explain the Black college women's utilization of preventive health. Consistent with a relatively low rate of preventive health screenings, few participants reported preventive health screenings or appointments as an important part of prevention of acute or chronic illness.

Both qualitative and quantitative findings highlighted the importance of health literacy and evaluated need in obtaining preventive care. Higher health literacy scores were associated with a higher proportion of physical health, mental health, and substance use screenings. Consistent with the quantitative findings, health literacy broadly was endorsed as an important part of being healthy and specific elements of health literacy including transparent communication and self-advocacy, were prominent themes endorsed by participants.

A final area of complementarity was evaluated need. Higher evaluated need scores were also associated with higher proportions of physical health, mental health, and substance use screenings. Qualitative findings were consistent with this finding as many participants connected being unhealthy or having a health condition to needing to see a doctor. This connection is notable as it highlights a focus on secondary or tertiary care, rather than including a focus on continued preventive care in the context of an illness or health condition.

Chapter 5: Discussion

The previous chapter presented the results of the quantitative and qualitative data analyses and highlighted themes related to the experiences of Black women, their healthcare experiences, and preventive health behaviors in relation to recommended vaccinations and screenings. This chapter will summarize those findings through a Black Feminist-Womanist lens while contextualizing the findings using Andersen's Behavior Model of Health Services Utilization. The limitations of this study, clinical implications, research implications, and future directions will also be discussed.

This study aimed to examine preventive healthcare utilization in Black college women by applying a Black Feminist-Womanist lens to the Behavioral Model of Health Services Utilization framework to learn: 1) how Black college women defined health, suboptimal health, optimal health, and preventive health, 2) where Black college women learned about health and preventive health, 3) the rates of preventive healthcare utilization among Black college women, and 4) the degree to which predisposing factors, enabling factors, and need factors separately and collectively predict preventive health care utilization in Black college women.

The researcher's interest in preventive healthcare utilization and disparities among racial/ethnic as well as sexual and gender minorities, and personal experiences as a Black woman utilizing health care and working in the healthcare field inspired this project.

Review of Key Findings

Qualitative Findings

Health and Suboptimal Health. Participants viewed health as a multidimensional concept that incorporated physical health, mental health, and the absence of disease. Health literacy included understanding, communicating, and applying health knowledge and was also

demonstrated to be an important component of this definition of health. Participants acknowledged that health is individualized and influenced by lifestyle choices related to physical, emotional, and spiritual health and engaging in preventive medical care. While participants noted that health is an individual experience, few mentioned that individuals could still be healthy despite having disabilities or chronic health conditions. This was notable as it suggests an elementary, all-or-nothing approach to health that discounts the ability to live as healthy a life as possible given diagnosed health conditions or disabilities.

Similarly to optimal health, participants largely saw suboptimal health as the opposite of optimal health including having poor physical and/or mental health, the presence of a disease, or other unhealthy behaviors caused by engaging in unhealthy lifestyle choices, genetics, and/or toxic environments.

Overall, participants' definitions of health and what it means to be healthy were consistent with two common dictionary definitions including “not displaying clinical signs of disease or infection” and “showing physical, mental, or emotional well-being.” (Merriam-Webster., n.d.) Participants viewed the idea of health and being healthy to be multifactorial. Of note, multiple participants highlighted the aesthetic component of health. For some participants, there was a focus on body shape and looking “your best” in a broad sense. However, for others, specific aesthetic qualities such as hair health or having their hair and nails styled were seen as an important aspect of self-care and were related to their mental health.

In addition to being consistent with dictionary definitions, definitions of health in the qualitative portion of this study and themes extracted from this study aligned with themes from a past qualitative interpretative meta-analysis of studies with Black college students by Barnett and colleagues (2019). Consistent with the current study, that study found themes of physical,

mental, and spiritual health were highlighted in definitions of health. Physical health and mental health were almost always included in definitions of optimal health across studies, reinforcing the indication that Black college students often see physical health and mental health as interrelated (Barnett et al., 2019). More specifically, that study found themes of stress, nutrition, exercise, as well as aesthetic qualities that were highlighted (Awad et al., 2015; Barnett et al., 2019; Brooks & Moore, 2016). Both the present study and the meta-analysis from Barnett and colleagues highlight consistent holistic definitions of health among Black college women that include both physical and mental health.

Preventive Health Behaviors. These questions addressed preventing both acute and chronic illness. For acute illness prevention, physical health, mental health, and COVID-related precautions were themes that arose. Physical health behaviors included taking medicine, supplements, and vitamins as needed, having adequate nutrition and exercise, engaging in more holistic practices, having adequate sleep, and prevention behaviors including getting routine physicals. COVID-related behaviors included those described by the CDC in 2021 including frequent hand washing, using hand sanitizer, coughing into one's elbow, avoiding touching your face, avoiding contact with folks who have been sick, cleaning surfaces, wearing masks, avoiding large crowds, and getting vaccinated (CDC, 2023b). The mental health sub-theme focused primarily on stress management. Participants in this study mentioned various potential sources of stressors including "toxic" people, places, relationships, environments, and healthcare-related stressors. Additionally, they alluded to various forms of stress management including social support, spirituality, and physical activity as potential ways to manage stress. It is unknown if participants understood the importance of stress management in relation to heart

disease prevention, but it is encouraging that they are aware of the connection to stress management and preventive care.

Given that heart disease is the top cause of death for Black women, as well as the top cause of death in Pitt County and Eastern North Carolina broadly, it is promising that participants were overall aware of the broad recommendations for heart disease prevention including proper nutrition, maintaining a healthy weight, regular physical activity, avoiding smoking, and stress management (CDC, 2023a; ECU Health Medical Center, 2022). While participants were aware of these broad recommendations, the degree to which participants were aware of or adherent to specific recommendations related to nutrition or activity (e.g., the recommended number of servings of fruits and/or vegetables; specific number of minutes of moderate-intensity exercise or days of weightlifting) was unclear. Additionally, while some participants described the importance of stress management, no participants acknowledge stress related to racism and discrimination outside of medical settings. This may have been due to limited experiences with discrimination or resilience factors that serve as a buffer from stress in this sample (McDermott et al., 2020). However, as the specific effects of oppression outside of medical settings were not assessed directly in this setting, further study is needed to examine the effects of discrimination in other domains and the relationship to health and preventive health.

Surprisingly, in this study of preventive healthcare utilization, very few participants reported annual physicals, screenings, or preventive vaccinations beyond the COVID-19 vaccine. It is likely that the COVID-19 vaccine was mentioned due to the prevalence of COVID-19 and public health messaging encouraging vaccination at the time of data collection. As the American health system aims to move toward prevention and health equity, it is notable that for most Black

women in this study, preventive healthcare was not conceptualized as an important part of health or preventive health behaviors (ODPHP, n.d.).

Given, the higher rates of chronic conditions in this population and the risk of comorbidity, morbidity, and mortality given these chronic health conditions, the exclusion of preventive care from the conceptualization of health is troubling (CDC, 2021a). Consistent with the all-or-nothing view of what it means to be healthy, it is possible, that once participants were diagnosed with certain conditions, they no longer saw the need or benefit for preventive care. Thus, it is possible that once someone is diagnosed with a condition, annual physicals, screenings, and vaccinations may not be prioritized. Additionally, some participants characterized preventive health behaviors as routine behaviors performed regularly (e.g., healthy eating, exercise, stress management, hand washing), it is possible that the screening and vaccination behaviors are lower priority behaviors for participants or priorities that do not come to mind for participants while at school, as the majority of participants utilize preventive health care in their hometowns or with their family doctors.

Sources of Information. Participants reported that they learned about preventive health from various sources including family, health resources, school, media sources, and personal experiences. Notably, the range of sources of information allows for a variety of information of potentially varying quality to reach participants. When participants learned of preventive health information from their family this often included a range of family members including grandparents, siblings, and parents. Some participants shared that they learned from family members who were in the healthcare field. The idea that participants learned these behaviors from a community of people in their families is aligned with the Womanist idea of motherhood as a "village" of parents, sibling, and extended family provide guidance and knowledge to

participants (Lindsay-Dennis, 2015). Additionally, participants typically learned about preventive health behaviors from women in their families. As previously mentioned, there were no participants who reported receiving information about preventive health solely from their fathers. Despite Black fathers being involved parents and having relationships with their daughters that encourage positive mental and physical health, many fathers do not have the opportunity to be as involved as mothers. This is largely due to a history of social policies that have introduced barriers such as unemployment, underemployment, and incarceration that encourage the displacement of Black men from their families (Miller et al., 2022).

Many participants noted that they learned about preventive health behaviors across their academic career from elementary through current courses in college. This provides a potential area of intervention for the university to provide consistent preventive health information in various locations that participants might access.

Expectations of healthcare. Overall, participants reported expectations related to medical mistrust, inequity, resilience, some positive expectations related to nondiscrimination, positive provider communication, and getting their needs met, as well as hope for the future. Unfortunately, participants reported concerns about fear and the idea that they need to be cautious and proactive in healthcare settings and there was an expectation that communication among providers would be poor such that they would not have information adequately relayed. Expectations related to inequity focused on both their experiences as well as the learned experiences of other Black women. There was an understanding of the exceptionally high maternal mortality rate among Black women as well as general inequity within the health care system.

Notably, negative expectations for healthcare seemed to have been met with resilience in this population. Participants' awareness of and preparedness for addressing inequity in healthcare settings may be protective to some degree as vigilance and knowledge of self-advocacy practices may contribute to participant confidence in seeking out and understanding necessary health information (Gazmararian et al., 2005; Tran & Silvestri-Elmore, 2020). This may allow participants to receive care that they may not have received otherwise.

Despite these negative expectations, there were positive expectations as well. There were positive expectations for the healthcare system such as individuals would get their needs met in a nondiscriminatory environment with positive provider communication and participants expressing hope for the future including a desire to work in healthcare and hopes for universal healthcare. Participants being able to name and describe feelings of mistrust, poor provider communication, and lack of transparency served to signify some knowledge about health literacy such that participants were aware of expectations that were not being met in their different experiences.

Experiences in Healthcare. Participant experiences with healthcare include positive, negative and neutral accounts of salient healthcare experiences. While some participants provided accounts of both positive and negative experiences, the majority of healthcare experiences described were negative. Participants recounted negative healthcare experiences that were consistent with Black women's experiences in the literature. Though this sample is primarily of traditional college-age, it is important to note that only 3 participants reported their PCP being on the university's campus and only 14% of participants had a PCP in the town where the university was located. For the majority of participants, the healthcare experiences that they

were referencing were likely in their hometowns or outside of the town in which the university is located.

Participants who reported positive experiences in the healthcare system described positive experiences with specialty care including hematology, orthopedics and amputee services, physical therapy, and obstetrics and gynecology. Participants reporting positive experiences highlighted interactions with providers where they felt cared for and felt that their needs were being attended to. This aligns with the organizational influences portion of the BMHSU as well as aspects of provider respect.

The negative experiences that were reported in this study by many participants referenced elements of interpersonal racism within a medical setting that primarily focused on unsatisfactory patient-provider relationships. Women in this study reported instances of being dismissed, inattentiveness, poor bedside manner, lack of transparency in communication, inappropriate focus on weight, and feeling uncomfortable or unsafe with male providers and White providers, echoing many of the documented concerns in the literature (Adebayo et al., 2021; Brenick et al., 2017; Ejaife & Ho, 2019; Freedman, 1999; Jacobs et al., 2006). In addition to interpersonal racism, multiple participants cited long wait times for care and financial barriers as negative healthcare experiences. Due to a lack of additional information, the timeframe of these experiences is unclear. However, the lack of access to healthcare for Black Americans has been a disparity attributed to institutional racism before the COVID-19 pandemic, with worsening access during the pandemic (Matoba et al., 2019; Tai et al., 2021). It is noteworthy that this younger population of Black women, many of whom may be starting their transition from pediatric to adult care are reporting experiences of medical discrimination similar to older

Black women who have had more time to encounter medical racism (Gee et al., 2012). This illustrates the pervasive nature of medical racism for Black women.

Qualitative Findings and Relationship to BFW

The qualitative part of this study was novel as it is the only qualitative study to date focusing specifically on Black college women at a primarily White institution (PWI), according to this author's knowledge. The qualitative portion of this study intentionally drew from Black Feminist and Womanist frameworks, such that these questions centered Black women participants and allowed them to define what healthy and unhealthy means for them as well as what preventive health looks like for participants. While there was existing research that described similar experiences of Black women in healthcare, none of these experiences focused on Black college women, thus it was important to allow these women to describe their own experiences. An important element in allowing participants to describe their experiences was allowing women the opportunity to describe their positive experiences or messages as well. This allowed for a better understanding of some of the resilience factors that may facilitate the utilization of preventive healthcare. There were themes such as mothering enacted through the communication of information, and encouraging self-help and self-advocacy that were aligned with themes of social change and strategies for overcoming practical barriers that are touted in Womanism (Lindsay-Dennis, 2015). The qualitative findings highlight the experiences of participants and the ways that they have learned to respond to oppressive environments where they experience medical racism.

Further, when examining themes in relation to the BFW-informed BHMSU, participants mentioned almost all elements of the model. Predisposing factors, or factors that make someone inclined to use healthcare services typically focus on demographic influences (e.g., gender, race,

age), mental influences (e.g., health literacy, provider communication, alignment with alternative medicine), and cultural influences (e.g., collective values about health care including medical mistrust, religiosity, views about stress management) were addressed by participants. However, elements of health literacy and medical mistrust appeared to be highlighted across qualitative questions.

Enabling factors typically include financial influences (e.g., health insurance, affordability of care, income inequality, SES, barriers to care) as well as organizational influences (e.g., culturally competent and respectful providers, having regular sources of care). Financial influences were mentioned by participants but typically were mentioned in response to the lived experiences of others or collective experiences in their social systems, but not as individual concerns. This may have been due to the lack of variance in health insurance status in this study as all students are required to maintain health insurance. While some participants noted their preferences for Black, female, and/or Black female providers, no participants cited cultural competence specifically. Instead, there was a focus on trust and understanding, which may allude to elements of cultural competence given the focus on elements of understanding (National Prevention Information Network, 2021).

Lastly, need factors addressed health care need which included perceived need (i.e., how participants perceive their own health, functioning, limitations, and risk factors) and evaluated need (i.e., participant's objective measurements, diagnoses, and need for medical care). Many participants commented on the presence of health conditions and disabilities being associated with being unhealthy. Additionally, very few participants noted engagement with preventive health behaviors as a way to stay healthy.

Quantitative Findings

Participant Demographics and Health Conditions. One of the goals of this study was to learn about Black college women at East Carolina University. As Black women are a diverse subpopulation, the researcher hoped to capture a diverse sample of Black college women. While the age range of participants spanned 33 years, with an average age of 20.9, much of the sample was non-Hispanic, monoracial Black, cisgender, heterosexual women within the 18-24-year-old range, though there was still variation in their experiences. The mean and median estimated family income were both in the $25,000-$49,999 range which was consistent with the median household income for the county where the university is located (ECU Health Medical Center, 2022).

The majority of women in the present study (65.2%) utilized their hometown PCP or their family doctor as their primary source of medical care. Recent data addressing where Black college women receive healthcare were unavailable at this time. However, when compared to the women in the American College Health Association (ACHA)'s national, majority white sample of college students, about 10% more of those students (75.2%) receive care from their hometown provider (ACHA, 2023). It is important to note that when students are reporting on their experiences with healthcare providers, they have a higher likelihood of referring to their hometown providers rather than providers at the university.

Regarding the self-reported health of the sample, there were unexpectedly low frequencies for the very good and excellent self-ratings given the age of participants. Only 26.1% of participants rated their health as very good or excellent. Unfortunately, recent data that focuses on the self-rated health of Black college women were not available for comparison. However, in a sample of Black adults with a median age of 44.8 years old from aggregated data

from the National Health and Nutrition Examination Survey (NHANES) from 2007-2016, 31.8% of Black adults rated their health as very good or excellent. Examining participant's self-rated health in comparison to the ACHA's sample of college women shows staggering disparities as well. In the 2022 ACHA survey, 46.8% of college students rated their health as very good or excellent in comparison to the 26.1% of Black women in this study (ACHA, 2023).

Further, over half of the sample endorsed at least one chronic health condition. The high rates of health concerns were unexpected with such a young population. The most prevalent physical health conditions in this study were overweight and obesity (21.3%) followed by high blood pressure and hypertension (7.1%). The self-reported overweight and obesity percentage is much lower than the Office of Minority Health (OMH) estimates that 75.2% of Black women over the age of 18 are overweight or obese. However, when BMI was calculated for participants based on their self-reported heights and weights, the sample was closer to the OMH's estimation with 65.1% of the sample being categorized as overweight or obese. The discrepancy in self-reported overweight/obesity compared to the proportion of participants who fell into these categories when their BMI was calculated is notable as it highlights the highlights the lack of cultural relevance to BMI in Black women. Though BMI is a widely used measure in medical settings, the problematic measure fails to account for body composition that is typically different in younger Black women compared to the White peers (Dodgen & Spence-Almaguer, 2017; Heymsfield et al., 2016). Thus, it is important to note that this discrepancy between overweight and obesity categorized by BMI score and reported overweight/obesity does not necessarily equate to an erroneous perception of healthy weight for participants meeting the BMI criteria for categories of overweight or obesity. Individuals in this study with higher BMI scores may have active lifestyles and healthy nutrition, but these elements were not captured by the survey

questions nor BMI scores. Additionally, perceptions of overweight/obesity may be more closely connected to elements of poor physical health obtained in the qualitative portion of this study such as activity limitations and restrictions, having low stamina, feeling sluggish, body shape or weight dissatisfaction, or perceptions of overeating. This is consistent with past research that highlighted Black women's skepticism with BMI as a measure of health for Black women (Justin & Jette, 2022). A qualitative study by Justin and Jette (2022) illustrated a complementary example as a physically active participants who was categorized as obese, did not see her weight as a problem as it did not limit her mobility . This discrepancy supports the skepticism of the BMI measure and lack of identification with categorizations of overweight/obesity based on height and weight alone.

When compared to the sample from the ACHA, the prevalence of hypertension in this sample (7.1%) was 2 1/2 times that of the majority white sample from the ACHA. However, this sample had lower prevalence of diabetes, polycystic ovarian syndrome, and asthma. The lower rates of diabetes in this sample are notable as diabetes is linked to cardiovascular disease and cancer, two of the leading causes of death in Black women (CDC, 2021a; Agyemang & Powell-Wiley, 2013). Overall, the physical health of this sample was less healthy than expected based on comparisons to available populations.

The most common mental health conditions were anxiety 23.2% and depression 17.4%. The prevalence of these two conditions is generally consistent with a pre-pandemic sample of Black college women where 15.4% of the sample reported an anxiety disorder and 18.0% reported a depressive disorder (Lipson et al., 2018). There were few studies that examined pre- and peri-pandemic mental health while acknowledging racial differences. A 2021 study by Kim and colleagues showed that Black students experienced an increase in depressive symptoms and

no significant changes in anxiety symptoms. This study cited the disproportionate effect of COVID-19 on Black Americans paired with the inadequate mental health care access for Black Americans in explaining these differences. However, this sample did not see the same higher levels. There were higher levels of anxiety and slightly higher levels of depression. This could be the result of resilience-related factors such as social support and religiosity. An explanation consistent with Kim and colleagues' suggestion could be that this sample experienced fewer deaths from COVID, but experienced more anxiety related to pandemic factors potentially related to COVID.

Primary Analyses. In the primary analyses, hypotheses in this study predicted that predisposing factors and enabling factors would each explain more variance than need factors. With the inclusion of BFW-relevant variables, the BMHSU did not predict 60% or more of preventive healthcare utilization, therefore neither the model nor the hypotheses were supported.

Secondary Analyses. While secondary analyses were not conducted under a priori conditions, findings from secondary analyses offer support for the relationships proposed in hypothesis one but not those proposed in hypothesis two. When healthcare utilization was operationalized as a continuous variable, the model was significant and accounted for 13.9% of the variation in healthcare utilization. Specifically, age explained 6.2% of the variation in healthcare utilization. Conceptually, it was expected that age would explain a significant portion of variance as the number of recommended preventive health behaviors increase with age (e.g., cervical cancer screenings, shingles vaccines, mammograms). Among factors from the BFW-influenced BMHSU model, predisposing factors explained 3.7% of the variance, enabling factors explained 1.6% of the variance, and need factors explained 2.3% of the variance in healthcare utilization. These results seemed to be aligned with the ways that Andersen's BMHSU can

reflect inequitable access, such that with inequitable access, predisposing variables account for more variation than need factors.

Enabling factors did not explain more variance than need factors though there were significant correlational relationships. This may be explained by some of the characteristics of this sample. For example, in the BMHSU, financial barriers including health insurance and organizational influences like having a regular source of care are predictors of outcomes like preventive health behaviors (Babitsch et al., 2012; Baptiste-Roberts et al., 2017).

In this sample, these barriers appeared to have less of an influence, as some of the primary barriers noted in the literature were not relevant to this sample. For example, every student at the university is required to have health insurance, thus insurance status, a commonly cited barrier not analyzed in the study. Thus, it is possible that the sample was not diverse enough to reflect inequitable access from a financial and organizational standpoint. As such, when operationalizing access using financial and organizational factors that fall under the enabling factors category, these factors performed more similarly to a group with equitable access, such that biological imperatives (i.e. age) and need factors accounted for more of the variance in utilization.

Tertiary Analyses. Tertiary analyses were conducted to examine relationships between predisposing, enabling, and need factors and categories of healthcare utilization including screenings and vaccinations broadly, mental health screening, physical health screenings, substance use screenings, COVID, sexual health, and HPV/cervical cancer. Age, health literacy, and evaluated need exhibited patterns related to screenings overall as well as mental health and physical health screenings, specifically.

As mentioned above, conceptually, it makes sense that receipt of screenings increases as participant age increases. Health literacy in this study assessed the ability to attain, process, and understand basic health information, navigate services, and communicate with a provider to make appropriate healthcare decisions (Davis et al., 2020). The ability to understand, communicate, and disclose information about health needs, symptoms, and health behaviors with a provider may facilitate the receipt of screenings. Specifically, knowing what information to share with a provider can help a provider have a better understanding of what screenings and vaccinations may be appropriate based on various health behaviors that might be associated with preventive health recommendations. For example, some screenings are only recommended if individuals are sexually active or using certain substances, and knowing to disclose this information to a provider may facilitate the receipt of screening. Relatedly, evaluated need likely influences these relationships because some diagnosed chronic health conditions typically trigger recommended screenings and vaccinations in medical settings.

Integrated Findings Examining BMHSU Through a Black Feminist-Womanist Lens.

The overarching goal of this study was to see whether applying a Black Feminist-Womanist lens to Andersen's Behavioral Model of Health Services Utilization would predict meeting 60% or more of the recommended preventive healthcare utilization recommendations for one's demographics. Predisposing factors, enabling factors, and need factors were chosen by utilizing BFW such that factors most relevant to this sample of Black college women would be included in the model.

Primary and Secondary Analyses. In the primary analyses, hypotheses in this study predicted that predisposing factors and enabling factors would each explain more variance than need factors. The BFW-informed BMHSU did not predict receiving 60% or more of the

recommended preventive healthcare screenings and vaccinations, therefore the model was not supported, and the hypotheses were not supported. However, when healthcare utilization was operationalized as a continuous variable in secondary analyses, the model was significant and accounted for 13.9% of the variation in healthcare utilization. Age explained the majority of the variance, which is conceptually aligned with an increase in recommended preventive health behaviors with age. Predisposing factors accounted for the next largest proportion of variance, followed by need factors, then enabling factors. Secondary analyses findings offer support for the relationships proposed in hypothesis one but not those proposed in hypothesis two.

Given that the predisposing factors were most aligned with consistently mentioned experiences in the qualitative analyses, especially medical mistrust, health literacy, and social influence, it makes sense that these factors not only resonated more with participants but explained more of the variance in their preventive health behaviors. Additionally, health literacy can be seen as an adaptive response and element of resilience that is shared within the Black community as a response to medical racism. These results seemed to be aligned with the ways that Andersen's BMHSU can reflect inequitable access, such that with inequitable access, predisposing variables account for more variation than need factors.

Enabling factors did not explain more variance than need factors. In the BMHSU, financial barriers including health insurance and organizational influences like having a regular source of care are typically predictors of preventive health behaviors (Babitsch et al., 2012; Baptiste-Roberts et al., 2017). However, the barrier of insurance was removed from this sample as students are required to carry health insurance. Further, while financial barriers were acknowledged for loved ones in qualitative responses and multiple participants noted that financial barriers were relevant as they had witnessed or learned about through the experience of

others, but across qualitative and quantitative responses, only one participant noted a financial barrier as a reason for delaying or not utilizing healthcare.

Additionally, while participants reported positive experiences with providers that seem to align with the idea of provider respect, most of the positive experiences highlighted focused on experiences in specialty care whereas the provider respect variable focused on primary care settings, where most individuals receive their preventive healthcare screenings and vaccinations. Therefore, it is possible that some variation in provider respect was not adequately captured in this study. Thus, in this sample, enabling factors seemed to reflect equitable access across participants, such that biological priorities (i.e. age) and need factors accounted for more variance in utilization than enabling factors.

Need factors explained more variance than enabling factors in secondary analyses. Though there was a relatively high rate of chronic health conditions, the overall perceived and evaluated need of the sample was fairly low. Qualitative responses corroborated this relatively low perceived need as few participants reported preventive health screenings and vaccinations as important preventive health behaviors.

Tertiary Analyses. Tertiary analyses were conducted to examine relationships between predisposing, enabling, and need factors and categories of healthcare utilization. Age, health literacy, and evaluated need displayed patterns related to screenings overall as well as mental health and physical health screenings.

As mentioned above, conceptually, it makes sense that receipt of screenings increases as participant age increases. Health literacy in this study assessed the ability to attain, process, and understand basic health information, navigate services, and communicate with a provider to make appropriate healthcare decisions (Davis, et al., 2020). Self-advocacy was a prominent

theme in the qualitative data that aligns with the concept of health literacy as understanding the importance of disclosure of behaviors and health information to a provider may facilitate the receipt of screenings. Relatedly, evaluated need likely influences these relationships because some diagnosed chronic health conditions typically trigger recommended screenings and vaccinations in medical settings. Additionally, in qualitative data, participants presented having a condition or illness as a valid reason to see a provider. This might also reflect that having more interaction with the healthcare system due to increased need can increase the likelihood of receiving screenings.

Overall, applying a BFW lens to the BMHSU utilization seemed to highlight both the strengths and critiques of Andersen's model. The model helped to contextualize some of the preventive health behaviors of Black college women. The model seemed to reflect both inequitable access in predisposing factors among this sample, as well as the relatively equitable access related to insurance status and financial barriers. One of the major critiques of the model is that the goal of using the model to predict global healthcare behaviors may be too broad to adequately address complex concerns. While tertiary analyses aimed to address Andersen's recommendation of applying the model to specific diseases and categories to elicit stronger relationships, the model was not as informative regarding preventive health utilization globally (Andersen, 2008).

Study Limitations

Barriers to Care. The barriers variable included a question about whether there was a time in the past 12 months were participants were due for a preventive health screening or vaccination and did not receive it. Though the majority of the sample had an adequate amount of health literacy, the qualitative data suggest that most participants do not conceptualize preventive

health care as a part of health. Additionally, there were no questions assessing knowledge of preventive healthcare recommendations for their individual demographics, health behaviors, and health conditions. Thus, it is unclear whether participants would have known how to answer this question accurately. Future research could include an individualized list of recommended screenings based on their answers to the healthcare utilization questions and assess their knowledge of recommended screenings followed by an assessment of barriers to obtain a more comprehensive understanding of barriers.

Provider Respect. The qualitative portion of the study captured positive experiences with specialty providers. However, the provider respect question focused primarily on relationships with primary care providers. Since some individuals can receive preventive healthcare in specialty settings, a more inclusive question may be more appropriate to capture experiences in both settings and/or the setting where participants receive most of their preventive healthcare.

Generalizations to Other Populations of Black Women. Although Black college women are an important group to prioritize in encouraging preventive health as the nation works to move toward health equity, findings from this study cannot be generalized to the larger population of Black women, including women in the same age range who do not attend college and/or are uninsured, and older adult Black women. Additionally, this study took place at a primarily White institution with a sample that included a large portion of non-Hispanic, monoracial Black, cisgender, heterosexual women within the 18-24-year-old range who receive the majority of their healthcare from their hometown providers. Data may not be generalizable to more diverse samples of Black women or Black women at other diverse universities like Historically Black Colleges and Universities, or Hispanic Serving Institutions.

Clinical Implications

Black women in this study were only receiving about half of the recommended screenings and vaccines for their individual healthcare status, demographics, and health behaviors. This puts them at increased risk for chronic health conditions. Additionally, qualitative analyses showed that very few participants in this sample of Black college women included preventive care in their definition of health. This could make it more difficult for patients to know what to ask about or advocate for when they visit their providers. Additionally, experiences with medical mistrust, both experienced and witnessed or learned about can influence the way Black women feel about engaging with the healthcare system. Further, Black women have learned to advocate for themselves, likely as an adaptive response to intergenerational experiences with medical mistrust. These skills along with health literacy skills may serve as a buffer from the impact of medical mistrust on health care seeking.

It is crucial to acknowledge the potential for undergraduate institutions to engage students in preventive health care. Enrolled students are required to have health insurance that covers preventive care. This removes primary financial barriers for most individuals. Additionally, since a significant portion of participants reported learning about preventive health behaviors in academic settings, inclusion of preventive health care recommendations in courses and on-campus may be helpful ways to increase utilization.

Research Implications

While none of the BFW-informed BMHSU variables were significant in the primary and secondary models on their own, the impact of medical mistrust, health literacy, evaluated need, and perceived need were illustrated when qualitative methods were applied. The inclusion of supplemental qualitative analyses helped to provide additional context, that vaccines and screenings are not typically conceptualized as an element of preventive health behaviors in this

sample despite the higher levels of health literacy. This highlights the specific experiences and definitions of Black college women that may not be captured by quantitative analyses. This was the first study to the author's knowledge examining preventive health healthcare utilization broadly in Black college women at a PWI. This was also the first study to the author's knowledge applying a Black Feminist-Womanist lens to Andersen's Model of Behavioral Health Services Utilization. More research is needed to understand the various elements that predict preventive healthcare utilization in Black college women using culturally relevant frameworks.

When utilizing this model, with this population of Black women, it may be helpful to focus more on the perceived need and predisposing factors as there may be limited variation in enabling factors. Perhaps examining beliefs and knowledge related to preventive care that is focused specifically on vaccinations and screenings. Considering a resilience perspective, it may be helpful to examine additional elements that facilitate utilization. The Health Belief Model which includes variables assessing perceived benefits, cues to action, and self-efficacy may be a helpful model to explore in predicting utilization in this population (Janz & Becker, 1984).

Future Directions

Given that increased preventive healthcare utilization is one of the goals of Healthy People 2030 in an effort to move toward health equity, it is important to understand the predictors that facilitate healthcare utilization, especially in marginalized groups like Black women. Specifically, when focusing on Black college women, it may be more beneficial to focus on predisposing factors and perceived need in working to facilitate preventive care. While a variety of research focuses on the disparate conditions and racism that Black women deal with, it is also helpful to gain a better understanding of the elements of resilience that Black women have learned and passed down intergenerationally to help other Black women adapt to various systems

of oppression including institutional and medical racism. In this study, participants highlighted themes of health literacy, self-advocacy, and holistic preventive healthcare behaviors. Future research should examine ways to incorporate screenings and vaccines into Black college women's conceptualization of preventive care and continue to examine facilitators and buffers to disparate conditions and aim to leverage the existing strengths of marginalized communities to help continue to move towards health equity.

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APPENDIX A: IRB Approval Letter

EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board
4N-64 Brody Medical Sciences Building· Mail Stop 682
600 Moye Boulevard · Greenville, NC 27834
Office **252-744-2914** · Fax **252-744-2284** ·
rede.ecu.edu/umcirb/

Notification of Exempt Certification

From: Social/Behavioral IRB
To: Juinell Williams
CC: Lisa Campbell
Date: 2/23/2022
Re: UMCIRB 22-000002
Black College Women's Preventive Health Behaviors

I am pleased to inform you that your research submission has been certified as exempt on 2/23/2022. This study is eligible for Exempt Certification under category # 2a.

It is your responsibility to ensure that this research is conducted in the manner reported in your application and/or protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

Document	Description
Debriefing Form(0.01)	Additional Items
Dissertation Survey(0.02)	Surveys and Questionnaires
Informed Consent(0.03)	Consent Forms
Juinell Williams Dissertation Proposal 01.02.22.docx(0.01)	Study Protocol or Grant Application
Recruitment Flyers.pdf(0.02)	Recruitment Documents/Scripts

For research studies where a waiver or alteration of HIPAA Authorization has been approved, the IRB states that each of the waiver criteria in 45 CFR 164.512(i)(1)(i)(A) and (2)(i) through (v) have been met. Additionally, the elements of PHI to be collected as described in items 1 and 2 of the Application for Waiver of Authorization have been determined to be the minimal necessary for the specified research.

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

APPENDIX B: Survey

Thank you for agreeing to participate in this research. This survey is intended for Black women who attend ECU. The questions below relate to your healthcare knowledge and experiences.

Please read each question carefully and select the response that most accurately reflects your experience.

Validity Items (demographic items, validity items, and reverse scoring throughout) *

General Demographics

[Qualitative] There are a lot of different ways that people choose to describe themselves. Some parts of those descriptions may include age, race, gender, sex, sexual orientation, where they or their families are from, or other elements that may be important to their identity. Please describe yourself below:

In the next section, you will be asked to choose one option from the answer choices provider. While we acknowledge that this might not be the optimal way for you to identify, we'd like for you to choose what fits best.

Race

1. Please tell us which below best fits you.
    - White
    - Black of African American
        - Black/ African American
        - African
            - Country/countries
        - West Indian/Caribbean
            - Country/countries
        - Black Canadian
        - Not listed: _____
    - Native Hawaiian or other Pacific Islander
    - Asian or Asian American
    - American Indian or Alaskan Native
    - Middle Eastern/North African
    - Multi-racial: Please specify
    - Biracial: Please specify
    - Race not list: Please specify

Ethnicity

2. Are you of Hispanic, Latina/e/o or Spanish origin?

    - No, not of Hispanic, Latina/e/o or Spanish origin

- Yes, Mexican, Mexican American, Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, other Hispanic, Latina/e/o or Spanish origin (Please specify)

Age

2. What is your age in years? (drop down 18-65+)

SES

3. How would you describe the area where you live?
    - Rural Area
    - Small Town/City
    - Suburban near large city
    - Large City

4. Please estimate your family's household income on average across your childhood?
    Under $15,000
    $15,000-$24,999
    $25,000-$34,999
    $35,000-$49,999
    $50,000-$74,999
    $75,000-$99,999
    $100,000-$149,999
    $150,000-$199,999
    $200,000 and over
    I don't know

6. How many people lived in your household on average when you were growing up?
Dropdown 1-11+

College-Related Demographics

1. Do you live on campus?
    Yes
    No

[If no, 1a.]

1a. Do you live in Greenville?
    Yes
    No

3. What is the highest level of your primary caregiver growing up?
    - Some high school
    - High school diploma/GED
    - Technical degree/certification
    - Some college

- Associates degree
- 4-year bachelors
- Masters, Professional, Doctoral degree
- Other _____
- I did not have a primary caregiver

3a. Who was your primary caregiver?

Mother
Father
Parent
Other (Please specify)

4. What is the highest level of education of your secondary caregiver growing up?

- Some high school
- High school diploma/GED
- Some college
- Associates
- 4-year bachelors
- Masters, Professional, Doctoral degree
- Other _____
- I did not have a secondary caregiver

4a. Who was your secondary caregiver?

Mother
Father
Parent
Other (Please specify)

5. What type of student are you?

- Undergraduate
- Graduate Student
- Professional Student
- Non-degree seeking student

[EXIT for graduate, professional and non-degree seeking student]

6. How many years have you been at ECU?

- This is my 1st year
- This is my 2nd year
- This is my 3rd year
- This is my 4th year
- This is my 5th year
- This is my 6th year
- I have been at ECU for 7+ years

Gender and Sexual Orientation-Related Demographics

1. What sex were you assigned at birth? (i.e., what appears on your birth certificate?) Please select one.
    - Male
    - Female
    - Intersex

2. How would you describe your gender most of the time? Please select one.
    - Male/Man/Transman
    - Female/Woman/Transwoman
    - Trans*/Gender queer/non-binary

[EXIT if Male/Male]
If anything other than Female/Woman/Transwoman is selected for #2, display 2a.
2a. Do you ever identity as a woman?
Yes
No
[If no, EXIT]
[QUALITATIVE]3. How would you describe your sexual orientation? Fill in the blank.

4. There are many ways that individuals think of their sexual orientation. If you had to choose one category that describes your sexual orientation, what would you choose?
    - Heterosexual
    - Lesbian
    - Bisexual
    - Queer
    - Asexual
    - Pansexual
    - Questioning
    - Gay
    - Choose to self-identify (please fill in)
    - Not sure
    - I don’t want to answer

5. During the past five years, with whom have you had sexual experiences? Please select one.
    Women only
    Women and nonbinary/genderqueer people
    Nonbinary/genderqueer people only
    Men and nonbinary/genderqueer people
    Women, and nonbinary/genderqueer people
    Women and men
    Men only
    I have not had sex

I don’t want to answer

6. During the past 6 months, with whom have you had sexual experiences? Please select one.
- Women only
- Women and nonbinary/genderqueer people
- Nonbinary/genderqueer people only
- Men and nonbinary/genderqueer people
- Women, and nonbinary/genderqueer people
- Women and men
- Men only
- I have not had sex
- I don’t want to answer

7. How would you describe your relationship status? Please select one.
Single
Dating
Cohabiting
Engaged
Married
Divorced
Widowed

PREDISPOSING

Medical Mistrust
*Instructions***:** I would like to ask you a few questions about how you feel about healthcare organizations. When I say healthcare organizations, I am not asking about an individual doctor or nurse or any other person like that. I am asking about organizations where you might get healthcare, like a hospital or a clinic, the healthcare system in general. Please read the statements carefully. For each one, tell me whether you strongly disagree, disagree, agree or strongly agree.

1. You’d better be cautious when dealing with health care organizations
1 (Strongly Disagree)
2 (Disagree)
3 (Neither Disagree nor Agree)
4 (Agree)
5 (Strongly Agree)

2. Patients have sometimes been deceived or misled by health care organizations
1 (Strongly Disagree)
2 (Disagree)
3 (Neither Disagree nor Agree)
4 (Agree)
5 (Strongly Agree)

3. When health care organizations make mistakes they usually cover it up
   1 (Strongly Disagree)
   2 (Disagree)
   3 (Neither Disagree nor Agree)
   4 (Agree)
   5 (Strongly Agree)

4. Health care organizations have sometimes done harmful experiments on patients without their knowledge
   1 (Strongly Disagree)
   2 (Disagree)
   3 (Neither Disagree nor Agree)
   4 (Agree)
   5 (Strongly Agree)

5. Health care organizations don't always keep your information totally private
   1 (Strongly Disagree)
   2 (Disagree)
   3 (Neither Disagree nor Agree)
   4 (Agree)
   5 (Strongly Agree)

6. Sometimes I wonder if health care organizations really know what they are doing
   1 (Strongly Disagree)
   2 (Disagree)
   3 (Neither Disagree nor Agree)
   4 (Agree)
   5 (Strongly Agree)

7. Mistakes are common in health care organizations
   1 (Strongly Disagree)
   2 (Disagree)
   3 (Neither Disagree nor Agree)
   4 (Agree)
   5 (Strongly Agree)

Health Discussions with Social Circle

1. During the past 12 months, how often have you

discussed your own health-related problems with someone in your religious setting?

1 = never, 2 = rarely, 3 = sometimes, 4 = very often, 5=always.

discussed someone else's health-related problems with someone in your religious setting?

1 = never, 2 = rarely, 3 = sometimes, 4 = very often, 5=always.

discussed your own health-related problems with someone in your friend group?

1 = never, 2 = rarely, 3 = sometimes, 4 = very often, 5=always.

discussed someone else's health-related problems with someone in your friend group?

1 = never, 2 = rarely, 3 = sometimes, 4 = very often, 5=always.

discussed your own health-related problems with someone in your family?

1 = never, 2 = rarely, 3 = sometimes, 4 = very often, 5=always.

discussed someone else's health-related problems with someone in your family?

1 = never, 2 = rarely, 3 = sometimes, 4 = very often, 5=always.

Religiosity

1. How often do you attend religious services?

Never
Less than once a year
A few times a year
A few times a month
At least once a week

2. How would you describe your religious or belief system?

Catholic, Evangelical Protestant, mainline Protestant, Jewish, Muslim, Pagan, Atheist, Agnostic other religion (please specify), and nonaffiliated

3. How important would you say religion is in your life: Is it:

Very important
Important
Fairly important
Slightly important
Not important

Nutrition Facts

Serving Size	½ cup
Servings per container	4
Amount per serving	
Calories 250	Fat Cal 120
	%DV
Total Fat 13g	20%
Sat Fat 9g	40%
Cholesterol 28mg	12%
Sodium 55mg	2%
Total Carbohydrate 30g	12%
Dietary Fiber 2g	
Sugars 23g	
Protein 4g	8%

*Percentage Daily Values (DV) are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

Ingredients: Cream, Skim Milk, Liquid Sugar, Water, Egg Yolks, Brown Sugar, Milkfat, Peanut Oil, Sugar, Butter, Salt, Carrageenan, Vanilla Extract.

1. If you eat the entire container, how many calories will you eat?

2. If you are allowed to eat 60 grams of carbohydrates as a snack, how much ice cream could you have?

3. Your doctor advises you to reduce the amount of saturated fat in your diet. You usually have 42 g of saturated fat each day, which includes one serving of ice cream. If you stop eating ice cream, how many grams of saturated fat would

you be consuming each day?

4. If you usually eat 2,500 calories in a day, what percentage of your daily value

of calories will you be eating if you eat one serving?

Pretend that you are allergic to the following substances: penicillin, peanuts,

latex gloves, and bee stings.

5. Is it safe for you to eat this ice cream?

6. (Ask only if the patient responds “no” to question 5): Why not?

I feel comfortable asking my provider questions about my health, health conditions, medications, or other health-related information.

1 (Strongly Disagree)
2 (Disagree)
3 (Neither Disagree nor Agree)
4 (Agree)
5 (Strongly Agree)

I can understand the education material that my provider gives me.

1 (Strongly Disagree)
2 (Disagree)
3 (Neither Disagree nor Agree)
4 (Agree)
5 (Strongly Agree)

I usually leave my doctor’s appointment with all of my questions answered.

1 (Strongly Disagree)
2 (Disagree)
3 (Neither Disagree nor Agree)
4 (Agree)
5 (Strongly Agree)

I understand the words that are used at my doctor’s appointment.

1 (Strongly Disagree)
2 (Disagree)
3 (Neither Disagree nor Agree)

4 (Agree)
5 (Strongly Agree)

ENABLING

1. Was there ever a time during the past 12 months when you were due for a preventive health screening or vaccination and did not receive the screening or vaccination?
☐ Yes ☐ No ☐ I don't know

*Show yes

2. If you answered "Yes" to the previous question, please indicate which, if any, of the following reasons contributed to your decision to not seek preventive health care.
(*Select all that apply*):
☐ I was not satisfied with available services
☐ Any financial reason (cost or lack of insurance coverage)
☐ It would take too much time or be inconvenient
☐ I was unsure where to go for help
☐ I could not get an appointment
☐ I was afraid to go to a health care provider due to COVID-19
☐ Preventive health did not seem like a priority
☐ I did not trust a vaccine or screening
☐ I was afraid of potential side effects of a vaccine or screening
☐ Other (please specify) _____
☐ None of the above are true for me

Do you have a primary care provider or a single doctor that you usually see?
☐ Yes ☐ No

Do you have a OB/GYN or gynecologist that you usually see?
☐ Yes ☐ No

Do you have a location that you typically go to for your health care needs?
☐ Yes ☐ No
Rate your agreement with the following:

I usually feel respected by my health care provider when I go to the doctor.
1 (Strongly Disagree)
2 (Disagree)
3 (Neither Disagree nor Agree)
4 (Agree)
5 (Strongly Agree)

I feel that my health care provider is LGBTQ+ affirming.

1 (Strongly Disagree)
2 (Disagree)
3 (Neither Disagree nor Agree)
4 (Agree)
5 (Strongly Agree)

I feel that my health care provider respects and affirms who I am as a person

1 (Strongly Disagree)
2 (Disagree)
3 (Neither Disagree nor Agree)
4 (Agree)
5 (Strongly Agree)

Which of the following are ways in which your health care provider is respectful and affirming of your identity:

- Educational health brochures about different populations including women
- Educational health brochures about different populations including Black/African American individuals
- Educational health brochures about different populations including gender diverse individuals
- Educational health brochures about different populations including sexual minority individuals (LGBQ+ individuals)
- Friendly front desk staff that make you feel welcome
- Friendly front desk staff that don't try to guess gender
- A waiting area that caters to your body size, ability or disability
- It is easy to find or obtain an interpreter or translator for my appointments
- I am addressed by the name that I want to be addressed by with correct pronunciation
- I am addressed by the correct pronouns
- I feel that my information is protected
- Assumptions are not made about my body parts
- Assumptions are not made about my sexual or romantic partners
- If I fill out a survey, someone discusses the results with me
- I feel like I can ask questions
- My providers ask me before touching me
- My providers inform me about what is going on during procedures
- My providers talk about the way that stress and the way that I deal with stress affects my health
- My providers acknowledge the stress that I may face as a Black woman
- My providers acknowledge the stress that I may face due to other forms of oppression
- My providers encourage me to ask questions
- My providers check to make sure I understand what was discussed during my appointment
- My providers explain words that I don't understand during my appointments

- My provider makes suggestions about health that fit into my culture
- My provider makes suggestions about health that fit into my budget or what I can afford
- None of these apply:
- Something else_____

NEED

1. In general, would you say that your health is**:**

Poor	**Fair**	**Good**	**Very Good**	**Excellent**
(1)	**(2)**	**(3)**	**(4)**	**(5)**

2. During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work or recreation? Drop down 0-30

3. Please rate your agreement with the following item

It is important to you to take care of your health before you are seriously ill.

1 (Strongly Disagree)
2 (Disagree)
3 (Neither Disagree nor Agree)
4 (Agree)
5 (Strongly Agree)

4. Have you been diagnosed with any of the following health conditions? Check all that apply.

- High Blood Pressure/Hypertension
- Overweight/Obesity
- Depression
- Anxiety
- PTSD
- History of Concussion or LOC
- Sleep Disorder
- Substance Use or Addiction
- HIV/AIDS
- Compromised immune system/immunodeficiency
- Eating Disorder
- Long-haul COVID, long COVID, chronic COVID
- Other
- Any chronic condition or disease
- I have not been diagnosed with any of these.

BMI

Please indicate each of the following to the best of your knowledge:
last measured height _____ ft _____in
last measured weight _____ lbs.

Health Care Utilization

1. I have a primary care physician with whom I've established care
- Yes
- No

2a. My primary care physician is at which of the following places
- Student Health Services
- ECU Family Medicine
- Vidant Health System
- Some other place in Greenville
- In my hometown/my family doctor
- Some other place Fill in the blank

3. I have health insurance through ECU
- Yes
- No, my health insurance is through my caregiver/parent or spouse
- No, my health insurance is from another source (Please specify)

Recommended Vaccines
[This will be branching pattern in the survey]
1. Did you receive the flu vaccine last year? (This can be either in a shot or nasal mist.)
- Yes
- No
- Don't know

2. Have you received the HPV vaccine?
[This will only show for AFAB who selected their age as 18-26 or AMAB ages 18-21.]
- Yes
- No
- Don't know

3. Have you received the Meningococcal meningitis vaccine?
[This will only show for participants who selected their age as 18-21.]
- Yes
- No

6. The Pneumococcal meningitis vaccine is recommended for people ages 65 years old and older, people living with alcoholism, people living with HIV, and/or people who are immunocompromised. Do any of these apply to you?
- Yes
- No

6a. [If yes] Have you received the Pneumococcal meningitis vaccine? Yes

- Yes
- No
- Don’t know

7.The Varicella (chicken pox) vaccine is recommended for health care professionals and for people living with HIV with CD4 count >=200. Do any of these apply to you?
[Only shown for ages 21+, required by ECU otherwise]

- Yes
- No

7a. [If yes] Have you received the Varicella (chicken pox) vaccine? Yes

- Yes
- No
- Don’t know

8. The Zoster (shingles) vaccine is recommended for people ages 50 years old and older and for people living with HIV with CD4 count >=200. Do any of these apply to you?

- Yes
- No

8a. [If yes] Have you received the Zoster (shingles) vaccine?

- Yes
- No
- Don’t know

9. The Hepatitis A vaccine is recommended for men who have sex with men and anyone who uses illegal drugs. Do either of these apply to you?

- Yes
- No

9a. [If yes] Have you received the Hepatitis A vaccine?

- Yes
- No
- Don’t know

10. The Hepatitis B vaccine is recommended for men who have sex with men, anyone who uses illegal drugs intravenously (with needles), and healthcare workers. Do either of these apply to you?
[Only show if 28+, required by ECU otherwise]

- Yes
- No

10a. [If yes] Have you received the Hepatitis B vaccine?

- Yes

- No
- Don’t know

11. Have you received any of the COVID-19 vaccines?

[If Yes, go to 11a. If NO, go to 11c.

11a. Which vaccine did you receive?

11b. How many doses of this vaccine did you receive?
11c. Were you told by a doctor that you should not get the COVID-19 vaccine?
11d. Did you get any other COVID-19 vaccines, additional doses, or a booster?

Recommended Screenings

[Everyone gets these]

Screenings for different health conditions, diseases and infectious diseases are an important part of preventative health care. The following questions will ask you questions about screenings you’ve received. Some of these screenings may have been given to you as a survey in a waiting room, while others may have required more invasive means like blood or tissue samples.

1. Did someone take your blood pressure within the past two years? (Typically this involves a blood pressure cuff.)
- Yes
- No
- Don’t know

2. Did someone take your height and weight measurements last time you went to the doctor?
- Yes
- No
- Don’t know

3. Have you had a colorectal screening (colonoscopy) in the last 5-10 years? [This only shows for individuals over the age of 50]
- Yes
- No
- Don’t know

4. Has anyone ever screened you for depression in a healthcare setting? (Typically this involves someone asking you in-person or on paper, if you been feeling down or have little interest in doing things.)
- Yes
- No
- Don’t know

5. Has anyone ever screened you for diabetes? (Typically this involves a blood test.)
- Yes
- No
- Don't know

6. Has anyone ever screened you for Hepatitis B? (Typically this involves a blood test.)
- Yes
- No
- Don't know

7. Has anyone ever screened you for Hepatitis C? (Typically this involves a blood test.)
- Yes
- No
- Don't know

8. Has anyone ever screened you for HIV? (Typically this involves a blood test.)
- Yes
- No
- Don't know

8a. [If yes], when was the last time you were screened for HIV?
- 0-2 months ago
- 3-5 months ago
- 6-8 months ago
- 9-12 months ago
- More than 1 year ago

9. Has anyone ever screened you for alcohol abuse in a healthcare setting? (Typically this involves someone asking you in-person or on paper, about the how often you drink and how much you drink on average.)
- Yes
- No
- Don't know

10. Has anyone ever screened you for tuberculosis (TB) (This is a skin test)? [only for individuals with HIV or compromised immune systems]
- Yes
- No
- Don't know

10. Has anyone ever screened you for syphilis? [only for individuals with HIV or compromised immune systems]
- Yes
- No

- Don’t know

10a. [If yes], when was the last time you were screened for syphilis?
- 0-2 months ago
- 3-5 months ago
- 6-8 months ago
- 9-12 months ago
- More than 1 year ago

11. Have you ever smoked?
- Yes, I currently smoke
- Yes, but I quit less than 15 years ago
- Yes, but I quit more than 15 years ago
- No

11a. [If, yes or yes, but I quit less than 15 years ago for individuals age 55-80] Have you been screened for lung cancer?

[For Male anatomy only]

12. Certain screenings are recommended based on risk given specific sexual activity. For instance, the CDC recommends that different body parts are tested based on whether you’ve had receptive anal sex or been a “bottom” in the past year, had insertive anal sex (been on the “top”) or received oral sex in the past year, or given oral sex (your mouth on your partner’s penis, vagina, or anus) in the past year. Please check which experiences describe your sexual activity in the past year:

0 None
1 I’ve had receptive anal sex or been a “bottom” in the past year.
2 I’ve had insertive anal sex (been on the “top”) or received oral sex in the past year.
3 I’ve given oral sex (your mouth on your partner’s penis, vagina, or anus) in the past year.
4 Prefer not to say

12a. [If 1] Have you been screened for chlamydia/gonorrhea of the rectum in the past year?
- Yes
- No
- Don’t know

12b. [If 2] Have you been screened for chlamydia/gonorrhea of the penis (urethra) in the past year?
- Yes
- No
- Don’t know

12c. [If 3] Have you been screened for chlamydia/gonorrhea of the throat in the past year?

- Yes
- No
- Don’t know

[For Female Anatomy Only]

1. Have you had a mammogram within the past 2 years? [only displayed to women 40 and older]

- Yes
- No
- Don’t know

2. Have you had a cervical cancer screening in the last three years? [displayed for age 21-29]

OR

2. Have you had a cervical cancer screening in the last five years? [displayed for age 30-65]

- Yes
- No
- Don’t know

3. Have you been screened for chlamydia/gonorrhea in the past year? [age 18-24]

- Yes
- No
- Don’t know

4. Have you ever been screened for osteoporosis? [ages 65+]

- Yes
- No
- Don’t know

5. Has anyone in a healthcare setting ever screened you for intimate partner violence? (Typically this involves being asked questions either an in-person or on paper about your relationship and includes questions about emotional or physical abuse.)

- Yes
- No
- Don’t know

6. Has anyone in a healthcare setting ever screened you for tobacco use or asked you if you smoke?

- Yes

- No
- Don’t know

Qualitative Questions

Pair 1:

1. How do you define health?
2. Please describe one or two personal experiences in the healthcare system that stand out to you, this can be a positive, neutral, or negative experience. You can go into however much detail you would like.

Pair 2:

1. How do you define what it means to be healthy?
2. What does it mean to be unhealthy?

Pair 3:

1. What are some important things to do to prevent **short-term** illnesses and where did you learn about those?
2. What are some important things to do to prevent **long-term** illnesses and where did you learn about those?

Pair 4:

1. There are a lot of different messages that we may receive about health from a lot of different sources. What are some messages that you’ve received about health or the healthcare system?
2. What are some expectations (if any) that you have related to these messages?

Qualitative Questions

Participants will be asked two of the following 8 questions which will be presented as one of four pairs:

Pair 1:

3. How do you define health?
4. Please describe one or two personal experiences in the healthcare system that stand out to you, this can be a positive, neutral, or negative experience. You can go into however much detail you would like.

Pair 2:

3. How do you define what it means to be healthy?
4. What does it mean to be unhealthy?

Pair 3:

3. What are some important things to do to prevent **short-term** illnesses and where did you learn about those?
4. What are some important things to do to prevent **long-term** illnesses and where did you learn about those?

Pair 4:

3. There are a lot of different messages that we may receive about health from a lot of different sources. What are some messages that you've received about health or the healthcare system?
4. What are some expectations (if any) that you have related to these messages?

Appendix C: DEBRIEFING FORM

Thank you for participating in this study. We hope that your feedback will help us better understand the way that Black women in college come to know, define, and understand their experiences in healthcare. We also hope your feedback will help us to better understand factors that influence the decision to utilize healthcare and how we can better serve Black women in healthcare. On this page and on following pages we have included resources for Black women including mental health resources and general information about preventive healthcare.

Preventive Healthcare Recommendation Resources
Preventive health recommendations are specific to age, anatomy, race and ethnicity, as well as family history. To be sure that you are receiving the preventive healthcare that you need, you should contact your medical provider. Many students receive their medical care on campus through ECU's Student Health Services. They have locations on Main campus and the Health Sciences campuses and can be reached at 252-328-6841. More information about the services they provide can be reached by visiting their website: https://studenthealth.ecu.edu.

Most health insurance covers some degree of preventive care. You can learn more about what type of preventive care that your health insurance covers by contacting the number and/or website that is typically included on your health insurance card. Summarized versions of preventive healthcare recommendations provided by the American College of Obstetrics and Gynecologists are included below in English and Spanish.

https://www.womenspreventivehealth.org/wp-content/uploads/WPSI_WWC_11x17_2021Update.pdf

https://www.womenspreventivehealth.org/wp-content/uploads/WPSI_WWC_11x17_2021_SpanishTranslation_Digital.pdf

Contacting Your Insurance If you have private insurance, on the back of your insurance card you will find a customer service line. You can call this number and speak with a representative to identify various resources in your area that accept your insurance, learn about copays, and more.

Student Blue: 1-888-351-8283
BCBS NC: 1-888-206-4697
Medicaid: 888-245-0179
Tricare East: 888-245-0179

ECU Resources
Student Health Services
1000 East 5th Street Greenville, NC 27858
252-328-6841
https://studenthealth.ecu.edu/
Student Health provides primary care and preventive health services including annual well woman exams and reproductive health exams.

If participating in this study made you interested in seeking psychological help for yourself, you may be interested in the following resources.

On-Campus Resources

ECU Center for Counseling and Student Development (CCSD)
CCSD services are available to all currently enrolled ECU students free of charge. CCSD provides short term individual and group counseling for a variety of concerns.
https://counselingcenter.ecu.edu/home/get-started/
137 Umstead Hall, Greenville, NC 27858
252-328-6661

Navigate Clinic
Navigate is a free clinic offering holistic counseling services to individuals, families, and groups utilizing evidence-based and innovative interventions.
4410 Health Sciences Building, Greenville, NC 27834
252-744-0328

Human Development & Family Science Family Therapy Clinic
The ECU Family Therapy Clinic provides high-quality services to families, couples, and individuals.
612 E 10th St, Greenville, NC 27858
252-737-1415

McClammy Counseling and Research Laboratory
The McClammy Counseling and Research Laboratory offers free individual, couple and family counseling sessions, and on occasion, group counseling programs.
118A Ragsdale Hall, Greenville, NC 27858
252-737-4803

The following are national resources that are helpful for addressing mental health concerns.

National Suicide Prevention Lifeline
1-800-273-8255
The National Suicide Prevention Lifeline is a suicide prevention network that provides 24/7 service via a toll-free hotline. It is available to anyone in suicidal crisis or emotional distress.

Crisis Textline
Text HOME to 741741
Crisis Text Line provides free, 24/7, high-quality text-based mental health support and crisis intervention by empowering a community of trained volunteers to support people in their moments of need.

BlackTherapistNetwork.com
TherapyforBlackGirls.com
MelaninandMentalHealth.com
Latinxtherapy.com
TherapyforQPOC.com
InclusiveTherapists.com

PREVENTION SERVICES	AGE (Years)						
	13–17[a]	18–21[a]	22–39	40–49	50–64	65–75	>75
GENERAL HEALTH							
Alcohol use screening & counseling	●	●	●	●	●	●	●
Anxiety screening	●	●	●	●	●	●	●
CVD & CRC prevention with aspirin[1]					○50–59		
Blood pressure screening	●	●	●	●	●	●	●
Contraceptive counseling & methods	●	●	●	●	○		
Depression screening	●	●	●	●	●	●	●
Diabetes screening[2]	○	○	○	○	○	○	○
Fall prevention						●	●
Folic acid supplementation[3]	○	●	●	●	○		
Healthy diet & activity counseling[4]	○	○	○	○	○	○	○
Interpersonal & domestic violence screening	●	●	●	●	●	●	●
Lipid screening[5]	○	●	○	●	●	●	
Obesity screening & counseling	●	●	●	●	●	●	●
Osteoporosis screening[6]					○	●	●
Statin use to prevent CVD[7]				○	○	○	
Substance use screening & assessment	●	●	●	●	●	●	●
Tobacco screening & counseling	●	●	●	●	●	●	●
Urinary incontinence screening[8]	○	●	●	●	●	●	●
INFECTIOUS DISEASES							
Gonorrhea & chlamydia screening[9]	●	●	●≤24 ○>24	○	○	○	○
Hepatitis B screening[10]	○	○	○	○	○	○	○
Hepatitis C screening (at least once)[11]	○	●	●	●	●	●	●<80
HIV preexposure prophylaxis[12]	○	○	○	○	○	○	○
HIV risk assessment	●	●	●	●	●	●	●
HIV screening (at least once)	●>15	●	●	●	●	○	○
Immunizations[b]	●	●	●	●	●	●	●
STI prevention counseling[13]	●	●	○	○	○	○	○
Syphilis screening[14]	○	○	○	○	○	○	○
Tuberculosis screening[15]	○	○	○	○	○	○	○
CANCER							
Breast cancer screening[16]				○	●	●	○
Cervical cancer screening		●≥21	●	●	●	●≤65	
Colorectal cancer screening					●	●	
Lung cancer screening[17]					○55–80	○	○55–80
Medications to reduce breast cancer risk[18]				○	○	○	○
Risk assessment for *BRCA* 1/2 testing		●	●	●	●	●	●
Skin cancer counseling[19]	○	○	○≤24				

Recommendations from the WPSI and the USPSTF for preventive services for pregnant and postpartum women are also provided in the Well-Woman Chart. Comprehensive recommendations for pregnant and postpartum women can be found in ACOG's practice guidelines and other educational materials.

PREVENTION SERVICES for pregnancy provided in addition to age-based services listed above.	
PREGNANCY	
Anxiety screening	●
Bacteriuria screening	●
Breastfeeding counseling, services & supplies	●
Contraceptive counseling & methods	●
Depression screening & preventive interventions[20]	●
Folic acid supplementation	●
Gestational diabetes screening	●
Gonorrhea & chlamydia screening	●
Hepatitis B screening	●
HIV screening (each pregnancy)	●
Interpersonal & domestic violence screening	●
Preeclampsia prevention with low-dose aspirin[21]	○
Preeclampsia screening	●
Rh(D) blood typing	●
Substance use screening & assessment	●
Syphilis screening	●
Tobacco screening & counseling	●

PREVENTION SERVICES for postpartum provided in addition to age-based services listed above.	
POSTPARTUM	
Anxiety screening	●
Breastfeeding counseling, services & supplies	●
Contraceptive counseling & methods	●
Depression screening & preventive interventions[20]	●
Diabetes screening after gestational diabetes[22]	○
Folic acid supplementation	●
Interpersonal & domestic violence screening	●
Substance use screening & assessment	●
Tobacco screening & counseling	●

KEY:

● Recommended by the USPSTF (A or B rating), WPSI, or Bright Futures

○ Recommended for selected use

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The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

ACP
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[a]Additional Bright Futures recommendations include: periodic vision and hearing tests for ages 13-21; risk assessment for anemia for ages 13-21; and fluoride supplementation if needed for ages 13-16 (https://downloads.aap.org/AAP/PDF/periodicity_schedule.pdf)

[b]Immunizations should be administered according to the most recent ACIP recommendations (https://www.cdc.gov/vaccines/schedules/index.html).

Abbreviations:
ACIP = Advisory Committee on Immunization Practices; BRCA = breast cancer susceptibility gene; CRC = colorectal cancer; CVD = cardiovascular disease; HIV = human immunodeficiency virus; HCV = hepatitis C virus; HBV = hepatitis B virus; STI = sexually transmitted infection; USPSTF = U.S. Preventive Services Task Force; WPSI = Women's Preventive Services Initiative.

***Criteria for selective use**

1. Low-dose aspirin to prevent cardiovascular disease and colorectal cancer: Calculated 10-year risk of a CVD event ≥10%; not at increased risk for bleeding; have a life expectancy of at least 10 years; and are willing to take low-dose aspirin daily for at least 10 years.
2. Diabetes screening and management: Overweight or obese for age 40-70 years; previous gestational diabetes but not previously diagnosed with diabetes mellitus when not pregnant for age ≥13 years.
3. Folic acid supplementation: Sexually active and planning or capable of pregnancy.
4. Healthy diet and physical activity counseling: Overweight or obese and have additional CVD risk factors (hypertension, dyslipidemia, abnormal blood glucose levels, diabetes). Specific anticipatory guidance for ages 13-17 may be found in the Bright Futures Guidelines.
5. Lipid screening: Familial dyslipidemia, risk factors, or high-risk conditions for age 13-16 years; universal screening once between age 17-21 years; clinical judgement for age 22-39 years.
6. Osteoporosis screening: 10-year fracture risk equivalent to an average-risk 65-year old woman based on specific risk factors (parental history of hip fracture, smoking, white race, excess alcohol consumption, low body weight).
7. Statin use to prevent CVD: Age 40 to 75 years; one or more CVD risk factors (i.e., dyslipidemia, diabetes, hypertension, or smoking); and calculated 10-year risk of a CVD event ≥10%.
8. Urinary incontinence screening: Screen all women age 18 and older and younger women if postpartum.
9. Gonorrhea and chlamydia screening: New sex partner, more than one sex partner, a sex partner with concurrent partners, or a sex partner who has an STI; inconsistent condom use among persons who are not in mutually monogamous relationships; previous or coexisting STI; and exchanging sex for money or drugs. Prevalence is also higher among incarcerated populations, military recruits, and patients receiving care at public STI clinics.
10. Hepatitis B screening: Born in a country with a prevalence of HBV infection ≥2%; lack of vaccination in infancy in U.S.-born persons with parents from a country or region with prevalence ≥8%; HIV-positive persons; injection drug users; and household contacts or sexual partners of persons with HBV infection.
11. Hepatitis C screening: One-time screening for asymptomatic adults age 18 to 79 without known liver disease. Repeat screening and screen at other ages if past or current injection drug use.
12. HIV preexposure prophylaxis (PrEP): Candidates for include 1) heterosexually active women with a serodiscordant sex partner (i.e., in a sexual relationship with a partner living with HIV); or inconsistent use of condoms during sex with a partner whose HIV status is unknown and who is at high risk; or an STI with syphilis or gonorrhea within the past 6 months; 2) uses injection drugs and shared use of drug injection equipment; or has risk of sexual acquisition of HIV based on above; 3) engaged in transactional sex, such as for money, drugs, or other.
13. Sexually transmitted infection prevention counseling: Risk factors for STIs include having an STI currently or within the past year, not consistently using condoms, having multiple sex partners, or having sex partners within populations with a high prevalence of STIs. Increased STI prevalence rates are found among women seeking STI testing or attending STI clinics; sexual and gender minorities; and among those with HIV, using injection drugs, exchanging sex for money or drugs, or residing in correctional facilities.
14. Syphilis screening: Women with HIV; high prevalence communities or populations; history of incarceration; exchanging sex for money or drugs.
15. Tuberculosis infection: Persons from countries with increased tuberculosis prevalence; living in high-risk congregate settings (e.g., homeless shelters, correctional facilities); exposure to individuals with active tuberculosis, such as health care workers and workers in high-risk congregate settings; immunosuppressed individuals.
16. Breast cancer screening: No specific criteria, decisions about screening are made on an individual basis through a shared-decision making process.
17. Lung cancer screening: 30 pack-year smoking history and currently smoke or have quit within the past 15 years.
18. Medications to reduce breast cancer risk: Major risk factors for breast cancer include increasing age, family history of breast or ovarian cancer (especially among first-degree relatives and onset before age 50 years), history of atypical hyperplasia or other nonmalignant high-risk breast lesions, previous breast biopsy, and extremely dense breast tissue. Models suggest that women with an estimated 5-year breast cancer risk of 3% or greater are likely to have more benefit than harm, although the balance of benefits and harms depends on age, race or ethnicity, the medication used, and whether the patient has a uterus.
19. Skin cancer counseling: Fair skin, light hair and eye color, freckles, sunburn easily.
20. Perinatal depression preventive interventions: Counseling interventions for women with one or more of the following: a history of depression, current depressive symptoms that may not reach a diagnostic threshold, socioeconomic risk factors such as low income or adolescent or single parenthood, recent intimate partner violence, or mental health–related factors such as elevated anxiety symptoms or a history of significant negative life events.
21. Preeclampsia prevention with low-dose aspirin: History of preeclampsia, especially when accompanied by an adverse outcome; multifetal gestation; chronic hypertension; type 1 or 2 diabetes mellitus; renal disease; autoimmune disease (systemic lupus erythematous, antiphospholipid syndrome).
22. Diabetes screening after pregnancy: Previous gestational diabetes but not previously diagnosed with diabetes mellitus when not pregnant.

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SERVICIOS DE PREVENCIÓN	EDAD (años)						
	13–17[a]	18–21[a]	22–39	40–49	50–64	65–75	>75
SALUD GENERAL							
Cribado y orientación sobre el consumo de alcohol	●	●	●	●	●	●	●
Cribado de ansiedad	●	●	●	●	●	●	●
Cribado de presión arterial	●	●	●	●	●	●	●
Prevención de ECV y CCR con ácido acetilsalicílico[1]					○50–59		
Asesoramiento y métodos anticonceptivos	●	●	●	●	○		
Cribado de depresión	●	●	●	●	●	●	●
Cribado de diabetes[2]	○	○	○	○	○	○	○
Prevención de las caídas						●	●
Suplementación con ácido fólico[3]	○	●	●	●	○		
Orientación sobre dieta saludable y actividad física[4]		○	○	○	○	○	○
Cribado de violencia interpersonal y doméstica	●	●	●	●	●	●	●
Cribado lipídico[5]	○	●	○	●	●	●	
Cribado y orientación sobre obesidad	●	●	●	●	●	●	●
Cribado de osteoporosis[6]					○	●	●
Uso de estatinas para prevenir la ECV[7]				○	○	○	
Evaluacion sobre el uso de sustancias y cribado	●	●	●	●	●	●	●
Cribado y orientación sobre el hábito tabáquico	●	●	●	●	●	●	●
Cribado de incontinencia urinaria[8]	○	●	●	●	●	●	●
ENFERMEDADES INFECCIOSAS							
Cribado de gonorrea y clamidia[9]	●	●	●≤24 ○>24	○	○	○	○
Cribado de hepatitis B[10]	○	○	○	○	○	○	○
Cribado de hepatitis C (al menos una vez)[11]	○	●	●	●	●	●	●≤80
Profilaxis preexposición para VIH[12]	○	○	○	○	○	○	○
Evaluacion de riesgos para VIH	●	●	●	●	●	●	●
Cribado de VIH (al menos una vez)	●>15	●	●	●	●	○	○
Inmunizaciones[b]	●	●	●	●	●	●	●
Orientación de Preventiva de ITS[13]	●	●	○	○	○	○	○
Cribado de sífilis[14]	○	○	○	○	○	○	○
Cribado de tuberculosis[15]	○	○	○	○	○	○	○
CÁNCER							
Cribado de cáncer de mama[16]				○	●	●	○
Cribado de cáncer cervicouterino		●≥21	●	●	●	●≤65	
Cribado de cáncer colorrectal					●	●	
Cribado de cáncer de pulmón[17]					○55-80	○	○55-80
Medicamentos para reducir riesgo de cáncer de mama[c]				○	○	○	○
Evaluacion de riesgos para pruebas de BRCA 1/2		●	●	●	●	●	●
Orientación sobre el cáncer de piel[19]	○	○	○≤24				

Las recomendaciones de la WPSI y el USPSTF para los servicios preventivos para las mujeres embarazadas y en el posparto también se proporcionan en el Cuadro de la mujer sana. Se pueden encontrar recomendaciones completas para mujeres embarazadas y en el posparto en las **pautas de práctica clínica del ACOG** y otros materiales educativos.

SERVICIOS DE PREVENCIÓN para el embarazo y el posparto brindados además de los servicios basados en la edad que se mencionan en el cuadro anterior	
EMBARAZO	
Cribado de ansiedad	●
Cribado de bacteriuria	●
Orientación, servicios y suministros para la lactancia materna	●
Asesoramiento y métodos anticonceptivos	●
Cribado de depresión y depresión perinatal[20]	●
Suplementación de ácido fólico	●
Cribado de diabetes gestacional	●
Cribado de gonorrea y clamidia	●
Cribado de hepatitis B	●
Cribado de VIH (todos los embarazos)	●
Cribado de violencia interpersonal	●
Prevención de la preeclampsia con ácido acetilsalicílico en dosis bajas[21]	○
Cribado de preeclampsia	●
Tipificación sanguínea Rh(D)	●
Evaluacion sobre el uso de sustancias	●
Cribado de sífilis	●
Cribado y orientación sobre el hábito tabáquico	●

SERVICIOS DE PREVENCIÓN para el posparto brindados además de los servicios basados en la edad que se mencionan en el cuadro anterior	
POSPARTO	
Cribado de ansiedad	●
Orientación, servicios y suministros para la lactancia materna	●
Asesoramiento y métodos anticonceptivos	●
Cribado de depresión y depresión perinatal[20]	●
Cribado de diabetes después de diabetes gestacional[22]	○
Suplementación de ácido fólico	●
Cribado de violencia interpersonal	●
Valoración sobre el uso de sustancias	●
Cribado y orientación el hábito tabáquico	●

LEYENDA:

● Recomendado por el USPSTF (calificación A o B), WPSI o Bright Futures

○ Recomendado para usos específicos

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LOS MIEMBROS DEL PANEL ASESOR APOYAN A LA WPSI

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NURSE PRACTITIONERS IN WOMEN'S HEALTH
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[a]Las recomendaciones adicionales de Bright Futures incluyen: pruebas periódicas de la vista y la audición para las edades de 13 a 21; evaluación del riesgo de anemia para las edades de 13 a 21; y suplementos de fluoruro si es necesario para las edades de 13 a 16 (**https://downloads.aap.org/AAP/PDF/periodicity_schedule.pdf**).

[b]Las vacunas deben administrarse de acuerdo con las recomendaciones más recientes del ACIP (**https://www.cdc.gov/vaccines/schedules/index.html**).

Abreviaturas:

ACIP = Advisory Committee on Immunization Practices; BRCA = breast cancer susceptibility gene; CCR = cáncer colorrectal; ECV = enfermedad cardiovascular; VIH = virus de la inmunodeficiencia humana; VHC = virus de la hepatitis C; VHB = virus de la hepatitis B; ITS = infección de transmisión sexual; USPSTF = U.S. Preventive Services Task Force; WPSI = Women's Preventive Services Initiative.

***Criterios de usos específicos**

1. **Acido acetilsalicílico en dosis baja para prevenir enfermedades cardiovasculares y cáncer colorrectal:** Riesgo calculado a 10 años de un evento ECV del 10%; no tiene mayor riesgo de hemorragia; tener una esperanza de vida de al menos 10 años; y están dispuestos a tomar ácido acetilsalicílico en dosis bajas todos los días durante al menos 10 años.
2. **Control y detección de diabetes:** Sobrepeso u obesidad entre los 40 y los 70 años; diabetes gestacional previa pero no diagnosticada previamente con diabetes mellitus cuando no estába embarazada durante 13 años.
3. **Suplementación con ácido fólico:** Sexualmente activa y planeando o capaz de quedar embarazada.
4. **Asesoramiento sobre alimentación saludable y actividad física:** Tiene sobrepeso u obesidad y tiene factores de riesgo de ECV adicionales (hipertensión, dislipidemia, niveles anómalos de glucosa en sangre, diabetes).
5. **Detección de lípidos:** Dislipidemia familiar, factores de riesgo o afecciones de alto riesgo para las edades de 13 a 17 años.
6. **Detección de osteoporosis:** Riesgo de fractura a 10 años equivalente a una mujer de 65 años de riesgo promedio basado en factores de riesgo específicos (antecedentes parentales de fractura de cadera, tabaquismo, raza blanca, consumo excesivo de alcohol, bajo peso corporal).
7. **Uso de estatinas para prevenir la ECV:** Edad de 40 a 75 años; uno o más factores de riesgo de ECV (dislipidemia, diabetes, hipertensión o tabaquismo); y el riesgo calculado de un episodio de ECV a 10 años es del ≥10%.
8. **Detección de incontinencia urinaria:** ealizar la detección a todas las mujeres de 18 años o mayores y a las mujeres más jóvenes si están en el posparto.
9. **Detección de gonorrea y clamidia:** Nueva pareja sexual, más de una pareja sexual, una pareja sexual con parejas concurrentes o una pareja sexual que tiene una ITS; sin uso habitual de condones entre personas que no tienen relaciones mutuamente monógamas; ITS anterior o coexistente; e intercambiar sexo por dinero o drogas. La prevalencia también es mayor entre las poblaciones encarceladas, los reclutas militares y los pacientes que reciben atención en clínicas públicas de ITS.
10. **Detección de hepatitis B:** Nacido en un país con una prevalencia de infección por VHB ≥ 2%; falta de vacunación en la niñez en personas nacidas en EE. UU. con padres de un país o región con una prevalencia ≥8%; personas positivas para el VIH; usuarios de drogas inyectables; y contactos domésticos o parejas sexuales de personas infectadas por el VHB.
11. **Detección de hepatitis C:** Detección única para adultos asintomáticos de 18 a 79 años sin enfermedad hepática conocida. Repetir la prueba y la prueba a otras edades si ha usado drogas inyectables en el pasado o en la actualidad.
12. **Profilaxis previa a la exposición al VIH (PrEP):** Los candidatos incluyen 1) mujeres heterosexualmente activas con una pareja sexual serodiscordante (es decir, en una relación sexual con una pareja que vive con el VIH); o sin uso habitual de condones durante las relaciones sexuales con una pareja cuyo estado de VIH se desconoce y que está en alto riesgo; o una ITS con sífilis o gonorrea en los últimos 6 meses; 2) usa drogas inyectables y uso compartido de equipo de inyección de drogas; o tiene riesgo de contraer el VIH por vía sexual con base en lo anterior; 3) participa en relaciones sexuales transaccionales, como por dinero, drogas u otros.
13. **Asesoramiento para la prevención de infecciones de transmisión sexual:** Los factores de riesgo de las ITS incluyen tener una ITS actualmente o en el último año, no usar condones de manera habitual, tener múltiples parejas sexuales o tener parejas sexuales dentro de poblaciones con una alta prevalencia de ITS. Se encuentran mayores tasas de prevalencia de ITS entre las mujeres que buscan hacerse la prueba de ITS o que asisten a clínicas de ITS; minorías sexuales y de género; y entre las personas con VIH, que usan drogas inyectables, intercambian sexo por dinero o drogas, o residen en establecimientos penitenciarios.
14. **Detección de sífilis:** Mujeres con VIH; comunidades o poblaciones de alta prevalencia; antecedentes de encarcelamiento; intercambiar sexo por dinero o drogas.
15. **Infección por tuberculosis:** Personas de países con mayor prevalencia de tuberculosis; vivir en entornos congregados de alto riesgo (p. ej., refugios para personas sin hogar, instalaciones correccionales); exposición a personas con tuberculosis activa, como trabajadores de la salud y trabajadores en entornos congregados de alto riesgo; individuos inmunosuprimidos.
16. **Detección de cáncer de mama:** Sin criterios específicos, las decisiones sobre la detección se toman de forma individual a través de un proceso de toma de decisiones compartida.
17. **Detección de cáncer de pulmón:** Antecedentes de tabaquismo de 30 paquetes al año y actualmente fuma o ha dejado de fumar en los últimos 15 años.
18. **Medicamentos para reducir el riesgo de cáncer de mama:** Los principales factores de riesgo de cáncer de mama incluyen edad avanzada, antecedentes familiares de cáncer de mama o de ovario (especialmente entre parientes de primer grado y aparición antes de los 50 años), antecedentes de hiperplasia atípica u otras lesiones mamarias no malignas de alto riesgo, biopsia mamaria previa y tejido mamario extremadamente denso. Los modelos sugieren que es probable que las mujeres con un riesgo estimado de cáncer de mama a 5 años del 3% o más tengan más beneficios que daños, aunque el equilibrio de beneficios y daños depende de la edad, la raza o el origen étnico, el medicamento utilizado y si la paciente tiene un útero.
19. **Asesoramiento sobre cáncer de piel:** Piel clara, cabello y ojos claros, efélides, quemaduras solares con facilidad.
20. **Intervenciones preventivas de la depresión perinatal:** Intervenciones de asesoramiento para mujeres con uno o más de los siguientes: antecedentes de depresión, síntomas depresivos actuales que pueden no alcanzar un umbral de diagnóstico, factores de riesgo socioeconómico como bajos ingresos o paternidad adolescente o monoparental, violencia reciente de pareja íntima o factores relacionados con la salud mental, como síntomas elevados de ansiedad o antecedentes de acontecimientos vitales negativos importantes.
21. **Prevención de la preeclampsia con ácido acetilsalicílico en dosis bajas:** Antecedentes de preeclampsia, especialmente cuando se acompaña de un resultado adverso; gestación multifetal; hipertensión crónica; diabetes mellitus de tipo 1 o 2; enfermedad renal; enfermedad autoinmunitaria (lupus eritematoso sistémico, síndrome antifosfolipídico).
22. **Detección de diabetes después del embarazo:** Diabetes gestacional previa pero no diagnosticada previamente con diabetes mellitus cuando no estaba embarazada.

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APPENDIX D: Medical Mistrust Index

Instructions: I would like to ask you a few questions about how you feel about healthcare organizations. When I say healthcare organizations, I am not asking about an individual doctor or nurse or any other person like that. I am asking about organizations where you might get healthcare, like a hospital or a clinic, the healthcare system in general. Please read the statements carefully. For each one, tell me whether you strongly disagree, disagree, agree or strongly agree.

1. You'd better be cautious when dealing with health care organizations
   1 (Strongly Disagree)
   2 (Disagree)
   3 (Neither Disagree nor Agree)
   4 (Agree)
   5 (Strongly Agree)

2. Patients have sometimes been deceived or misled by health care organizations
   1 (Strongly Disagree)
   2 (Disagree)
   3 (Neither Disagree nor Agree)
   4 (Agree)
   5 (Strongly Agree)

3. When health care organizations make mistakes they usually cover it up
   1 (Strongly Disagree)
   2 (Disagree)
   3 (Neither Disagree nor Agree)
   4 (Agree)
   5 (Strongly Agree)

4. Health care organizations have sometimes done harmful experiments on patients without their knowledge
   1 (Strongly Disagree)
   2 (Disagree)
   3 (Neither Disagree nor Agree)
   4 (Agree)
   5 (Strongly Agree)

5. Health care organizations don't always keep your information totally private
   1 (Strongly Disagree)
   2 (Disagree)
   3 (Neither Disagree nor Agree)
   4 (Agree)
   5 (Strongly Agree)

6. Sometimes I wonder if health care organizations really know what they are doing

1 (Strongly Disagree)
2 (Disagree)
3 (Neither Disagree nor Agree)
4 (Agree)
5 (Strongly Agree)

7. Mistakes are common in health care organizations
1 (Strongly Disagree)
2 (Disagree)
3 (Neither Disagree nor Agree)
4 (Agree)
5 (Strongly Agree)

APPENDIX E: NEWEST VITAL SIGN

Nutrition Facts

Serving Size	½ cup
Servings per container	4
Amount per serving	
Calories 250	Fat Cal 120
	%DV
Total Fat 13g	20%
Sat Fat 9g	40%
Cholesterol 28mg	12%
Sodium 55mg	2%
Total Carbohydrate 30g	12%
Dietary Fiber 2g	
Sugars 23g	
Protein 4g	8%

*Percentage Daily Values (DV) are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

Ingredients: Cream, Skim Milk, Liquid Sugar, Water, Egg Yolks, Brown Sugar, Milkfat, Peanut Oil, Sugar, Butter, Salt, Carrageenan, Vanilla Extract.

1. If you eat the entire container, how many calories will you eat?

2. If you are allowed to eat 60 grams of carbohydrates as a snack, how much ice cream could you have?

3. Your doctor advises you to reduce the amount of saturated fat in your diet. You usually have 42 g of saturated fat each day, which includes one serving of ice cream. If you stop eating ice cream, how many grams of saturated fat would

you be consuming each day?

4. If you usually eat 2,500 calories in a day, what percentage of your daily value of calories will you be eating if you eat one serving?

Pretend that you are allergic to the following substances: penicillin, peanuts, latex gloves, and bee stings.

5. Is it safe for you to eat this ice cream?

6. (Ask only if the patient responds “no” to question 5): Why not?