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A Research-Based Grant Proposal Thesis to Address Colorism as a Public Health Concern:
The Need for Interventions to Mitigate the Phenomenon of Skin Bleaching
Among Women in Kingston, Jamaica

By

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2019

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An abstract of
A thesis submitted to the Faculty of the Rollins School of Public Health of Emory
University in partial fulfillment of the requirements for the degree of
Master of Public Health in Public Health Nutrition
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Abstract

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By Hadajo J. Ferguson

Despite the abolition of slavery and independence from Great Britain, Jamaica struggles with internalized values of colorism that affect the beauty standards of women in the country. These values are exhibited through the popularized practice of skin bleaching. Skin bleaching, or skin whitening biotechnology, is a common cosmetic treatment among women and communities of color. It is the act of lightening, whitening, or bleaching one's skin using melanin-inhibiting mechanisms; common chemical ingredients in skin bleaching products include mercury (Hg) and hydroquinone. Long-term exposure to these chemical substances link to various adverse health outcomes ranging from skin cancer, liver and kidney issues, dermatitis, and many more. This practice is also an understudied public health concern; there is limited research or epidemiological data on the negative medical and psychosocial health outcomes on women in the population, especially in Jamaica.

This thesis project describes the development of a research grant proposal to acquire funding to advance in literature on the psychosocial and socio-cultural factors that influence the motivation behind skin bleaching within the population of women in Jamaica. By assessing the practice of skin bleaching, this research will provide a baseline of information with goals to: (1) Gain a deeper understanding of the psychosocial and socio-cultural factors (2) Collect formative/mixed methods research data to investigate the harmful effects of skin bleaching on women within this region.

Addressing the issues of skin bleaching through this research proposal will be a strategy for additional resources and a solution to the lack of available research. Providing further research on the practice of skin bleaching and its effects on women in Jamaica can assist in incorporating education and empowerment interventions in partnership with governmental organizations, thus reducing the possibility of risk to adverse health outcomes. Such direction in research will allow for the opportunity to develop a possible women's beauty educational campaign that will formulate a model utilizing scientific evidence and cultural competency to curtail the dangerous practice.

The grant proposal is in response to the upcoming 2022 The Global Alliance for Chronic Diseases (GACD) call for proposals. GACD's funding priorities support research that addresses the prevention and treatment of non-communicable diseases through implication sciences. Addressing skin bleaching in collaboration with GACD's implementation strategies can help achieve these goals.

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I would now like to reintroduce myself as
Hadajo J. Ferguson, MPH

Table of Contents

Chapter I: Introduction	1
INTRODUCTION AND RATIONALE.....	1
<i>Beauty and Women</i>	2
<i>Beauty and Perceptions of Skin Color</i>	4
<i>Beauty, Women, and Perceptions of Skin Color: Purpose of Project</i>	5
PROBLEM STATEMENT.....	6
PURPOSE STATEMENT.....	6
SIGNIFICANCE STATEMENT.....	7
DEFINITION OF TERMS.....	7
Chapter II: Review of the Literature	8
INTRODUCTION.....	8
RESEARCH QUESTION.....	8
INTRODUCTION TO SKIN WHITENING BIOTECHNOLOGY.....	8
PSYCHOLOGICAL HARM LEADING TO SKIN BLEACHING/COLORISM.....	11
PHYSICAL HARM OF SKIN BLEACHING.....	13
SKIN BLEACHING IN JAMAICA.....	14
SUMMARY OF CURRENT PROBLEM AND PROPOSAL RELEVANCE.....	18
Chapter III: Methodology	19
INTRODUCTION.....	19
GLOBAL ALLIANCE FOR CHRONIC DISEASES.....	19
A SUMMARY OF THE GRANT ANNOUNCEMENT.....	20
PROPOSED METHODOLOGY.....	21
PROTECTION OF HUMAN SUBJECTS.....	22
REVIEWERS COMMENTS.....	23
Chapter IV: Grant Proposal	24
PROJECT TITLE.....	24
PROJECT OVERVIEW.....	24
RATIONALE.....	26
PROPOSED METHODOLOGY.....	26
ACTIVITIES.....	27
PROJECT EVALUATION AND MEASUREMENT.....	32
STUDY DESIGN AND DATA COLLECTION.....	33
RISKS AND LIMITATIONS.....	33
DISSEMINATION AND TRANSFERABILITY OF RESULTS.....	34
PERSONNEL.....	35
Chapter V: Conclusion	36
Chapter IV: Recommendations and Implications	37
RECOMMENDATIONS.....	37
<i>Community-level</i>	37
<i>Systems-Level</i>	38
IMPLICATIONS.....	39
References	40

Chapter I: Introduction

Introduction and Rationale

“if you're black, stay back; if you're brown, stick around; if you're yellow, you're mellow; if you're white, you're all right.”

This is a saying I remember hearing throughout my youth, not only in my Jamaican family but among my African American peers. Colorism, featurism, and texturism are all oppressive biases that communities of color tackle daily; being closer to the spectrum of Eurocentric ideals introduced the privilege of beauty, economic, and social capital for opportunities for success. Colorism, or skin stratification, is prejudice and discrimination based on skin tone. The persistence of colorism and the practice of skin bleaching is evident in Jamaica and many other ethnic groups. As I grew older, my skin tone made me reconsider my beauty ideals because all it took was one look in the mirror. That one look in the mirror showed me that I might never be the ideal beauty standard because I am too deep, too far on the spectrum of what the Eurocentric ideals of beauty are. I am visible but still invisible. I define this as the internalization of skin stratification, colorism, and discrimination by skin tone.

In Jamaica, and most parts of the world, bleaching of the skin is a normalized practice. The purpose of this research study is to analyze the motivation and rationale behind skin bleaching amongst Jamaican women as the trend has gradually increased in the past decades. The practice of skin bleaching is the use of chemical products, some homemade, to reduce the amount of melanin to the skin, resulting in a lighter skin complexion. This process is a phenomenon in many communities of color, including Jamaica. The legacy of social discrimination based on skin complexion since British colonization has caused the emergence of this practice. Now the use of skin bleaching products is socially acceptable among Jamaican women. The global production and marketing of skin bleaching is a multi-billion-dollar industry making it one of the most potentially harmful modification practices worldwide. In this population of women, light skin tone is represented as more beautiful and wealthier than persons with dark-colored skin

(Ricketts et al., 2019). The strains of Eurocentric ideals are a seed that has grown expansively in Jamaican culture as a residual component. Lighter skin complexion equates as 'fashionable,' perpetuated by the influence of popular culture.

While most skin bleaching products are required and intended for a short period of use, this chemical alteration is used for much more. Skin bleaching has a significant impact on self-esteem and identity formation in population groups (De Souza, 2008); the practice also impacts users' health. Addressing skin bleaching and colorism as a significant health concern among the Jamaican population is essential. The common ingredient in skin bleaching products is mercury, steroids, and hydroquinone; these are toxic that can cause damage to the nervous system, kidneys, and gastrointestinal tract. Many people in Jamaica mix steroid creams; Neoprodone, Topsone Gels, Lemonvate, Nadinola, and many more. These creams cut down on the collagen and elastic fiber to make the skin weaker. There is limited research conducted to find out the medical and psychosocial effects behind the practice amongst women. Dominant discourses of beauty, including identity, we should focus on the representation of Black beauty standards.

Beauty and Women

From the types of products use to the practices done to maintain beauty, women go to many different degrees to adjust to ever-changing beauty standards. Several chemicals included in daily beauty products contain synthetic and toxic substances. Cosmetic chemicals common in beauty products include o-phenylenediamine, formaldehyde, dibutyl/diethylhexyl phthalates, artificial colors, synthetic fragrances, triethanolamine, silicones, chemical preservatives, etc. Usages of these toxins gradually affect our bodies and cause serious health problems; they link to cancer, hormonal disruption, damage to our nervous system, harm to our reproductive system, and many other health concerns. For example, chemicals like dibutyl phthalate and diethylhexyl phthalate are developmental toxicants that can harm both male and female reproductive systems; identified as a possible carcinogen. In skin bleaching products, the toxic substances included are steroids, hydroquinone, and mercury (elemental, inorganic, or organic). When absorbed into the

skin through sweat glands and hair follicles, these chemical substances cause damage to essential bodily organs, i.e., the skin, kidneys, and nervous system. Long-term exposure to mercury and other products may also result in irritability, muscle weakness, and memory loss. (Ricketts et al., 2020).

The U.S. Food Drug Administration (FDA) is currently responsible for evaluating various cosmetics to regulate the chemicals and contaminants in products. According to the FDA's 1938 Food, Drug, and Cosmetic Act, "a cosmetic is adulterated under the 1938 FDCA if packed in unsanitary conditions that may render it 'injurious to health' or its container is composed in a whole or part of any poisonous or deleterious substance that may render it 'injurious to health'" (FDA, 1938). On average, women use about 12 personal care products that contain may contain almost 200 different chemicals. With over ten thousand chemicals used to formulate cosmetics in the beauty industry, only eleven are banned and restricted by the FDA despite the emergence of the 1938 Act. Many countries have banned or limited the use of mercury and hydroquinone in their cosmetic products. The FDA has set a limit of less than 1 ppm of mercury manufactured in skin-lightening products. A previous study about the adverse effects of mercury on the University of West Indies in Jamaica found some skin-beaching products with up to 17,000 ppm of mercury in popular skin bleaching products. The mercury concentration of some products is 13,546 times greater than the FDA limit (Ricketts, 2020). According to the Code of Federal Regulations Title 21, Volume 7 by the FDA, due to the known hazards of mercury substances in cosmetic products, there are no current justifications for mercury in skin-bleaching preparations its use as a preservative in cosmetics (FDA, 2020). Any use of mercury past 1 ppm is detrimental to the health of the user.

The same sentiment can apply to the use of hydroquinone. As part of a passage in the Coronavirus Aid, Relief, and Economic Security (CARES Act), the United States Congress made significant changes to the access of over-the-counter products containing hydroquinone and how it is regulated or dispensed. Under the Under Code of Federal Regulations: Title 21,

Section 330.1, over-the-counter hydroquinone is now established as a not GRASE drug (generally recognized as safe and effective). These changes became effective on Sept. 23, 2020, when all over-the-counter products containing hydroquinone were immediately removed from the market and must be approved by the U.S. Food & Drug Administration through their new drug application process.

Since the meaning of beauty is an aspect woman have a problem defining throughout their life, women become highly vulnerable to the effects of the constant changes in societal beauty standards leading to internalized hatred or a negative self-perception. With the different cosmetic products and procedures, women are going to extreme lengths to achieve the desired beauty standards. As women, our lived experiences shape our perception of beauty, and having a sense of self-consciousness is essential to avoid internalizing the ever-changing labels. Skin bleaching products, and products containing hydroquinone and mercury, are not effectively regulated in Jamaica. To raise awareness to tackle skin bleaching among women, composing this research is vital to address idealized beauty.

Beauty and Perceptions of Skin Color

Colorism, stereotypes, and generalizations are factors that lead to negative self-conceptions. A significant problem people of color face are the negative perception of their identity due to racial oppression. "...Black identity has allowed for the development of an internal set of standards which many black women have begun to judge themselves." (Ladner, 1972). Women of color are vulnerable to these factors, including the result and ideals of European standards of beauty; these lived experiences can perceive beauty and affect self-identity.

The "Doll Test" and the "Brown Paper Bag Tests" are both studies that show the discrimination by skin tone and the role it plays in self-perception amongst Black people. The Doll Test is a study for Black children to analyze the detrimental effects of European beauty standards. Clark and Clark (1947) was an "experiment with 253 black children between the ages

of three and seven at nursery and public schools in Arkansas and Massachusetts. Children were shown two identical dolls, one black and one white. Roughly two-thirds of the children indicated that they liked the white doll better, despite their own skin color" (Clark, 1947). In 2005, Kiri Davis, a filmmaker, recreated that same experiment resulting in 16 of the 21 children choosing the white doll instead of the Black doll. When asked why the children expressed that the darker-toned doll "looked bad." Although both studies are years apart, the findings between the studies did not change; European ideals of beauty standards is expressed even today.

Another study that explored racial discrimination in the United States was the "Brown Paper Bag Test," which determined whether individuals could have certain privileges based on their skin tone. An individual who was darker than a brown paper bag would deny privileges:

Furthermore, to maintain their elite status and privileges, lighter-skinned men engaged in social practices to exclude darker-skinned Blacks from entering social circles; these practices included the "Paper Bag Test," (which banned Blacks from joining fraternities if their skin tones were darker than a brown paper bag), the "Comb test," (which banned Blacks with coarse, nappy African hair if combs could not be glide through it) and the "Blue veins" society (which banned Blacks whose skin tones were too dark to see the blue veins on their arms) (Bond & Cash, 1992). These findings consistently indicated that light skin tone resulted in clear social and economic advantages. (Uzogara 2014)

These studies show that the socio-cultural standards of beauty and colorism shape how identity conceptualizes women.

Beauty, Women, and Perceptions of Skin Color: Purpose of Project

Learning about the lived experiences of others and the obstacles people face in society would be an opportunity to elaborate more on the psycho-social influencers that promote the practice of skin bleaching in conjunction with beauty and colorism. As the famous saying goes, beauty is in the eye of the beholder; it can is defined in the most unique ways possible. Women, especially women of color, can be highly vulnerable to the effects of European beauty standards, leading to internalized hatred or a negative self-perception. This study is a way to focus on the thoughts, the experiences, the testimonies of women when discussing how their colorism plays a role in how comfortable they are with their identities, deeply understanding skin bleaching. In

the case of Jamaica, skin-bleaching poses a severe health concern to health and governmental officials. This study should provide the data necessary to mitigate the problem.

Problem Statement

The grant proposal aims to deepen the understanding of the psycho-social and cultural factors that influence the motivation behind skin whitening biotechnology in the population of women in Jamaica. There is no available research or statistical data on this normalized practice in Jamaica, including the negative medical and psycho-social effects on women in the population. Outside of cosmetic purposes, skin bleaching has growing popularity with many safety and medical concerns toxic ingredients manufactured in certain products. It also symbolizes a more complex psychological issue such as negative self-perception and self-esteem in women of color. By assessing the practice of skin whitening biotechnology and the attitude, perception, and knowledge, this study will provide a baseline of information on the practice among the female population in the country.

Purpose Statement

There are two main objectives to be answered by the grant proposal. Tackling the issues through this research will be a strategy to provide additional resources and provide a solution to the lack of available research. The first is to gain a deeper understanding of the psycho-social and socio-cultural factors that influence motivation behind practicing skin whitening biotechnology in women in Jamaica. The second is to collect formative/mixed method research data that will investigate the harmful effects of skin bleaching on women in this region; Identify and measure a range of bleaching products' use.

Significance Statement

Ending colorism will be an uphill battle in Jamaica; banning products will not solve this inter-generational problem. Tackling the issues through this research will be a strategy to provide additional resources and provide a solution to the lack of available research.

This proposal focuses on mixed-methods research for mitigating skin bleaching in Jamaican communities. By providing more research on the skin bleaching practice and its effects on women in Jamaica, it can assist in mitigating this practice through education and empowerment in partnership with the Ministry of Health and the University of the West Indies. This response will allow for the opportunity to develop a discourse to maximize women's beauty educative campaigns and formulate a model for cosmetics brands to use scientific evidence and cultural competency to curtail the dangerous practice.

Definition of Terms

Colorism: Defined as, 'discrimination based on skin tone', is acknowledged to be rooted in slavery, colonialization, suffrage, and other factors that persist from colonial order. The term is also known as pigmentocracy, which has been used to describe the "system of privilege based on the degree of lightness in the color of a person's skin" (Gabriel, 2007).

Skin Bleaching: Also known as skin whitening biotechnology, (both terms are applied in this proposal) is "the act of toning, lightening, whitening, or bleaching one's skin through the use of creams, soaps, pills, injections, and other melanin-inhibiting mechanisms" (Benn, et. Al, 2019).

Chapter II: Review of the Literature

Introduction

The objective of this literature review is to review and align relevant research and studies associated with skin whitening biotechnology as the public health concern, with a focus on colorism, and to reveal any gaps that exist in the literature. The results of this review will focus primarily on the history and post-colonial roots in Jamaica, as the practice is also an understudied public health crisis for Afro-Jamaican women due to its popularized use. The works reviewed also examine the critical issues of the practice and its impact for the use in a comprehensive analysis and recommendations for additional research.

Research Question

The research question guiding the literature review was as follows: What are the societal factors that influence the practice of skin bleaching among women in Jamaica? What are the perceived benefits and risks of skin bleaching? What are future strategies the University of the West Indies and the Ministry of Health can implement to tackle the rising public health concern of skin bleaching among women in Jamaica?

Introduction to Skin Whitening Biotechnology

Skin bleaching is practiced in many areas of the world, including the United States, Africa, Southeast Asia, and the Caribbean. Understanding the historical roots of "whiteness", skin biotechnology is the act of using substances, mixtures, and treatments to physically lighten and drain the natural pigmentation and melanin from the skin (known as melanin blocking). Whitening biotechnology is implied through the racialization of women women's bodies and their skin complexion. This type of technology reaffirms the belief that women should appear desirable at any age despite natural changes to their bodies, such as age spots, hyperpigmentation, and visible signs of imperfections (Mire, 2020).

Historically, skin bleaching began during the Victorian era and was marketed as a cure against any visible signs of aging (targeting middle-aged white women) to normalize the ideal femininity as a youthful woman with glowing, soft skin (Mire, 2020). The standard beauty and desirable femininity began as the promotion of ageless skin, whiteness, or a lighter skin complexion symbolized purity and cleanliness. With women being the center of physical attractiveness in the public sphere, the use of skin bleaching developed as an erasure of the lived experiences of aging, working-class women, and the promotion of ageless skin (McClintock, 1995). During this time (the Victorian era) aging was interpreted as a lack of self-care and became a normalized practice; pale skin associated with wealth and social status (Ruehl, 2018), indicating individuals with lighter skin tones can be advantaged in economic, social, political, and cultural atmospheres. Women of wealthy status did not have to face the adversity of domestication or become vulnerable to environmental stressors; thus, they could avoid the effects of increased exposure to the sun. On the other hand, working-class women faced deformation of the skin and hyperpigmentation due to their exposure to environmental stressors and the sun. In the pursuit of beauty, skin whitening biotechnology homogenized the beauty standard. There were ideas about the shades of hyperpigmentation of the skins of different people and the link between geographical factors, particularly latitude and sunshine; thinkers also made positive or negative judgments about the physical, intellectual, or moral characteristics of people sharing the same type of pigmentation and habitat, and about their culture (Petit, 2019). With this acknowledgment, in the roots of skin bleaching, race, class, and gender intersect; racism, colorism, sexism, and ageism are driving forces behind this cosmetic technique. As a symbolic "investment in whiteness, skin-whitening entails a conscious consumption of skin-lightening products for the aim of achieving transformation of the image by reducing or preventing the presence of melanin in the skin, the pigment that is responsible for skin color" (Goon & Craven, 2003). In framing the catalyst to the ladders of social hierarchies, light skin modeled the equalization of happiness and class mobility. After colonization, communities of

color linked "whiteness, whitened bodies, and hybrid foreign bodies" (Riggs, 2012) as a symbol of consumer empowerment and global capitalist progress promoting the ideology of inferiority.

The commodification and globalization of consumable whiteness can be exemplified through the cosmetic industry; the industry has identified new ways to transform women's bodies and market remedies. Skin whitening biotechnology is a billion-dollar industry and a growing sector of the cosmetics industry, particularly in low- and middle-income countries. Based on reports by the market intelligence firm Global Industry Analysts, the demand for skin bleaching products is projected to reach \$12.3 billion by 2027. The global skin bleaching market has expanded within Asia, Africa, the Caribbean, North America, and many other places; it is rapidly growing, targeting women. Although the information on the prevalence rates of skin bleaching is limited, research on estimated rates in different areas is available. The World Health Organization reported 77% of women in Nigeria to use skin bleaching products, the highest percentage of women to engage in the practice. A similar rate is reported in India, where 65% of these women used skin-lightening products (Glenn, 2008). For countries within East Asia, skin bleaching practices have reported among 30% in China, 20% in Taiwan, 18% in Japan, and 8% in Korea among women (Nielson, 2007). Bleaching products are accessible over the counter or by prescription in edible cosmetics, oral capsules, creams, lotions, and soaps.

The upsurge usage outside of acne scarring and betterment of the skin is a widespread controversy for women. It is desirability for a lighter complexion, lack of facial imperfections, and flawless skin for societal validation. For women of color, skin-whitening techniques may promise social status. Using choice consumerism, the images often promoted through skin-whitening advertisements frame whiteness as a choice-based self-transformation with no racist or sexist implications (Mire, 2020), producing unspoken hierarchies in the cosmetic industry.

Psychological Harm Leading to Skin Bleaching/Colorism

Self-hate or low self-esteem identifies as a possible explanation for skin bleaching, but some other factors perpetuate the practice outside of lack of self-confidence. People construct several identities based on gender, ethnicity, sexual orientation, occupation, religion, politics, personal relationships, and race. These identities are integrated or ordered in terms of importance (Asante, 1993; Brewer, 2001). In the phenomenon of skin bleaching, women are subject to these identities that are displayed. Global beauty standards have positioned women of color, and people of darker skin complexion, to be viewed as less beautiful, less feminine, and less socially acceptable due to the features they possess. Through the usage of media, whiteness is centered as the proximity of success. Women of color become vulnerable to the effects of beauty standards that emphasize skin colors and hair types that create exclusion (Bryant, 2013). In these contexts, the known beauty standard is the blue-eyed, blonde, White woman compared to the kinky-haired, full lips, and dark skin features of the Black woman. This beauty standard has socialized not only women but men to believe that Eurocentric notions of beauty are essential. The white-centered aesthetic led to the light-skin and dark-skin debates that is negatively bestowed on BIPOC communities. For women of color, to assimilate to this standard to appear feminine and attractive, beauty aids such as skin bleaches, hair dyes, and straightening combs (Jha, 2016) were used.

Colorism, which is defined as, ‘discrimination based on skin tone’, is acknowledged to be rooted in slavery, colonialization, suffrage, and other factors that persist from colonial order. The term is also known as Pigmentocracy, which has been used to describe the “system of privilege based on the degree of lightness in the color of a person’s skin” (Gabriel, 2007). An outcome of colorism is women internalizing beauty standards that emphasize a lighter skin tone or silkier hair. The practice of skin bleaching may be rooted in an individual's overall emotional and cognitive evaluation of their self-esteem. Women internalize these beliefs about themselves, influencing behavior patterns and ideas (Hahmed et al, 2010). The objectification theory

(Fredrickson & Roberts, 1997) and the biopsychosocial theoretical model (Engels, 1977) are approaches that offer better understanding on social interaction's role in health and diseases. The biopsychosocial theoretical model uses biological, psychological, and social factors to understand a phenomenon. As a unified conceptual model to health and healthcare delivery, it considers psychological and social factors relevant to understanding human health just as consideration of biological factors requires applying relevant natural sciences (Engels, 1977). The objectification theory proposed an ideology that girls and women are typically acculturated to internalize an observer's perspective as a primary view of their physical selves (Fredrickson & Roberts, 1997). Internalizations may contribute to negative health outcomes, low self-esteem, and engagement in potentially harmful body modification practices, such as skin bleaching. For example, in mass media and popular culture, the production of images that perpetuate the idea of female sexual attractiveness through skin color discrimination is often portrayed, valorizing Black women with lighter skin as sexually desirable and attractive (Jha, 2016). In the social atmosphere, Eurocentric beauty standards, femininity, and sexual desirability often associated with lighter skin, whilst darkness is associated with masculinity and male sexual virility... the gendered colorism impacts women's lived reality psychologically and economically (Jha, 2016). The media can play a more significant role in self-objectification by furthering these standards. Media outlets tend to edit features of Black models and lightening skin tones because of this aspect in our society – whiteness. In a study conducted in Tanzania, a participant expressed, "People who use skin bleaching they look so light and smart [and are] also . . . quite different from Black people . . . they are attractive . . . I use skin bleaching creams to be quite different from other women and to be like Europeans" (Lewis et. al, 2011). The themed motivator of skin bleaching from this qualitative study showed many Tanzanians have embraced more Eurocentric beauty ideals; they wanted to be White, "beautiful," and more European looking (Lewis et. al, 2011). This is an internationally shared belief that emerged from Western media.

Due to the limited research on the psycho-social impact of skin bleaching, these models can be applied in research and clinical interventions to discover the mental and physical health conditions associated with skin bleaching.

Physical Harm of Skin Bleaching

The usage of skin whitening biotechnology is to achieve a lighter skin tone; common active ingredients in skin bleaching products include mercury (Hg), hydroquinone, and corticosteroids. These substances link to various adverse health outcomes, ranging from dermatitis and exogenous ochronosis to mercury poisoning and renal damage (Benn et al., 2019). The existence of these potentially harmful substances is known to be detrimental to the health of those who partake in skin bleaching practices. Currently, there are many over-the-counter creams containing hydroquinone (2%); these creams link to the disfigurement of newborn babies, skin cancer, and liver issues from exposure to acute toxicity. Other more severe health risks listed by studies include hypertension, diabetes, infertility, leukemia (blood cancer), skin cancer, fetal toxicity (fetal poisoning), immunosuppression (suppression of a healthy immune response), renal and liver impairment and failure, Cushing's syndrome (hormone disorder), insomnia, memory loss, tremors, speech, and hearing impairment (Street et al., 2014). From dermatitis to mercury poisoning to nephrotic syndrome, the practice of skin bleaching is known for adverse health risks. However, it is still a popular practice that disproportionately affects communities of color extending beyond Asian and African countries. Use these agents to lighten the skin by suppressing the production of melanin, the pigment that gives skin color. The U.S. Food and Drug Administration (FDA) allows cosmetic products to contain only a small amount of mercury. With mercury's ability to cause life-threatening health issues, high use of this substance is toxic to the human body.

Skin lightening cleaners with hydroquinone usually have a potency of 4%, but new federal guidelines and restrictions recommend a safe percentage of use as 2%. In a study,

researchers have identified mechanisms by which mercury exposure from skin bleaching products could result in bone-marrow-related malignancies (FDA, 1990). Researchers also found skin bleaching associated with infections caused by bacteria, fungus, and parasites, e.g., dermatophyte infections, skin lesions, and scabies (Streets et al., 2014). The typical bleaching cream that is mercury-based or contains hydroquinone controls the skin's melanin and increases the risk of disease and abnormalities (Lewis, 2011). Outside of over-the-counter products, homemade concoctions also exist from a range of household chemicals; automotive battery acid, bleach, laundry detergent, toothpaste (del Giudice & Yves, 2002). Overall, there are many acute or chronic risks due to long-term exposure to these chemical substances. In response to the men and women using skin bleaching products, healthcare services and governmental agencies began the banning of products and released formal statements to reduce the use of these products (Hunter, 2011). Despite the strict regulations of the use of products like hydroquinone, mercury, and steroids, the accessibility to these products throughout the world is still high. The global production and marketing of overall skin whitening biotechnology is a very profitable industry, popularized in the African and Caribbean geographical locations. Several Ministries of Health and other agencies have launched public service announcements and campaigns to educate the public on the risk of skin bleaching; the practice remains existent even through underground distribution.

Skin Bleaching in Jamaica

Skin color associated with power and social hierarchy remains a legacy of Jamaican slavery and colonial history; Jamaica, known by many as a color-conscious nation (Wallace, 2009). This notion illustrates that color has been an index of wealth and social status amongst the population through political position, economic standing, and social worth. This socio-cultural atmosphere encodes and transmits value amongst lighter skin over darker skin, lighter skin as a positive ideal. This issue correlates with other genetic and phenotypical factors, such as length

and texture of hair, the shape of the nose, and indicators of close approximation to Eurocentric standards of beauty (Hope, 2011). In Jamaica, which is viewed as a creole society, most of the population emphasizes Eurocentric features of beauty and social acceptance. The influence of media, post-colonial historical contexts, and other factors are the reasons that may have led to the possible phenomenon of skin bleaching. After receiving independence from the United Kingdom in 1962, access to promising resources, such as job opportunities, was only offered to people of lighter complexion, perpetuating a colored-coded privilege within its social and economic atmosphere. This access created a manifestation of not only "white privilege" but "off-white privilege" (Wallace, 2009), which played an imperative role in the categorization and different hierarchies. Privileges and access to resources became a marker of social status; in the context of Jamaica, color became a pathway to opportunity. To highlight the historical context behind light skin privilege, during enslavement and emancipation lighter tone, people were given more privileges and opportunities than those of darker skin complexion. For example, many politicians, those working in the medical field, and high administrative jobs were light-skinned people during the 1950s (Gabriel, 2007). This type of association established the ideology that lighter-toned individuals would dominate the business sector, leaving people of darker complexion to lack the resources necessary to survive in this color-coded society. To this day, this message can perpetuate throughout Jamaica's culture in music, the social atmospheres, advertisements, and several documentaries. Bleaching creams in Jamaica's marketing industry emphasize the importance of understanding the connection between beauty and skin complexion within colonial history. Fairer skin complexion has associated with privileges and status and Western ideals of beauty. This connection between skin complexion and beauty has influenced a possible skewed belief amongst the population. In the Caribbean, post-colonization portrays itself through the discrimination, social exclusion, and preferential treatment of darker-toned people because of racism (Pine & Hilliard III, 1990) which can be embedded deep into the psyche of any minority group. Colorism and skin color stratification has been an ongoing debate

in the Caribbean population and is prevalent in countries of the African Diaspora, like Jamaica. In the discourse of racism in the Black community, skin bleaching has established its role in the country's traditional history. Blackness devalued in the society shows skin color controlling the attainment of opportunities and conditions for Afro-Caribbean communities. Since slavery and colonialism, black beauty has been placed as other to whiteness (Tate, 2013). In Jamaica, "brown" was a prestigious birthright, a class identity associated with high cultural, social, and economic capital that included social background, high levels of social and economic prestige, and political and economic power (Hope, 2011). The popular terminology "Browning" emerged as the idealistic standard of feminine beauty in a country that had once been dominated by a white value system (Hope, 2011). Jamaica is one of many Caribbean islands that is influenced by the Eurocentric ideal. Skin bleaching is extended throughout all factors of the country of colorism and self-image.

The motto in Jamaica is "Out of many one people"; the country has many different cultures and ethnicities but seemingly little tension about race or racism. However, class and colorism play a significant role in societal structure. It is well known that skin bleaching started due to the traumatizing experiences of slavery and the historical construct behind colonization. Through socialization, the internalization and negative attitudes about darker skin complexion have been deeply rooted in the psychological scars of slavery (Abrahams, 2000; Singham, 1968). The post-colonial influences of the British monarchy is evident through the Eurocentric values and denigration of Afro-centric significance in the facets (Robinson, 2011) of the population's life. Colonialism framed the nation's history and how it's socialized this phenomenon of skin bleaching and the issues of colorism that sets societal structures and multiple hierarchies; colorism is an identifier of beauty and a major sociological problem in Jamaica's communities. As early as 1949, skin color was identified and documented as the determinant of class within the country (Henriques, 1949).

“Among Anglos, white is associated with purity and light, freedom from malignity or evil intent, and this with the beneficent, the innocent, the harmless. This is strongly motivated by its contrast with black... Thus, to be white was a compliment and the attribution of darker hues was dysphemistic” (Allan 2008, p. 636).

The Jamaican Ministry of Health does not have current data on the potential health risks caused by the chemical substances in skin-bleaching products. However, dermatologists and other health officials say they have seen more cases. On July 5, 1999, the Ministry of Health released a press conference publicizing the strategy against the bleaching phenomenon. This press conference made it well known that the increasing prevalence of the skin bleaching phenomenon is a massive concern in Jamaica. Despite warnings and growing concerns over skin bleaching and publicized dangers of its practices, skin bleaching remained popular and normalized. Some women "make a dark paste using a mixture of peroxide and baking soda or toothpaste, lemon, Dermaclear, Nadinola, and Topiclear, along with a little curry powder, which is reputed to make the color of the face much prettier" (Ritch, 1999). Illegal products that are distributed underground included Top Extra Gel, Prozone, Omic, Regge Lemon, Topstone and Neprosone Gels, and Lemonvate and Movate Creams (Daily Gleaner, 1999). Women, also men, do this as a practice to be considered more attractive from a societal perspective. Most persons suffering from skin problems related to bleaching are said to be females in the 20s to early 30s age group; men are also involved, according to a report by the Daily Gleaner in 1999. Popular culture and the media influence the messages of skin bleaching as a normalized phenomenon that is socially constructed in mainstream media. The creation of the Don't Kill the Skin campaign that Jamaica's Government launched was a public health campaign to raise awareness on the dangers of skin bleaching and to stop it from continuously being popularized:

"It is very worrying because a lot of persons know that they are doing severe damage to the skin and persist in it. Some of this damage is reversible; a lot of it is not reversible. We need to realize that when we use these products, we are doing our skin immeasurable harm. There is no advantage to lightening our skin color and at the same time damaging our skin. Beautiful skin is healthy skin, whatever the color" ("Campaign to Rid," 2007).

The above quote exposes the many misconceptions women have about beauty and the false impressions that continue to be messaged. These public education programs, such as the Ministry of Health's anti-bleaching campaigns in 19993 and the "Don't Kill the Skin" campaign" in 2007, ostensibly target the biological and medical aspects of skin bleaching and target and profile Jamaican 'bleachers' as persons at the lower reaches of the social and economic strata. In this regard, Brown-Glaude's (2007) examination of public newspaper discussions around the issue highlights the propensity to medicalize the debates around skin bleaching in Jamaica and suggests that the relationship between discourse and power is evident (Hope, 2011).

Summary of Current Problem and Proposal Relevance

In public health discourse, acknowledging that the social and political reality of skin bleaching is due to the misconceptions that women of lighter complexion are more beautiful and will be higher in the social hierarchy. It overlooks skin bleaching and the phenomenon, something that needs to be acknowledged to the public. The practice of skin bleaching in Jamaica to gain social status marked the development of multiple cultural and social hierarchies based on skin tone. This study is necessary because exploring the psych-social and medical implications behind the practice of skin bleaching will allow for the examination of the phenomenon. Skin bleaching is a dangerous trend that has impacted the country for many years, practically embedded in the culture. This study will allow for further discussion on handling the issue providing the opportunity to address it in social atmospheres.

Chapter III: Methodology

Introduction

Chapter III includes an overview of the funding agency that this proposal will use to address the practice of skin bleaching among the population of women in Jamaica, including a summary of the grant announcement for this proposal, the grant review process, and critical details.

Global Alliance for Chronic Diseases

The Global Alliance for Chronic Diseases (GACD) is an alliance that supports research that addresses the prevention and treatment of non-communicable diseases globally. This organization collaborates with the most significant public research funding agencies that cater to the needs of low- and middle-income countries and populations. The goal of GACD is to fund research that contributes to the development and implementation of strategies that for the betterment of health in the most vulnerable populations. As the first major network of research agencies, GACD aims to invest in NCD research, build implementation capacity for NCDs, and facilitate collaborations and partnerships to support investments (GACD, 2019). This mission contributes to the achievement of the United Nations' 2030 Agenda for Sustainable Development. Established in 2009, GACD invests in research and effective interventions that reduce health inequalities resulting from non-communicable diseases. These strategies should enhance the understanding of the impact of socioeconomic, cultural, geopolitical, and policy factors that shape the effectiveness and scalability of interventions (GACD, 2019). Previous research funding for NCDs includes hypertension, diabetes, lung diseases, and mental health, involving more than 100 research plans in over 66 countries, total spending of more than \$225 million on research implementation.

The GACD 2019-2024 Strategic Plan includes a range of research perspectives focusing on common determinants and risk factors of non-communicable diseases i.e., health economics,

health systems, policymaking, multimorbidity, and public health impact. The network uses implementation science as a study of methods to promote the "uptake of interventions, research findings, and other evidence-based practices". According to their website, implementation science addresses the significant knowledge gap between interventions that research has shown to be effective and their delivery to communities and translation into practice (GCAD, 2019). This research method studies behavior changes among populations to understand the social, economic, cultural, and systemic factors that shape behavior.

A Summary of the Grant Announcement

The GACD Alliance of Health Research Funders funds millions of dollars to researchers to promote advocacy towards vulnerable populations in conjunction with section 3.4 of the Sustainable Development Goals. In December of 2020, GACD announced their call topics for 2021-2023, all of which focus on implementation sciences, on their website. The 2022 topic is anticipated as follows:

2022: Interventions in urban environments to reduce NCD risk: implementation science focused on individual and/or structural level interventions that can reduce NCD risk and/or maximize the health-promoting potential of cities. Transdisciplinary partnerships between health, urban planning and behavioral science experts are encouraged.

Although the scope of the 2022 proposal has not yet been released, successful GACD research proposals aim to:

1. Reduce health inequalities and inequities.
2. Increase understanding of critical barriers at a local, national, and international level.
3. Include a strategy to address socio-economic and contextual factors of relevance to the targeted community.
4. Identifies system-level barriers to innovative approaches.
5. The involvement of industry and non-governmental organizations in health or other sectors and many other implementation plans (GACD).

Research proposals must achieve measurable public health impact on non-communicable diseases and their common risk factors. This proposal's primary focus falls under the categories for the 2022 funded GACD call for proposals; this research uses behavioral sciences and the

structures of implementation sciences to investigate the socio-economic, cultural, and geopolitical determinants of skin bleaching through behavioral risk communication. Target 3.4 of the Sustainable Development Goals is to reduce premature mortality from non-communicable diseases by one-third through prevention and treatment and promote mental health and well-being (SDG). As Jamaica falls under the category of a low-and middle- income country (LMIC), addressing skin bleaching through GACD's implementation strategies can help achieve these goals. There is a need for greater awareness of the popularization of skin bleaching products in LMICs, like Jamaica, and the dangerous levels of toxins in these products that cause risk to adverse health outcomes. In 2019, GACD recognized the priority of comprehensive research outside of the common NCDs they address. The alliance is seeking the development of cross-cutting approaches that tackle the burden of NCDs. In addition, they provide the opportunity to assess the research in the context of implementing a project aimed at reducing the risk of NCDs on a global scale. There are no current research and interventions funded by the organization in Jamaica or in the Caribbean. As a global funding institution, providing this proposal to GACD will introduce and highlight skin bleaching as a vital intervention, multiplying the potential impact for other international communities.

GACD will announce participating funding agencies, details of the call for proposals, and the predicted funding commitment for the 2022 call in that year. All funded projects are selected through a rigorous review process; applicants must apply to one funding agency with eligibility that is identical to the project or proposal intended for submission. Some global associate members in the alliance include the National Institutes of Health (NIH), the Health Research Council of New Zealand (HRC), the UK Department of Health and Social Care (DHSC), and many agencies; funding also varies based on each GACD member criteria.

Proposed Methodology

This research aims to identify the most effective intervention to effectively inform women in Jamaica about skin bleaching's psychological and health-related risks. While there has

been significant research to understand and reduce the practice of skin bleaching in the population of Jamaica, it is necessary to move deeper into an individual-level and social-level context to gain a fuller understanding of the impact on a societal context. GACD funds implementation research that is invested in building evidence to integrate into practice.

This study will use three qualitative methods to examine the practice of skin bleaching and overall access to products. These methods will consist of (1) Photo-voice research method; (2) qualitative focus group discussion to construct a social map of skin bleaching usage; and (3) storytelling individual interviews for emic/etic perspective and narrative. The goal of this research is to develop a complex and detailed understanding of the phenomenon of skin-bleaching through the experiences of each participant and transparent dialogues about colorism and the beauty industry. This open-discussion dialogue will allow a conversation to discuss the commonalities on the impact of colorism across these different regions and ultimately population health.

Protection of Human Subjects

This grant proposal involves interaction with human subjects through focus groups and interviews targeting 20 women in Kingston, Jamaica. There are minimal risks or benefits associated with this study. Participants may withdraw their consent to participate in the focus groups at any time. Workshops will include a session on the ethics and ethical concerns behind this specific research, including the photo-voice, which considers the power of images and spoken voice for storytelling. Participant's responses are confidential and will be available only to researchers for analysis purposes. Information from this research will be shared for the purposes of education, research, and advocacy about skin bleaching biotechnology. It is also essential to consider the personal and structural dimensions of consent to participate; all participants should be provided information even though risks are minimal.

Reviewers Comments

For the purpose of completing a thesis for the Emory University RSPH Global Health program, this proposal is intended to be outlined for potential participation in the 2022 Global Alliance for Chronic Diseases application process. Due to the lack of information on the participating funding agencies, critical details on the scope and background for call for proposal, resources for the peer review process, and budget information, this section will be left incomplete until further notice.

Chapter IV: Grant Proposal

Project Title

A Research-Based Grant Proposal Thesis to Address Colorism as a Public Health Concern: The Need for Interventions to Mitigate the Phenomenon of Skin Bleaching Among Women in Kingston, Jamaica

Project Overview

The beauty industry is one of the most influential aspects of a woman's life because it frequently incites the gaps between self and self-identity (Davis, 2013). One of the most prominent beauty topics among women of color is colorism. Colorism is defined as 'discrimination based on skin tone'; a form of prejudice confined within a race that discriminates against those of certain skin complexions within that race based on social constructs around skin color (Walker, 1983). This issue is significant in communities of color, and the diaspora, especially in Jamaica. Skin bleaching, or skin whitening biotechnology, is an understudied public health concern for Afro-Jamaican women. There is no available research or statistical data on this normalized practice in Jamaica, including the negative medical and psycho-social effects on women in the population. Outside of cosmetic purposes, skin bleaching has a growing popularity with many safety and medical concerns toxic ingredients manufactured in certain products; it also symbolizes a more complex psychological issue such as negative self-perception and self-esteem in women of color. Due to colorism and inequality, women tend to alter their appearances to meet Eurocentric beauty standards; in colorism, having a lighter skin complexion is often associated with upward mobility and higher-class status. From makeup, cleansers, fragrances, skincare, eating certain foods, and many more, beauty and the desire to be beautiful are constantly emphasized. Women are socialized with the idea that beautifying themselves or making themselves look "presentable" will help them progress in society. Skin bleaching in the beauty industry is associated with colorism and a variety of known medical and mental health

effects; it also symbolizes a more complex psychological issue such as negative self-perception and self-esteem in women of color.

Skin bleaching, or skin whitening biotechnology, is a popular cosmetic treatment amongst women and communities of color, which is used to improve skin hyperpigmentation for ‘ageless beauty’ and a youthful appearance. It is known to be the act of toning, lightening, whitening, or bleaching one’s skin through the use of creams, soaps, pills, injections, and other melanin-inhibiting mechanisms (Benn et al., 2019). With this type of technique being used to reduce melanin production in the skin, it is also a widely known phenomenon among non-white communities. As women understand positionality and engage through society through multiple identities, this study will extend prior, if available, research on the impact of colorism in Jamaica, where skin whitening is popularized. This practice can be viewed through the dynamics of the biomedicalization and commodification of women’s bodies and self-identity. This internalization of colorism can lead to psychological, medical, and emotional damage, including low self-esteem, low self-confidence, self-hatred, economic disadvantages, and political disadvantages (Stamps, 2018). In this work, using intersectional theoretical frameworks and the critical race theory will investigate the harmful effects of skin bleaching on women in Jamaica. Despite the abolition of slavery and independence from Great Britain, former British colony Jamaica still struggles with internalized and socialized values of colorism that affect the beauty standards of women within the country. These values can be exemplified by promoting lighter skin as an indicator of beauty and higher social status, resulting in the outcome of skin bleaching being a popularized practice. This known social inequality in the country is primarily due to its historical colonial past as well. Our goal in this grant proposal is to systematically identify and examine the structures of Jamaica that play a role in the psycho-social and socio-cultural factors that influence motivation behind practicing skin whitening biotechnology within the population of women in Jamaica. Specifically, across variations, we will use focus group discussions and a series of interviews in this mixed methods research to: 1) Gain a deeper understanding of the

psycho-social and socio-cultural factors that influence motivation behind practicing skin whitening biotechnology in the population of women in Jamaica. 2) Collect formative/mixed methods research data that will investigate the harmful effects of skin bleaching on women within this region; Identify and measure a range of bleaching products' usage. Ultimately, this work will identify intermediate impacts—changes in behavior, actions, or decisions—that can eventually lead to long-term impacts. The data from this research will lead to the development of a community-based program that will address this behavior for positive outcomes.

Rationale

The intent of this grant proposal is to develop a complex and detailed understanding of the phenomenon of skin-bleaching through the experiences of each participant and transparent dialogues about colorism and the beauty industry. These methods will be a major resource in tackling this significant public health problem to put an end to the practice.

Proposed Methodology

This research is aimed to identify the most effective intervention to effectively inform women within Jamaica about the psychological and health-related risks of skin bleaching. While there has been significant research to understand and reduce the practice of skin bleaching in the population of Jamaica, it is necessary to move deeper into an individual-level and social-level context to gain a understanding of the impact on a societal context. In this study, three qualitative methods will be used to examine the practice of skin bleaching and overall access to products.

These methods will consist of (1) Photo-voice research method; (2) qualitative focus group discussion to construct a social map of skin bleaching usage; and (3) storytelling individual interviews for emic/etic perspective and narrative. The goal of this research is to develop a complex and detailed understanding of the phenomenon of skin-bleaching through the experiences of each participant and transparent dialogues about colorism and the beauty industry.

These methods will help guide participants into a group discussion that will lead to the storytelling of their lived experiences. The use of a focus group discussion is a qualitative method that will be the primary data collection. This open-discussion dialogue will allow a conversation to discuss the commonalities on the impact of colorism across these different regions.

Activities

FGD participants will be recruited through snowballing and personal connections of women who fit research criteria; this includes a combination of flyers, electronic mailing lists, and word-of-mouth advertisement. The participants must identify as a woman and live in Kingston, Jamaica, a region most affected by a high prevalence of skin bleaching. Kingston, the capital of Jamaica, can help to understand how the characterization of colorism through the embodiment of class structure. There are specific areas in Kingston, the Uptown (upper-class) neighborhoods and the Downtown (lower-class) neighborhoods that knowingly divide Jamaica creating inequalities. Uptown and Downtown Kingston operate in a spectrum where class identities and socioeconomic factors are often indicated. Since Kingston is a town of many towns, the uptown/downtown outlines division that can assist with the societal patchwork. This study will recruit 20 women from each town (10 skin bleachers and 10 non-skin bleachers). Community agencies will host focus-group discussions, and the time will be averaged four hours in duration. Consent to participate in a storytelling workshop is needed; some stories reveal very personal issues (e.g., class status, a history of violence, etc.) that can make participants vulnerable to stigma and discrimination (Gubrium, 2013).

1. *Photo-voice Research Method:* Using Freirean philosophy, feminist theory, and documentary photography, its foundation, photo-voice research is a process by which participants, often marginalized or disenfranchised populations, can identify, represent, and enhance their community through a photographic technique (Wang & Burris, 1997). Photo-voice

research is a participatory method with the use of photography and stories with three main goals: 1) to enable participants to record and reflect their community's strengths and concerns, 2) to promote critical dialogue and knowledge about important community issues through group discussions of chosen photographs, and 3) to influence policymakers to promote changes deemed necessary by the community (Wang & Burris, 1997). In this study, participants would be able to identify and represent issues of colorism, skin bleaching, and the beauty industry, allowing them to become a catalyst for personal and community change. Photo-voice in this research will help promote a process of analytical and empowering participation through three sessions, an introductory, story-based session, and an image analysis open-discussion session. The three sessions will help guide participants into a group discussion that will lead to the storytelling of their lived experiences. To meet Goal 1, photo-voice will be used as a pathway to have participants reflect on their experiences with skin bleaching creating a critical dialogue on the similarities and differences of their lived experiences. During the three sessions, facilitators will have participants distributed digital cameras to take photos around their communities of indicators that may reflect on their skin bleaching, colorism, and experiences. This idea will allow for concrete observations and critical analysis of shared assets, needs, and priorities. Having an informal group discussion will let my participants be comfortable and at ease with our conversations; they should be prepared to express their views freely. The final interactive session, image analysis, and open discussion will be a part of the focus group discussion that will allow participants to explore their lived experiences and the perspectives of the images they are introducing. The overarching goal is to create a valid approach with input from many women to understand their experiences of skin bleaching or even local knowledge of its practices. Applying photovoice as public health promotion for colorism is the best way to address elements. Goals will outline the overall process and dates. Data will be compiled through the photo-voice research and focus-group sessions to create a thematic analysis that will be used to analyze the phenomenon of skin bleaching through the stories of participants.

2. *Qualitative Focus Group (Social Mapping)*: To provide an emic and etic perspective, group focus groups will be conducted; these focus groups will be a form of social mapping, which investigates the structures that contribute to the broader scope of behavioral activity. Using the FGD guides, focus groups will aim to cover the perceptions of skin bleaching products, behavioral motivators behind skin bleaching use, knowledge of the safety and types of products used, and their availability in Kingston, Jamaica. Social mapping based on FGD will show how each of the following provides information on the structures that influence skin bleaching: internet/media, personal social networks, professional networks, pharmacies/drug stores, politics, and other connections identified. Social mapping has an advantage over one-on-one methods because, as a group process, it promotes productive, thought-provoking dialogue and encourages consensus building among peers (Singer, 2000). A strengths-based approach will be utilized to encourage participants to recognize and build on their strengths, the strengths of their collective communities, and ways to assist in acknowledging the need for new behavior outcomes concerning the practice of skin bleaching.

There will be four different focus group discussions due to the differences of our participants. The first focus group discussion will include the 10 recruited participants from Uptown, Kingston, who identified as skin bleachers. The second focus group will include 10 recruited participants from Downtown Kingston that identified as skin bleachers. The third focus group discussion will consist of 10 recruited participants identified as non-skin bleachers from Uptown, Kingston. The fourth focus group discussion will include 10 recruited participants that identified as non-skin bleachers from Downtown Kingston. The agenda for these discussions will consist of (a) welcome and introductions, (b) split focus groups between bleachers and non-bleachers, (c) combined focus group discussion. Together, focus group participants will help identify the psychological and health-related risks of skin bleaching. They will contribute to developing this research with their insights; insight based on the neighborhood is also important to identify the structures that play a role in the skin bleaching practice. The neighborhoods in

Kingston, Jamaica that are selected for this study are Uptown (New Kingston) and Downtown; they are selected based Kingston being Jamaica's capital where skin bleaching is most affected and prominent. Participants in the focus group discussion will address all questions of interest, mainly 1) What influences skin bleaching in this neighborhood? 2) Where can you have easier access to skin bleaching products outside of the pharmacies or drug stores? 3) Does income, or class structure, play a role in skin bleaching usage in your neighborhoods? Participants are encouraged to discuss any of these elements that will be relevant and important to this research.

3. *Qualitative Narrative Interviews (Storytelling)*: Storytelling as a research method is a solid element to understand knowledge, attitudes, and behaviors when gathering qualitative and quantitative research; storytelling has been used to address imperative public health issues to convey participants' experiences and interactions that play a role in their identities and values. The interpretive researcher collects data relevant to the informants and attempts to preserve their unique representations (Gioia et al., 1990). Storytelling is also known as Narrative Interviews. Narrative interviews help researchers understand the context of participants' lives, allowing the interviewee to control the context and pace of these interviews. In this study, narrative interviews will be used as a form of transformative research to incorporate a personal account or perspective. To use narrative interviewing in skin bleaching research and further understand colorism within the population of Jamaica, this tool can contribute to public health research and analytics. Instead of using a question-answer format, narrative interviews are supposed to provide an opportunity for the participant to narrate their experience for the researcher.

The goal is to shift the way roles are conceptualized: from the interviewer–interviewee into narrator–listener (Allen, 2017). This technique is critical in building and supporting cultural norms and developing culture-centered health promotion interventions (Dutta, 2008), such as the potentially conducted research in Jamaica. The aims and goals for storytelling would be: 1) address impact; 2) build reciprocity and trust; 3) ensure transparency (Gubrium, 2013) between participants. The four functions of storytelling are experiential, explanatory, validating, and

perspective. Experiential allows to describe the culture and encourage social inclusion in the interviews. It will help understand the participants' lived experiences, including how culture and social environments impact the practice of skin bleaching. Explanatory reveals how problems can be solved through analyzing culture and behavior. This will be beneficial for future interventions. The validating function allows to articulate values and extend knowledge of skin bleaching. Perspective allows for changing behavior, education, and promotion of necessary interventions that can mitigate the issues behind skin bleaching. Understanding these four functions of storytelling is useful. They are supposed to help researchers put stories into functional contexts, outside of the historical and social. They also provide knowledge of narrative functions to explain why different participants tell the same story in different ways (Kendall, 2012).

Using this narrative, or storytelling, interview method in this research will allow participants' narrative to be a dialogue for change; "the entire story is greater than the sum of its parts". This study will choose 20 participants (5 skin bleachers and 5 non-skin bleachers from both locations) to engage in the collection of their stories for data. The narrative method will be semi-structured in-depth interviews (IDI) with the participants. Interviews will be coordinated via email or WhatsApp and conducted in-person, over Zoom, Skype, or a similar video conferencing platform based on COVID-19 guidelines. Written and verbal informed consent will be obtained from participants before interviews are conducted. Interviews will be audio-recorded with participants' support such that they can be transcribed verbatim by a professional transcription service.

Project Evaluation and Measurement

GOAL 1: Collect formative/mixed methods research data that will investigate the harmful effects of skin bleaching on women within this region; Identify and measure a range of bleaching products' usage.

Objective 1: Develop research to increase knowledge by providing quality information on existing literature.

	Specific Activities	Measurement	Timeline
1.1	Survey existing materials and information on practices from literature and data from Ministry of Health	Summary and list of data on the topic that covered skin whitening biotechnology.	August 2022- October 2022
1.2	Coordinate meeting with research team from University of the West Indies to share and review existing literature, strategies, and resources for project plan	Summary of content and resource provided; Information provided from meetings with UWI.	August 2022- December 2022
1.3	Revise existing or create new materials to develop strategy and tools; Resources and handbooks to provide for focus groups	Description and summary of content will be used to create infographic/handbook.	December 2022- January 2023

GOAL 2: Gain a deeper understanding of the psychosocial and socio-cultural factors that influence motivation behind practicing skin whitening biotechnology within the population of women in Jamaica.

Objective 2: Study barriers to mitigating the practice through studying sociological, and phycological effect on self-esteem.

	Specific Activities	Measurement	Timeline
2.1	Begin recruitment process for focus group; this includes a combination of flyers, electronic mailing lists, and word-of-mouth advertisement.	This study will recruit 20 women from each town (10 skin bleachers and 10 non-skin bleachers).	January 2023- February 2023
2.2	Conduct photo-voice focus group on colorism in Jamaica through semi-structured interview; Introductory session, story-based session, and image-based analysis session.	Summary of content and resource provided from group discussion; Information provided from open dialogues.	February 2023- March 2023
2.3	Qualitative focus groups (four in total) between each population of women to identify psychosocial motivation and behavioral patterns	Summary of content and resource provided from group discussion; Information provided from open dialogues.	March 2023- April 2023
2.4	Narrative interviews will be conducted on all 20 participants to incorporate a personalized account or perspective of the skin bleaching practice	Narrative method will be semi-structured in-depth interviews with the participants. Information will be revised and transcribed.	April 2023- May 2023
2.4	Continue data collection, develop codebook to identify major themes in research, finalize report	Revising materials.	May 2023- July 2023

Study Design and Data Collection

The research team will utilize thematic and content analysis methodology to analyze focus group and interview transcripts. All coding for this research will be conducted using the MAXQDA software. Coding and code development will be discussed and determined by the team using the software for data manipulation, and codes will be refined through discussion and inter-coder reliability testing. Inter-coder assessments will be performed to identify the themes used from the interview guides and information from focus groups and interviews, and discrepancies will also be addressed. The use of thematic analysis will be used to identify themes related to each of the research objectives for major themes emerging across both skin bleaching and non-skin bleaching groups to be discussed. The success of this project will be measured through the completion of interview guides, the implementation of interviews, and focus group discussions. Data collected and documented will be used to develop a final report for publication at the University of West Indies. The information and findings will be shared within Jamaica's community organizations, academic institutions, and localities interested in mitigating the phenomenon of this issue.

Risks and Limitations

There are minimal risks or benefits associated with this study. Some questions may cause discomfort. Participants may withdraw their consent to participate in the focus groups at any time. Workshops will include a session on the ethical concerns behind this specific research, including the photo-voice, which uses images and spoken voice for storytelling. Participant's responses will be kept confidential and will be available only to researchers for analysis purposes. Where, why, how, and by whom stories will be released to the public need to be negotiated and discussed with consent among the team of researchers. Information from this research will be shared for the purposes of education, research, and advocacy about skin

bleaching biotechnology. All participants should be provided information about the potential risks and limitations of participating in this study even though risks are minimal.

Dissemination and Transferability of Results

This research is used to develop the most recent understanding of the critical issues behind the practice of skin whitening biotechnology and aims to investigate the specific priorities and barriers. Qualitative methods will be used as information for evaluation to assess participants' improvements and progress in understanding the factors that play a critical role in skin bleaching. The research behind this study will be used to educate communities on the health risks of skin bleaching to provide new insight and innovative outcomes on mitigating the practice. The overall goal is to identify intermediate impacts—changes in behavior, actions, or decisions—that can eventually lead to long-term effects, including changes to the beauty industry to implement strategies that can shift social norms on skin bleaching technology use. Data that is collected and documented will be used to develop a final report for publications. The information and findings can be shared within other countries, community organizations, academic institutions, and localities that are also interested in mitigating the global phenomenon of this issue. In public health discourse, it is acknowledged that skin bleaching's social and political reality is due to the misconceptions that women of lighter complexion are deemed as beautiful and will be higher in the social hierarchy. It overlooks the existence of skin bleaching and the phenomenon, something that needs to be acknowledged to the public. This study is necessary because exploring the psych-social and medical implications behind the practice of skin bleaching will allow for the examination of a dangerous trend that has impacted the country for many years, practically embedded in the culture. This study will allow for further discussion on handling the issue providing the opportunity to address it in social atmospheres.

Personnel

Hadajo J. Ferguson— *Principal Investigator and Project Coordinator*— is a current MPH candidate at Rollins School of Public Health studying public health nutrition with an interest in community health development, and consumer sciences. Her future work aims to address a variety of clinical and policy-related issues among women's and community health. As principal investigator and project coordinator, Hadajo will be responsible for managing the recruitment and enrollment process, as well as collecting data and materials to ensure the proper outcome of this project. She will also be responsible for the scientific and technical direction of this project.

A *Research Fellow* will be picked and invited from a list of suitably qualified applicants for the Research Fellow/Junior Research Fellow position. The Research Fellow will be from the University of West Indies, MONA campus, and will be responsible for assisting the Principal Investigator, along with gathering emic/etic data within Kingston, Jamaica for 15 hours per week for the 2022 GACD cycle.

Chapter V: Conclusion

Public health information and consumer information on the potential health risks of skin bleaching are available but limited. Despite the history and magnitude of the global phenomenon of skin bleaching, this practice continues to receive minimal attention in academia. Neither governments, nor practitioners have prioritized the need to regulate, address, or prohibit the use of skin bleaching products due to its popularity among the Jamaican population. Across all objectives, deepening this research provides a way to discuss the realities and experiences of skin bleachers to build on data for the creation of interventions that will address and curb this problem. Analysis of the qualitative data will use a grounded theory approach to understand the social implications behind skin bleaching, cultural literacy, beauty, acculturation, colonial mentality, psychological colonization, and other themes that influence the practice of skin bleaching in Jamaica. Additional analytical strategies will be applied to the qualitative data to deepen nuanced understandings, triangulate findings, and understand the socio-cultural-economic drivers to skin bleaching. These tools include participatory research for direct reflection and the social relations technique to examine the relationships between participants and their communities and how it influences access to skin bleaching resources and interventions. These interventions should use top-down (governmental) and bottom-up (community) approaches to encourage education and increase knowledge about the risks of skin bleaching.

Furthermore, it should accentuate the need for governmental regulation to address pre-existing psychological effects, control the demand for bleaching products within manufacturing and underground distribution, and regulate behavioral outcomes on skin bleaching. The practice of skin bleaching is a widespread practice among Jamaicans and other populations of color. Using interventions, a grounded theory approach, and participatory methodology to prevent the dangerous health consequences of skin bleaching is promising for the country's future, including women.

Chapter IV: Recommendations and Implications

The practice of skin bleaching is a health risk and rising public health concern; unfortunately, research data that examines the direct adverse health effect of skin bleaching products on the Jamaican population, including women in the region, is limited. Current research describes the need for governmental policies and intervention to regulate the distribution of bleaching products, but these recommendations are not enforced. This chapter includes the recommendations and implications to build on the call to reduce the prevalence of skin bleaching (community-level and systems-level approaches) if selected for the 2022 Global Alliance of Chronic Diseases funding program.

Recommendations

Given the scarcity of research data on skin bleaching, the possibility of directions in research that address policy, clinical practice, and psycho-social contexts are infinite. In potential partnership with GACD, the opportunity to produce a comprehensive and epidemiological direction of research to explore skin bleaching can be introduced. Generating effective interventions through a large-scale approach can pique the interests of governments, community members, and practitioners for strategies that will address this practice and curb the risk of health outcomes.

Community-level

The basic role skin stratification plays on women of color is an emerging global issue; social status, attractiveness, socio-economic status, and other factors are problematic indicators of hierarchy directly correlated with skin color. As the commercialization of skin whitening products continues to rise, the pressure to conform to Western ideals and conventions of beauty through body modification procedures, i.e., skin bleaching, puts women at risk of being vulnerable to adverse health outcomes. In 2020, the global business in skin bleaching valued at \$8.6 billion (Global Industry Analysts, Inc.) and will continue to rise to \$12.3 billion by 2027.

Thus, the connection between colorism and consumerism provides an opportunity to explore beauty standards as an innovative strategy to combat skin bleaching.

A critical global priority to advance gender equality for women is mandating the promotion of empowerment in all forms. Various research indicated that the practice of skin bleaching began due to the controversial view of idealized beauty leading to low self-esteem among women. A community-level approach to tackling low self-esteem, and an array of other factors that lead to skin bleaching in Jamaica, should be women empowerment workshops in collaboration with clinical practitioners and governmental organizations. These workshops would generate a line of interventions needed to evaluate intrapersonal and psycho-social techniques to reduce the practice of skin bleaching through examinations on beauty. Beauty must be a segment of the new emergence of a discourse on women's issues outside of reproductive health, violence against women, gender economic justice, and other inequalities. Organizations cannot address the barriers of equity in women's issues without directing their focus on the intrapersonal issues that potentially result in psychological and medical problems from long-term use. Creating medical interventions and women's justice campaigns made in partnership with Jamaica's Ministry of Health to reform the standards of beauty can prevail to protect women's health in the population. Women being the primary focus of this grant proposal, advocacy for empowerment is imperative.

Systems-Level

The attempt to mitigate the practice of skin bleaching by the Jamaican government and health officials has been made through existing policy and various educational campaigns. The 'Dying to be Beautiful' conference was one of many public awareness campaigns created by Jamaica's University of the West Indies that offered training and education on growing concerns, i.e., body modification and dissatisfaction. This conference and the Ministry of Health's 9th Annual Health Research Conference in November 2018 are the most recent campaigns that targeted the issues of skin bleaching. From a systems-level viewpoint, these interventions were

drivers of social and medical change. Still, because of the lack of measurement and evaluations, they do not serve as strategies to address the barriers in the practice of skin bleaching.

Furthermore, the existing government policy that does serve as a strategy is the ban on containing over 2% hydroquinone and mercury illegal unless prescribed by a practitioner or pharmacist. In 2017, Jamaica signed the Minamata Convention, an international initiative that seeks to raise awareness of mercury exposure and eliminate mercury pollution to eradicate products containing mercury by 2020. The assessment on mercury (Ricketts et al., 2020) is presented under Minamata Convention Articles 4 and 16. Based on the review, the policy caused an increase in the prices of skin bleaching resulting in the reduction of over-the-counter access; however, illegal distribution of hydroquinone and mercury-containing products are still available for purchase, locally, and for export (Ricketts et al., 2020).

A study (Robinson, 2011) addressed the need for a collaborative approach in implementing educational campaigns through critical health literacy to transform the perceptions of skin color and the phenomenon of bleaching among the population. This study reported that bleachers believed the government was ‘fear mongering’ and interfering with their personal decisions to bleach their skin instead of focusing on more pressing issues. Like the European Union and many African nations, Jamaica’s Ministry of Health needs to enforce a ban on skin bleaching products, and chemical use of mercury and hydroquinone until implementing educational campaigns with proper research and guidelines are developed.

Implications

To curb the demand for skin bleaching through education, the collaboration with the Global Alliance of Chronic Diseases (GACD) through this grant proposal will incorporate health promotion as an innovation to reduce the burden of non-communicable diseases associated with skin bleaching use.

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