RACE AND SUNRAYS: AN EXPORATION OF SKINFLUENCER APPEAL EFFECTS ON THE BEHAVIORAL INTENTIONS OF BLACK INDIVIDUALS IN RELATIONS TO SUNSCREEN

by

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(Under the Direction of Michael A. Cacciatore)

ABSTRACT

In recent years, the effects of unprotected sun exposure, the adoption of sun protective behavior, and the necessity of sunscreen has become a topic of discussion. While several studies have focused on varying races affected by skin cancer, black individuals seem to be a missing demographic in these examinations. Hence, this study used the health belief model and regulatory focus theory to examine the effectiveness of advertising appeals on the intentions of black individuals to purchase and use sunscreen, as well as their attitudes towards sunscreen use. Specifically, this study compared the effects of fear and hope appeals, as well as the method of information presentation used in skinfluencer advertisements. A quantitative 2 (appeal type: fear vs. hope) x 2 (statistics info: statistics vs. no statistics) x 2 (skin condition: melanoma vs. hyperpigmentation) between subject experimental design was adopted. A two-way ANOVA, multiple regression and moderation analysis were used in examining the derived online data. Results showed that fear and hope appeals have no significant effect on the behavioral intentions and attitudes of a black individual towards sunscreen use. It also showed that the use of statistics is more impactful than subjective language on a black individual's attitude towards the use of

sunscreen and no significant difference was observed in their effects on purchase and use intentions. Findings further revealed that the health belief model is a viable predictor of a black person's intentions to purchase sunscreen, intentions to use sunscreen and attitudes towards sunscreen whether skin cancer or hyperpigmentation is highlighted as the possible danger of sun exposure. Also, it was discovered that a black person's age and gender will moderate the relationship between the fear and hope appeals on perceived susceptibility used in skinfluencer advertisements when the skin ailment is hyperpigmentation.

INDEX WORDS: Skinfluencers, People of color, Advertising appeals, Health belief model, Behavioral intentions, Health regulatory focus.

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A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment of the Requirements for the Degree

DOCTOR OF PHILOSOPHY

ATHENS, GEORGIA

2023

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August 2023

DEDICATION

This dissertation is first and foremost dedicated to my heavenly father in whom my weaknesses and inadequacies were made strong. To my parents, Dr. & Evang. Mrs. Olaleye, who over the years have offered not only their finances, but their nurturing encouragement and prayers to carry me though the tiring travails of this program.

ACKNOWLEDGEMENTS

First, I would like to commend my major chair, Dr Michael Cacciatore, for his patience and unwavering willingness to offer me guidance and assistance. Working with you throughout my time at UGA was filled with ease, and for that, I'll eternally be grateful. Next, I would like to thank Dr Joe Phua, who as my previous major advisor was instrumental in molding my program to my needs as well as offered invaluable advice in the formation of my eventual study. To Dr Nathaniel Evans and Dr Analisa Arroyo, thank you for your time and efforts in making sure I produce my best work. To all professors at Grady college who have helped in elevating my knowledge throughout my program at UGA, I will always remember your willingness to aid my academic success. To my big brothers, especially Korede, who have shown concern and love when I felt exhausted and thought of giving up, to Onome, my sister who as a fellow scholar took responsibility of keeping me on track, I couldn't have asked for a better support system. To my yard people, who made my time at UGA less lonely and offered an outlet for venting my academic frustration, you've been true friends. Thank you.

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CHAPTER 1

INTRODUCTION

With an invested interest in the beauty industry and an overarching purpose to explore how sunscreen products are advertised to black individuals, this chapter provides an initial overview of the past and current state of skincare. It also details how sunscreen products have been advertised in the past and the present-day condition of ethnic representation in the beauty industry. It explains the observable problems presented with the current awareness and advertising methods used in promoting the use of sunscreens and states the gap which this study intends to address. The purpose of this study is described, with the research objectives and questions which guide this study being stated. Study significance which explains the importance and implication of this study is also identified. Lastly, a definition of major terms which are of importance or re-occurring in this study are outlined, with an overall dissertation structure being provided.

Skincare: Past and Present

The use of skincare, cosmetic and beauty products are no new innovations and have been present almost as long as humans (Drommond, 2018). 3000 BCE in ancient Egypt saw the first recorded use of skincare and beauty products which were used not just for aesthetic purposes but as a form of protection against the naturally occurring elements like the sun (LBL, 2022). Before long, the use of cosmetic products spread to the Romans and ancient Greeks which birthed other major skincare treatments like milk facials and skin exfoliation with natural ingredients (Drommond, 2018, LBL, 2022). Overtime, these practices spread and although skincare elevated

the existing beauty standards, it was only assessable to individuals of means, who were also regarded as high born (Library of Congress, 2022). The 19th and 20th century saw the beginning of a transformation that led to the end of elitism in relations to the use of beauty products. Hence, the 1900s is recognized as a period of change in beauty as it ushered in the general accessibility and affordability of various skincare products as well as saw the successful formulation of sunscreen (LBL, 2022).

Today, assessable beauty products are widespread and range from facial moisturizers, cleansers and sunscreens to Botox and UV treatments (Sagar, 2022). The global skincare market is growing at a breakneck speed with the United States skincare market expected to reach $21.8 billion by 2023 (Sagar, 2022). This can be attributed to the current shift in consumer needs which emphasizes the importance of self-care and the astonishing increase in the number of available skincare products (Automat, 2021). Consumer concerns have also seen a focus on health-conscious preservations such as sun protection and pollution which are factors that particularly affect the aging of the skin (Automat, 2021). Social media has been identified to greatly contribute to this surge in skincare demand as it has made it easier for individuals to share products that they use in achieving a flawless skin and recommend the same to others (Sagar, 2022). In more recent times, this accessibility has further propagated the use of skincare products for specific skin concerns and eventually popularized the “glass skin” trend which is used in reference to crystal-clear, poreless and luminous looking skin (Fasanella & Robin, 2022).

Following the introduction of this trend (as trends online often dictate what is fashionable in large part), the use of anti-aging and anti-wrinkle creams and moisturizers became of higher demand in a bid to achieve the look of having glass or flawless skin. To achieve this aesthetic, the use of SPF has gained vast popularity amongst beauty products as it is identified to not only

prevent skin cancer but is effective in combating premature aging, wrinkles, and skin discoloration. Hence, rather than only advertising sunscreen as a preventive product against sun exposure, brands have begun promoting sunscreen as an answer to various cosmetic woes. Changes in this mode of advertisement as seen the formulation of various types of sunscreens and has led to the availability of choices for consumers.

Statement of Problem

The problem to be addressed in this study is the lack of use and purchase of sunscreen by black individuals. Over the years, medical advances have brought to light several physical and physiological effects of sunlight exposure with Melanoma (more commonly known as skin cancer), being mostly discussed amongst other skin conditions (Yu et al, 2014). Research into this has revealed that the daily use of sunscreen can reduce, premature wrinkles, hyperpigmentation, sunburns, prevent photoaging, control photo sensitive dermatoses and reduce the risk of skin cancer (Buller, 2011). Armed with this knowledge, medical professionals and dermatologists have recommended the daily use of sunscreen to combat against sun exposure due to its long and short-term protective benefits (Mead, 2008). With a market and a need for sunscreen products, several companies have crafted narratives directed at bringing awareness to and highlighting the overwhelming need for sun protection.

To further this cause, health organizations and sunscreen manufacturing companies have activated campaigns and advertisements across a range of traditional and online media with the inclusion of TV, print, billboard and online advertising, but despite these efforts, a disservice is still clearly observed and revealed in the representation gap in relation to the lack of advertisements and awareness concerning the importance of sun protective behaviors for black individuals as compared to White audiences (Fraser, 2021). Although the use of sunscreen has

been highly recommended by both physicians and dermatologists, the general efforts to create awareness messages and advertisements that target the usefulness and effectiveness of sunscreen on black skin has been vastly minuscule thanks to the lack of representation in advertisement and existing myths and beliefs in the black community (Fraser, 2021).

With the assumption that the production of melanin offers satisfactory protection from the possible damages which could be caused by the sun, individuals who have darker skin tones believe they do not need sunscreen. Advertisers and beauty brands also further this notion by creating sunscreen advertisements that exclusively portray predominantly White or Asian individuals and lack marketing which target black individuals. Study revealed that black individuals tend to be less knowledgeable about skin cancer risks and prevention in comparison to Whites and non-Hispanic Whites, thereby resulting in a rather low need to take preventive measures (Ma et al., 2007). As sunscreen product advertisers don't display the use of sunscreens by black individuals in their advertisements, black individuals strengthen their already established conclusions on the supposed necessity of sunscreen and are less likely to take precautions in forms of purchase and use of sunscreen.

Currently, studies and campaigns carried out on preventive measures relating to sun exposure as well as the body of existing literature available on skin cancer and the use of sunscreen by black individuals is near non-existent. This reveals the inadequacy of health organizations, skincare production brands and advertisers in communicating health risks and possible solutions to this specific group of people. While this negligence unknowingly perpetuates the assumption that black individuals don't need sunscreen because of the low occurrence of skin cancer in their community, the benefits of sunscreen for the prevention and improvement of hyperpigmentation (which black people are more at risk for), photo aging and

other skin conditions caused by unprotected sun exposure are also foregone. Considering this, unless sunscreen production companies and health organizations understand how to appeal to black individuals and what factors affect and guide their decision-making process in relations to the purchase and use of sunscreen, promoting and propagating healthy sun protective behaviors in these community cannot be successfully established.

Purpose of Study

With the understanding that sunrays are no respecter of skin color, ethnicity or race, this study sought to discover factors that influence the use and purchase of sunscreen by black individuals. It also examined the effectiveness of skincare influencer advertising through message framing using appeals, as well as the role an individual's Health Belief plays, on the behavioral intentions of black individuals. Existing studies on sunscreen and sun exposure have focused on skin cancer knowledge, occurrence, and awareness about proper protective measures amongst white and select ethnically diverse adults in the United States (Calderon et al., 2019; Lunsford et al., 2018; Qarqaz et al., 2019). In comparison, this study intends to discover why black individuals in particular have certain attitudes towards the use of sunscreen, examine what myths and beliefs impede the successful translation of skin cancer awareness advertisement into need for preventive action, discover how effective modern advertising approaches in form of influencer advertising can lead to positive attitude change and encourage the purchase and use of sunscreen by black individuals.

Significance of Study

First, as there has been little to no research done on this specific niche of influencers and their influence effectiveness based on a targeted audience such as black individuals, this study offers a practical outcome which would be beneficial for both sunscreen manufacturing

companies and health organizations alike. As findings from this study provide insight into the effectiveness (or lack thereof) of skinfluencer advertising in relation to sunscreens, the development and incorporation of ideas based on derived insights could lead to commercial benefits for beauty and skincare brands which might be observed in an increase in return on investment and/or increase in consumer brand loyalty.

Second, this study provides insights that could aid government health organizations in their efforts to create awareness and advocate for the use of sun protection products amongst black individuals. Since knowing what appeals are more effective in garnering the attention of black individuals promises a certain level of communication effectiveness, more targeted infomercials and awareness materials can be created playing to those strengths and advantages.

Finally, this study offers an opportunity for the understanding and education of individuals in regard to hyperpigmentation, which black individuals are at greater risk for, as well as effective advertising methods to encourage preventive behaviors against it or improve the appearance of it on those who already have the condition. Further, it will allow for a test of whether more beauty-based health concerns (hyperpigmentation) might be more effective than cancer-focused concerns for a younger population that may have more day-to-day concerns about appearance than their own mortality.

Research Objectives and Questions

This study, with the incorporation and modification of already existing instruments, will operationalize measurement scales that will be used in examining and measuring the effects of advertising appeals and the health belief model constructs on the behavioral intentions of black individuals. It also aims to understand what appeal type (fear or hope) is more effective in encouraging sun protective behavior in black individuals when incorporated or used in social

media influencer advertisements about sunscreens. To assist in achieving these objectives, the following research questions were proposed:

RQ_1: In considering the limitations of suitable sunscreen products, the lack of representation, and the belief in cultural philosophies and myths, do black individuals still think they don't need sunscreen?

RQ_2: Are fear appeals more effective than hope appeal in encouraging the use of sunscreen by black individuals in regard to cancer focused concerns (melanoma) or beauty-based concerns (hyperpigmentation)?

RQ_3: Do individuals with family or acquaintances with a history of melanoma or hyperpigmentation perceive higher levels of susceptibility to these conditions?

Definition of Terms

To better aid in the understanding of study jargons, variables, concepts, and technical terminology used within the scope of study, and to generally assist in following the research discourse, a definition of important and re-occurring terms used will be provided below.

Black Individuals: For the purpose of this study, the term "black individuals" would be used in reference to individuals who identify as African or African American with exclusion of other black individuals who possess darker skin complexions that white individuals.

Melanoma*:* This is the most serious type of skin cancer which develops in the cells (melanocytes) that produce melanin — the pigment that gives the skin its color (Mayo Clinic, 2022).

Hyperpigmentation: A common, usually harmless condition in which patches of skin are darker than the surrounding skin. It occurs when special cells in the skin make too much of the pigment

called melanin. Hyperpigmentation may appear as freckles, age spots, or larger areas of darkened skin (National Cancer Institute, 2022).

Skinfluencer: Skinfluencers are influencers specializing in skincare and beauty who go beyond sharing their skincare routine and provide in-depth content around skincare regimens and even tackle complex topics like active ingredients (Leslie, 2021)

Appeals: Appeals are the components of an advertising which are effective in grabbing the attention of a potential target audience (Schmidt & Eisend, 2015)

Behavioral Intention*:* Behavioral intention is the subjective probability of a person performing a specific action and has been identified as the most prominent aspect in influencing and shaping behavior (Ajzen & Fishbein, 1975)

Purchase Intention: A type of behavioral intention relating to an individual intent to purchase a specific product. It has been identified as a critical factor which is used in the prediction of consumer behavior (Azjen & Fishbein, 1975).

Dissertation Structure

This dissertation consists of five chapters and begins with an introduction to the study in question. It outlines the state of the problem and proposes research questions to guide the study. The second chapter presents a thorough review of current literature as well as expounds on vital components and frameworks that are essential to providing answers to the overarching questions of this study. Literature on social media use in advertising as well as the rise of social media influencers are reviewed and advertising appeals and how they have been utilized by influencer were elaborated upon. Further in this chapter the health belief model and regulatory focus theories were examined and discussed after which research hypothesis were be proposed.

The third chapter details the methodology used in tackling the research questions and the technique employed in analyzing derived data. The steps and components of the experimental design and quantitative approach used in this study were extensively detailed here. The fourth chapter reveals the findings from the experiment carried out and provides answers to the research questions and hypotheses. Finally, Chapter 5 presents a discussion based on the study findings and results derived with addition of a discourse on study limitations and recommendations for future research similar to this.

CHAPTER 2

LITERATURE REVIEW

This chapter provides an overview on the occurrence of Melanoma and Hyperpigmentation in black individuals and examines the hurdles and barriers that Black individuals face which strengthens and/or contributes to the myths they believe about sunscreen use. It includes a summary of current research that has been done on influencer advertising on social media, their impact, and the appeals used in advertising branded products to followers with a focus on fear and hope appeal. Also, as consumer behavioral intention is an outcome variable of this research, previous studies, and literature on it will be outlined. This lays the foundation for subsequent sections in this chapter which detail the health belief model which is a focal variable in the development of the research hypotheses as well as regulatory focus theory.

Melanoma and Hyperpigmentation in Black People

Sun exposure has often been a recommendation by medical practitioners as it aids in the absorption of Vitamin D which assists in calcium absorption for stronger bones and although this is sound counsel, unprotected sun exposure can do more harm than good (John Hopkins Medicine, 2022). Protection from the sun's ultraviolet rays is highly recommended by physicians as it can cause varying damage to the skin as well as the immune system (John Hopkins Medicine, 2022). Premature skin aging, skin cancer, hyperpigmentation and eye injuries are few of the harmful effects of unprotected sun exposure but for the purpose of this study Melanoma and Hyperpigmentation were emphasized upon.

Melanoma may be less common in occurrence but is the most dangerous and deadly skin cancer which develops when the cells that gives the skin its color begin to grow uncontrollably (American Cancer Society, 2019). It is the second most diagnosed cancer in young adults and is subject to both phenotypical factors and predisposing genetics such as unprotected sun exposure and having easily sunburned skin (Robinson et al., 2021). Early and accurate diagnosis of this condition is key because although Melanoma can be treated successfully with surgery in its early stages, the survival rate drops drastically after metastasis, which is the development of a secondary malignant growth (Davis et al., 2019). According to practitioners, although black individuals produce more melanin than people of other ethnicities—thereby leading to lower incidence rates for melanoma in blacks than for any other race—the mortality rate for is still higher amongst black individuals and deeper pigmented individuals than in non-melanated individuals due to late detection of observable symptoms (Agbal et al, 2014). As symptoms of Melanoma may appear in different areas on Black skin than they do on white skin, it is much harder to treat and more deadly in nonwhites.

Hyperpigmentation is one of the top 5 most diagnosed skin conditions in black people and is characterized by the darkening of skin from its actual skin tone (Schulman, 2021). Although non-life threatening, it is a physically observable beauty condition that causes some level of cosmetic concern. Hormones and inflammation are some triggers of hyperpigmentation as well as prolonged unprotected exposure to sunlight. While it is noted that individuals of varying ethnicities can be affected by hyperpigmentation, it is more likely to occur in black people as their skin contains higher levels of melanin (Schulman, 2021). Where individuals with lighter complexion tend to develop wrinkles and fine lines first when exposed to excess sun without protection, black individuals see pigmentation changes first which could present in form

of dark patches and uneven skin tone due to the sun damage (Wadyka, 2022). With this known, why do African Americans and other black individuals believe they don't need sunscreen? This can be attributed to certain myths and contributing factors which have been observed and developed overtime.

Sunscreen Use, Myths and Hurdles

According to the practical dermatology journal, 62 percent of Americans include anti-aging products in their daily skincare routine but only 11 percent wear sunscreen daily and 46 percent never wear sunscreen (Healthcare trends, 2020). From the surveyed population of those who wear sunscreen daily, prevention of skin cancer and signs of aging were the top motivation (Healthcare trends, 2020). On the other hand, participants who neglected its use stated not being exposed to the sun enough to need it, not getting sunburns easily and forgetting to apply it as their reasons (Healthcare trends, 2020). Although this could be said to apply to all race in the population, of importance to us is the general physical evaluation on how the skin burns to determine the need for sunscreen. The question of whether black people indeed need sunscreen has been a frequent question with a vast majority of the answers provided by medical professionals pointing to a resounding 'yes.' How then did black individuals continue to live under the conception that they do not need sunscreen?

Being heavily reliant on the protection provided by their naturally produced melanin, a sizable population of Africans and African Americans presume that they have no need for sunscreen. They hold the believe that since their melanin production prevents their skin from mild or intense burning in comparison to their white counterparts, they do not need to apply sunscreen. However, this couldn't be any farther from the truth. This notion is one of several myths that melanated individuals voice when discussing the use of sunscreen and led to the

discovery of three hurdles that contribute to the presumption that SPF is not a necessity for black individuals as well as elements that widen the SPF knowledge gap in the black community.

First, the lack of targeted messaging by organizational health bodies as well as professional oversight by medical practitioners is highlighted as a major contributing element in strengthening the above notion (Calderon et al, 2019). A vast majority of sunscreen products are marketed as a preventive measure against skin cancer, and although it is known that people of diverse ethnicities are susceptible to this condition and even more so to conditions like hyperpigmentation, prevention promotional materials mostly target individuals in the white population (U.S Cancer Statistics Working Group, 2017). In a dermatology study about trends in sunscreen recommendation among physicians in the U.S, it was found that black individuals were prescribed sunscreen after ER visits about 9 times less than their white counterparts (Akamine et al., 2014). This shows the lack of professional progress in creating awareness about the need for sunscreen by black individuals. According to Lunsford et al, (2018), poor uptake of sun protection behaviors in ethnic groups who are traditionally perceived as low risk for skin cancer could be reflective of lower awareness.

Secondly, the lack of representation in sunscreen advertisement is also a factor, as a vast majority of sunscreen brands portray individuals with light or fair skin but neglect the inclusion of black individuals or black individuals in the advertisement of their sunscreen products (Fraser, 2021). In a CDC study, it was found that individuals no longer felt the need to pay attention to an advertisement when they noticed a lack of image representation or a lack of someone who shared similar looks to them in it (Fraser, 2021). As research suggests that “consumers feel more favorable towards a brand or product that reflects diversity in advertisements” (Rogers, 2016), it is important that adequate imagery showing black people using sunscreen and a representation of

black individuals in sunscreen ads is perpetuated more frequently as it may aid in inducing a favorable uptake of sun protection behaviors as well as increase population awareness on the subject matter in the black community.

Finally, the limited sunscreen options previously available to black individuals is a reason to be considered, as it is a constant complaint that sunscreen companies do not cater to the black population in the production of their products (Fadulu, 2018). Most sunscreens have often than not been known to look terrible or ashy on black skin or have made darker pigmented skin look "casket ready" because sunblock companies were only considering product effectiveness and neglected product appearance and feel on different skin tones (Fadulu, 2018). The unattractive look resulting from the use of these sunscreen formula's have indeed emboldened the narrative that sunscreen was not made for individuals with deeper skin tones. Hence, the following research question is proposed:

RQ_1: In considering the limitations of suitable sunscreen products, the lack of representation and the belief in cultural philosophies and myths, do black individuals still think they don't need sunscreen?

In more recent times, brands are rising to change the narrative and making efforts to close the knowledge gap by creating products suitable for black skin as well as spreading awareness about the necessity of sunscreen to Africans and African Americans alike (Fadulu, 2018). They are employing diverse advertising methods and inclusion strategies in marketing sunscreens primarily produced to suit all skin types, especially black individuals, and these attempts are observed through their venture into social media and influencer advertising.

Influencer advertising on social media

With the rise of social media as a medium for communication and marketing, there has been an increase in the presence of online communicators who have taken advantage of this medium to relay their expert and non-expert opinions to the public (Hu et al., 2020). The willingness and efforts made by these individuals in their bid to be seen and regarded as a source of entertainment, innovation and reliable information has earned them the title of influencer and a following like that of celebrities (Belanche et al., 2017). Influencers have been described as ordinary individuals who possess a relatively medium to large following on social media and engage with their followers through contents surrounding their lifestyle, interests and personal life which are sometimes monetized by integrating branded advertising content (De Veirman et al., 2017). They have also been regarded as independent or third-party individuals uniquely separate from celebrities who are characterized by their ability to affect and reshape the attitudes of their social media audience (Freberg et al., 2011).

Unlike celebrities who are thrust into the limelight through their profession such as being movie stars, sport icons or TV personalities, social media influencers gain popularity by means which do not necessarily conform to the traditional emergence to fame but employ the use of individually created content by an influencer to organically build viewership and a following online (Neal, 2017). For instance, individuals who achieve a certain level of popularity on Instagram because their content received a particularly high amount of likes and repost or said content went viral online are referred to as being “insta-famous” and although these individuals remain unknown by mainstream media, continued production of similar content that garner the same results with the online community will help generate an enormous viewership, following, and assist in distinguishing social media influencers from average online users (Jin et al., 2019;

Neal, 2017). While traditional celebrities are primarily known for their image constructed outside of social media and offline, influencers are acknowledged and majorly known for their activity on social media (Tafesse & wood, 2021).

In the same vein, disparate from celebrities who gain their esteemed evaluation from the public by means of the ever-changing characters they perform (in the case of movie stars), or roles they play (in the case of sport stars) in their traditional occupation, popular influencers generally achieve followership based on the online niche specific contents which they are known for (Marwick, 2015). With this niche specification and difference in content production online, influencers are categorized into various types based on what their content and online persona focuses on, with fashion, beauty, fitness, blogging and vlogging being the most popular (Marwick, 2015). Influencers who generally produce content focusing on fashion are then regarded as fashion influencers, beauty focused content by an influencer sees them in the beauty influencer category and so on. For this research our focus was on a sub-select type of beauty influencers who are wildly referred to as skin influencers aka “skinfluencers”.

Skinfluencers have been defined as influencers who specialize in skincare and beauty and provide in-depth content around skincare as well as tackle complex topics like active ingredients in skincare products (Leslie, 2021). Skinfluencers are credited for making basic to advance skincare knowledge, which was previously a privilege offered to those with expendable income, more accessible to the public (Oh, 2021). They have also been described as working professionals and the most recent re-innovation of Mary Kay girls and beauty gurus who have access to a social media platform dedicated to creating informative, scientific, or personal advice on potentially sensitive topics as regards individual skin concerns (Oh, 2021). According to Broyd (2021), skinfluencers are not only providing their followers with direction and advice on

how to create a skincare regimen, but they are also assisting consumer to better understand the science behind skincare and how to navigate them based on their skin needs. Considering the possible wealth of information and sensory entertainment that they offer their followers, skinfluencers are driving up views and gaining followers on nearly all social media platforms.

In a bid to leverage this online following, skincare brands have begun enlisting the help of skinfluencers in the advertising of their products, most importantly for our needs, sunscreens. This is done with the belief that a skinfluencer's recommendation or review of a product can affect consumer attitude towards a product or brand and induce positive reactions from their audience causing a change such as making a purchase and driving sales. In gaining a better understanding of how and why these types of skinfluencer advertising efforts are successful, influencer characteristics, message crafting, message presentation and interrelated factors are usually considered (Zhu et al., 2021). Source credibility, Brand-influencer congruence or match-up, parasocial relationships, interactions and identification are but a few of the frameworks widely studied in relation to influencer advertising. But for the purpose of answering our research questions and chartering into varying territory that involves incorporating influencer persuasiveness with the uptake of preventive health measures, advertising appeals, which is a well-established message strategy in product advertising was examined as the focal concept for this study.

Advertising Appeals

Advertising appeals, often interpreted as message strategy is defined as the components of an advertisement which are effective in grabbing the attention of a potential target audience (Schmidt & Eisend, 2015). It was described as a psychological motivating power applied by suppliers in a bid to arouse consumers desire and action for buying a product while also changing

the message receivers' concept of the product through broadcasted signals (Schiffman & Kanuk, 2007). Berkman and Gilson (1987) also characterized advertising appeals as a creative attempt that inspires consumer' motives for purchasing a product as well as affects their attitudes towards said product or service. According to Raza et al., (2018), the key objective of an advertisement, be it TV, print or other mediums, lie in the appeal used because it panders to a certain audience.

Although message appeals can usually be identified in a plethora of forms in persuasive communicative advertising, considering the three rhetorical appeals by Aristotle, they are generally categorized as either rational or emotional in their appeal (Jovanović et al., 2016). These classifications are largely dependent on how an advertising message is crafted as well as how the receivers of the message, in this context, the consumers, react or interact with it (Zhang, 2021). Kim and Cho (2012) hinted at a third category which would emerge from a combination of emotional and ration appeals, while Hornik et al., (2017) posited a similar appeal category which was coined the persuasive appeal.

Rational appeals which are also considered the logical or informational appeals are described as the use of persuasion with reasonable logic in the advertising of a product or service (Zhang, 2021). It has also been identified as the rationally oriented purchase stimulated by directly giving explanations of a product's advantages (Kotler, 2001). It is an appeal aimed at engaging consumers with evidence and reason, as it is assumed that consumers tend to make rational and logical decisions during the decision-making process of a purchase or while processing a message (Kim & Cho, 2012). Kotler (2003) stated that since products are sold when their quality, performance capability and attributes are highlighted, logic is the base of rational appeal. Lin (2011) opined that in using rational appeal in advertisements, there is an emphasis on

product benefits which also highlights the proposition of a consumer's self-benefit in the use of a product or service.

Khanna (2016) states that while rational appeals rely on the persuasive power of argument, they also follow the hierarchy of effects stages of awareness, knowledge, liking, preference, conviction, and purchase. In an attempt to document the sub-groups under the umbrella of rational appeals, Rossiter and Donovan (1991) classified rational appeals into educative informative, logic and refreshment. Stern et al. (1981) and Davies (1993) also categorized them as physical attributes, incentive offers and evidence. Other types of appeals considered to be rational are the transparent, endorsement, pain solution, natural, testimonial, scarcity, statistics, and beauty appeals.

Emotional appeals are defined as appeals which are used in message strategy to generate either negative or positive feelings which aid in the creation of an emotional association with a product (Albers-Miller & Stafford, 1999). Emotional appeals emphasize the need to meet the consumers' social, psychological, and symbolic needs which are heavily related to how decision-making and purchase intentions emerge (Lin, 2011). As creatives intend customers to feel a certain bond with their product or service, they consider emotional appeals as a key aspect in the formation and development of brand loyalty (Khanna, 2016). The use of emotional appeals has also been recognized in enhancing consumer attention, brand attitude, and affecting message receiver reactions to advertisement (Olney et al., 1991; Aaker et al., 1986; Albers-Miller & Stafford, 1999).

Various needs and connected feelings can be utilized as a foundation for emotional appeals in advertising (Kazmi & Batra, 2009). According to Belch & Belch (2004), consumer feelings which are utilized as the base of emotional appeals, can be divided into social based

feelings and personal feelings of the consumer. Where social based feelings consist of the likes of respect, affiliation, status, rejection, recognition etc. Consumer personal feelings include humor, fear, happiness, joy, confidence, love, hope, safety, security, pride, pleasure, accomplishment, etc. In the continuation of this study, fear and hope appeals were further discussed as they represent the focal appeals of this study.

Fear appeal

Fear is described as a negatively valanced emotion that arises from the appraisal of a threat as seemingly significant and personally relevant (Ortony & Turner, 1990). It is identified as an emotion with the power to induce behavior change in individuals (Farias, 2020). According to Nabi et al. (2018) the main function of fear as an emotion is to assist individuals in avoiding risk in the near immediate future while triggering an intense fight-or-flight response. It has been proven through the examination of fear in several studies, especially in health-related cases, that fear is a suitable catalyst for action which shows results in its effect on people's behavioral change towards their health or lifestyle (Munoz et al., 2013; Campo et al., 2019). Hence, it is no surprise that fear has played a significant role as an appeal in message framing and product advertisement.

Dillard (1996) conceived fear appeals to be persuasive messages that emphasize the potential danger an individual is prone to if they do not adopt a messages' recommendation by attempting to arouse fear in the message receiver. The perception of a threat is said to be a motivating factor which triggers protective behavior from a message receiver as a reaction to said threat (Wittle, 1992). It is also believed that the use of fear is necessary to motivate consumers to accept and carry out protective behaviors (Munoz et al., 2010). Fear as a marketing tool has been examined in the study of passing health messages and dealing with environmental

concerns such as technological and natural hazards (Xie et al., 2011; Witte & Allen, 2000), tobacco use (Dickinson & Holmes, 2008), and gambling addictions (De Vos et al., 2017) and although the strategies used in crafting the fear induced messages in these studies may differ in its presentation depending on the situation examined, it is theorized that the structural elements of fear appeal must remain the same for fear laden messages to be effective (Witte, 1992).

Witte (1992) posited that the evocation of fear through the presentation of a threat and a recommended course of action to avert said threat are the two vital parts of a theoretically driven fear appeal. In the first part of the fear appeal which is usually the threat, imminent physical, psychological, or social harm is presented in the message which attempts to be the catalyst that highlights the susceptibility and severity of the threat in the receiver's mind. The second part of the message then goes on to provide a recommended action which would assuage said threat. According to Witte (1992), the second part of an effective fear appeal should induce in the receiver the believe that they can successfully avert the threat and perform the recommended action. Other researchers have buttressed this stating that fear appeals that do not adhere to these parameters may have an adverse negative effect by causing message receivers to distance or extricate themselves altogether from the subject of the message (O'Neill & Nicholson, 2009; Nabi et al., 2018).

Although this structure has been observed in a plethora of crafted messages, there is still no guarantee that fear appeal will produce the same outcomes or effectiveness in similar situations or in a homogeneous group as appeal effectiveness is also affected by the differing subject matters being studied and the individual characteristics of message receivers. Various studies have proven the effective of fear appeal in message communication in widely divergent ways. For example, scholars examining the use of fear in disseminating environmentally

conscious messages discovered that fear appeals are more effective for short term concerns where an immediate identifiable threat is present (Smith & Leiserowitz, 2014). It was also found that the use of fear appeals elicit fear which results in less risky decision making and a more pessimistic view of situations which eventually leads to an increase in an individual's perception of risk (Xie et al., 2011).

Hope Appeal

Hope is a motivational state which comprises a cognitive component of expectation as well as an optimistic element about an expected outcome (Bar-Tal, 2001; Choi et al., 2019, Farias, 2020). Chadwick (2015b) described it as a positive emotion that comprises the assessments of a future outcome as consistent with one's goals, possible but not certain, of importance, and lastly, leading to a better future. Similarly, Nabi (2010) conceptualized hope as a psychological construct consisting of "an evaluation of a situation or condition, the physiological component of arousal, a subjective feeling state, a motivational component, including behavioral intentions, readiness, and motor expression". Hence, it is held that hope acts as a motivating factor that enables message receivers face a challenge or make a change with the belief of overcoming (Lazarus, 2001).

From another perspective, Snyder et al., (1991) viewed hope as "a positive motivational state that is based on an interactively derived sense of successful (a) agency (goal-directed energy), and (b) pathways (planning to meet goals)". With similar sentiments, Jarymowicz & Bar-Tal (2006) stated that hope requires a cognitive representation of a positively attainable future situation and more importantly, requires setting goals, planning to achieve set goals while using imagination and creativity to explore unique situations. In a slightly differing interpretation, alluding to hope not being an all-positive construct, Lazarus (1991) associated

hope with the attainment of a goal and classified it as a coping process that is taken advantage of under duress. He also stressed that hope is a culmination of both positive and negative judgements and affects which reflect the uncertainty of the occurrence of the hoped-for outcome (Lazarus, 1991; Howell & Buro, 2017). Despite the varying observable differences in the definition of hope, the need for a goal and the belief of attainment remains a constant requirement for its effectiveness in message strategy.

Because of the future and goal-oriented nature of hope, it is known to encourage perseverance and action in individuals (Chadwick, 2015). It has also been suggested by research that hope appeals are most effectual when there is a realistic understanding of a present threat as well as an honest belief that said threat could be mitigated (Hobbs, 2013; Nabi et al., 2018). However, when this structure is deviated from, it has been observed that the use of hopeful messages in advertising can result in individuals underestimating possible threats and becoming heedless in acting (Nabi et al., 2018; Hornsey & Fielding, 2016). As fear and hope appeals have been used in the communication and dissemination of health-related messages, it is important that an examination of their effect on the behavioral intentions and attitudes of message receivers be perused.

Advertising Appeals and Behavioral Intention

Behavioral intention has been defined as the subjective probability of a person performing a specific action and although not a perfect predictor, intention has been identified as the most prominent aspect in influencing and shaping behavior (Ajzen & Fishbein, 1975; Ajzen, 1991). For this research, intentions to purchase sunscreen, intention to use sunscreen and engagement intentions were the focal behavioral intention studied. As purchase intention is a type of behavioral intention and relates to how an individual intends to purchase a specific

product, it has been identified as a critical factor which is used in the prediction of consumer behavior (Azjen & Fishbein, 1975). Schiffman & Kanuk (2007) defined it as "the decision-making process consumers show in their request for information, purchase, utilization and disposal of a product or service to meet their demand". Variables such as consumer expectation to buy a product and consumer intention to use a product are also considered as elements of purchase intention (Laroche et al., 1996).

The degree to which a consumer or message receiver intends to purchase a product or service can reflect the effectiveness of the advertising appeal employed by a brand or marketer (Shamdasani et al., 2001). Schiffman & Kanuk (2007) also backed this with findings which revealed that a consumer's attitude towards purchasing a particular product is always a result of the advertising appeal used in the message strategy. Although it was discovered by Bartikowski et al. (2019) that fear appeals were mostly used in examining medical, and personal care products, very little has been done regarding its study, as well as the study of hope appeals in relations to the use of sunscreen and purchase intention. Hence, a general overview of a few related studies where fear and hope appeals were studied in relations to health message strategy and the uptake of behavior is stated below.

While fear appeals have been explored in relations to its persuasive power and capabilities, inconsistencies in the results have been observed and this has been attributed to its use in examining different audiences as well as varying products (Zhang, 2021). Nonetheless, an effect can still be observed. Fear appeals have been known to increase the salience of an issue and effect changes to behavioral intention (Witte & Allen, 2000). Earlier research suggests that fear appeals can trigger both tension and energy which can lead to changes in a message receivers' behavioral intention (LaTour et al., 1996). Li (2014) discovered that the attitudes and

behavioral intentions of college students were significantly changed after reading global warming news charged with a fear appeal. In a similar study on climate change, a fear appeal elicited high activism intentions and had a significant effect on the intention to perform climate change mitigation behaviors (Skurka et al, 2018).

Fear appeals have been known to not only motivate consumer purchase of product but be instrumental in changing buying decisions (Motwani et al, 2014). In a study by McDaniel & Zeithaml (1984), it was revealed that there was a positive relationship between fear and purchase intention. Shin et al (2017) found that although fear appeals negatively affected consumer attitude towards green advertising, there was a positively strong intent to purchase the products in the ad. In a bid to explain such an outcome, Asghar & Zar (2021) state that in many cases unfavorable information may have more influential power than favorable information as they are more memorable and spark anxiety in the consumers mind leading to a change in behavior or intentions to purchase a product (LaTour et at, 1996).

As hope messages induce positive valence and appraisal of an outcome, it is believed that the use of hope appeals evokes hope through the presentation of an opportunity. Chadwick (2015b) discovered that a hope appeal, when used in climate change messages, increased mitigation behavioral intention as well as mitigation behavior. It was also found to increase interest in climate change protection. Although the earlier research on seasonal influencer prevention found hope appeals to positively affect behavior and behavioral intention (Chadwick, 2010), a later study, similar to that above on climate change, found no effect on behavioral intention and information seeking intention (Chadwick, 2015c). Lorenzoni et al., (2007) found hope appeals to positively correlate with pro-environmental behaviors and support for climate change policies, just like hope leading to support for social and environmental activism

(Greenaway et al., 2016; Ojala, 2012). As studies on hope in relation to purchase intention was not discovered, this research intends examining its effectiveness on said variable.

Advertising Appeals and Attitudes

As an essential psychological concept used widely in advertising research, attitudes are defined as a learning orientation based on a state of constant like or dislike generated towards a certain object (Fishbein & Ajzen, 1975). It was also described as the position of an individual based on their internal evaluation of a person, character, or object (Sallam & Wahid, 2012). According to Kotler (1991), an individual's long-lasting perceived evaluation, emotional feelings and intended action towards an object is the core of consumer attitude. Attitudes are also known to differ based on the motivation asked towards a certain stimulus in form of a product or an idea. Thus, making formulation of a consumer's attitude highly dependent on the position of the asked phenomenon (Raza et al., 2018; Sallam & Wahid, 2012). Plainly said, a consumer's attitudes towards a product, idea, or person, is exceedingly reliant on on the intent of the advertising or message which they have been exposed to.

According to Belch & Belch (1998), when advertising appeals are used in framing a message, the goal is usually to attract consumer attention, as well as an attempt to influence consumer attitude and emotions about the product or service in question. Raza et al., (2018) believes that advertising appeals play a role in shaping consumer imaginings and motivations which are instrumental when they make conscious behavioral decisions. Similarly, it is indicated that advertising appeals used in a message may have an impact on consumer attitude, because in using advertising messages to trigger a consumer's psychological inner momentum, they are likely to echo and recognize said message, leading to a change in attitude towards the product advertised (Lin, 2011; Schiffman and Kanuk, 2007). Hence, it is logical to think that there is a

relationship between advertising appeals and consumer attitudes towards a product or the use of a product.

While fear and hope appeals used in advertisements have been supported by research to have an impact on behavioral intention and attitudes, it is unclear which appeal poses more effectiveness, or what presentation method is more effective when used in the advertisement of sunscreen products to specific groups of people, in this case, black individuals (De Vos et al., 2017, Farías, 2020). In a bid to answer these questions, health statistics were considered as a presentation method in the message strategy for this study. Sometimes, in the process of crafting health-related messages with the goal of persuading healthy behavior, health statistical data is incorporated into a message to boost its effectiveness.

Health statistics are numbers that summarize information related to health and are used to learn about health and public care (National Library of Medicine, 2020). They are used in tracking and monitoring diseases, understanding the risk factors for communities, and observing the impact of policy changes related to the safety and quality of healthcare (National Library of Medicine, 2020). Unlike fear and hope which are emotional appeals rooted in personal or social feelings, the use of statistical data is a form of rational appeal which relies solely on the efficacy of numbers and data based on previous research (Newbold, 2017). According to Chase (2019), sometimes the use of words is not enough in crafting a persuasive message, hence, the use of numbers to spur the needed feeling or outcome desired from said message. He states that people trust numbers, and the use of statistics in a fact-based, thought-provoking marketing campaign can be elevated with the use of the right statistics (Chase, 2019).

The practice of collecting and using statistics in health messages has been identified as a tactic employed by experts, researchers, private, government and non-profit agencies as it is a

powerful tool in its role as a persuasive component (National Library of Medicine, 2020). While the use of images offers great aesthetics and draw attention in advertising messages, statistics rely on numerical data which enhances the perception of the product of information in the mind of the message receiver (Newbold, 2017). Studies have found that when statistics is used in a message, there is a higher level of message recall, information value and a perception of better cognitive responses (Kazoleas, 1993; Kopfman et al, 1998; Green & Brinn, 2003). Thus, it is believed that the incorporation of statistics with health messages will yield better results on the uptake of preventive behavior than messages crafted with subjective language alone.

On the other hand, while statistics may positively boost message effectiveness, it could also be disadvantageous when used in advertisements due to improper interpretation of data or falsification of statistics used (Mack, 2023). When consumers believe they have been lied to or led astray with false statistics or improper comparisons using inaccurate information, it affects their trust in the brand, leading to negative impacts on their behavior and intentions towards the product (Mack, 2023). Similarly, the use of statistics may also be ineffective or cause negative impact if the target audience is already skeptical of statistics or just generally mistrust their ability to make sense of statistical data. Considering this, the researcher hypothesizes the following about outcomes associated with the use of these emotional appeals in sunscreen advertising by skinfluencers:

H_1: Skinfluencer fear appeals used in sunscreen advertisements will have a more significant effect on a black person's (a) intention to purchase sunscreen (b) intention to use sunscreen, and (c) attitude towards sunscreen use, than messages crafted using hope appeals.

H_2: Skinfluencer sunscreen advertisements containing the use of statistics will have a more significant effect on a black person's (a) intention to purchase sunscreen (b) intention to use sunscreen, and (c) attitude towards sunscreen use, than messages crafted using no statistics.

RQ_2: Are fear appeals more effective than hope appeals in encouraging the use of sunscreen by black individuals in regard to cancer focused concerns (melanoma) and beauty-based concerns (hyperpigmentation)?

Although it has been shown by various researchers that there is a relationship between the types of appeals used in advertising and message receiver behavioral intention, many other significant factors exist which strengthen the above-mentioned connection and offer further insight into how and why these appeals are effective (Dianoux et al., 2014; Bamoriya & Singh, 2011). To answer our research questions and provide a theoretical framework for better understanding the persuasive impact of health communications using appeals and how message receivers process and incorporate health messages, the Health Belief Model was explored.

The Health Belief Model

The Health Belief Model (HBM) is a socio-psychological framework posited with components derived from a well-established body of work on behavioral theory in the early 1950s (Glanz et al., 2008). At its conception, it was used to explain health-related behaviors, to understand the widespread failure of a population's acceptance of disease preventive measures, as well as screenings for the early detection of asymptomatic diseases (Rosenstock, 1974). It was also an approach employed when describing decision-making under conditions of uncertainty where an individual's behavior is predicted from both their perception of an outcome and the expectation that a specific action will result in that outcome (Feather, 1959). In other words, it was assumed that people will undertake a certain health behavior if they perceive themselves as

susceptible to a condition, if they believe that taking a specific action will help in avoidance of said negative condition, and if they believe that they can carry out related action successfully (McWhirter & Hoffman-Goetz, 2016). In this model, there are 6 major constructs related with health behavior, with perceived susceptibility, perceived severity, perceived benefits, and perceived barriers being the original variables at ideation and cues to action and self-efficacy developed during the evolution of HBM (Hochbaum, 1958; Kegeles, 1965; Rosenstock; 1966; Becker & Maiman, 1975).

Perceived susceptibility refers to the assessed probability that an individual will develop a specific health condition (Rosenstock, 1974; Pender, 1987). An individual may sternly believe that he/she is at an elevated risk of contracting an illness or a medical condition while another individual may believe the possibility of contracting the same condition is relatively low or deniable (Coats, 1997). Seeing as individuals all differ vastly in their feelings and perceived vulnerability to a health condition or medical illness, this construct is largely rooted in a person's subjective perception of the risk of contracting a condition (Becker & Maiman, 1980). Hence, this construct is applied by defining the population at risk and their risk levels, personalizing risk based on an individual's behavior or characteristics and making perceived susceptibility more consistent with a person's actual risk (Glanz et al., 2008). In this study perceived susceptibility will be an individual's perception of their susceptibility to skin cancer or hyperpigmentation.

Perceived severity concerns the feelings related with the seriousness of contracting a condition or illness as well as its potential to cause harm and interfere with an individual's functioning (Janz & Becker, 1984; Becker et al., 1977). It has also been identified as the weightiness of leaving an illness untreated (Janz & Becker, 1984). It is evaluated by the level of emotion created at the thought of a health condition or the difficulties a person believes it will

create (Rosenstock, 1974). As there is also vast variance in how severe individuals perceive a condition, this construct includes the evaluation of possible social consequences (such as the effects of the considered illness on social relations, family life and work) as well as medical consequences (such as death, disability, and pain) (Rosenstock, 1974; Janz & Becker, 1984). In this study perceived severity will be an individual's perception of the severity of skin cancer or hyperpigmentation.

Perceived benefits refer to a person's belief about the efficacy of a recommended preventive measure or action in the reduction of a certain threat or medical condition (Rosenstock, 1974). In the development of the Health Belief Model, an individual's acceptance of susceptibility to a condition which he/she believes could also be severe, although recognized as being effective in the uptake of preventive behavior, could not be wholly credited for it (Janz & Becker, 1984). Hence, perceived benefit was posited on the premise that an individual is more likely to engage in a preventive action or behavior if he/she believes that the action is effective in making the individual less susceptible to it, as well as reducing the severity of the condition in question (Janz & Becker, 1984). In its application, it defines the action to take and clarifies the positive effects to be expected from a certain uptake in behavior (Glanz et al., 2008). In this study perceived benefits will be an individual's perception of the benefits of using and purchasing sunscreen products in prevention of skin cancer or hyperpigmentation.

Perceived barriers are the potential negative repercussions or impacts of a recommended health behavior or action, as perceived by an individual, that inhibit preventive behavior (Rosenstock, 1974). As individuals often mentally conduct a pros and cons analysis when presented with the idea of undertaking a certain health action, it is no surprise that where the combined levels of susceptibility and severity provide a force to act and perceived benefit

provides a preferred path of action, perceived barriers introduce reasons which could impede said path of action (Rosenstock, 1974). It represents the real or perceived estimated costs of undertaking a preventive action or behavior that might occur such as the financial, physical, and psychological costs (Becker et al., 1977). Barriers such as inconvenience, extent of life change, time, and the unpleasantness of carrying out the preventive action are also but a few of the possible hinderances (Pender, 1987). This construct was regarded as the most impactful of the HBM by several scholars because when individual's regard these barriers as challenging, the likelihood of undertaking a preventive measure or action was low (Janz & Becker, 1984, Rosenstock, 1991, Brock & Beazley, 1995). In this study perceived barriers will be an individual's perception of the barriers in using and purchasing sunscreen products in prevention of skin cancer or hyperpigmentation.

Cues to action encompass the external factors that trigger preventive behavior (Rosenstock, 1974). According to Becker et al., (1977), a relevant stimulus or cue to action must occur for an applicable heath action to be triggered. These cues could manifest through external factors such as advice during contact with other individuals, newspapers, and mass media. It could also be observed in intangible bodily prompts such as varying forms of health symptoms (Becker et al., 1977; Washburn, 2020). Skinfluencer advertisements or "get ready with me" routines videos are a prime example of cues to action, as these videos routinely involve a skincare influencer getting ready for the day, while mentioning and recommending skincare products he or she uses to achieve their blemish free appearance. These videos could act as a reminder or prompt to followers about their need to tackle similar skin issues, thereby leading to the possible purchase of the recommended products. Although cues to action is the least developed construct (Champion & Skinner, 2008), the use of appeal message strategy in this

study provides an opportunity to include a trigger message which serves similar purpose as these cues.

Self-efficacy refers to an individual's belief, conviction, or confidence in their ability to effectively perform a certain preventive behavior or action required to lead to a health outcome (Washburn, 2020). Similarly, it was defined as an individual's belief that they can successfully navigate or execute a particular behavior with desirable outcome (Bandura, 1997). It was posited as an addition to the existing HBM model by Rosenstock et al. (1988) and in its application provides training and guidance in performing a recommended action, utilizes progressive goal setting, demonstrates desired behaviors, and reduces anxiety (Glanz et al., 2008). In this study self-efficacy will be an individual's belief that they can effectively use sunscreen products in the prevention of skin cancer or hyperpigmentation. To summarize, this model theorizes that for successful behavioral change, individuals must feel threatened by a condition or situation (perceived susceptibility and severity), believe that any adopted change will result in a desired outcome of satisfactory cost (perceived benefit) must feel capable and trust in their ability (Self-efficacy) to overcome any barriers (perceived barriers) while acting (Glanz et al., 2008). As the health belief model has been widely used as an explanatory model in the uptake of health-related preventive behavior, a few studies and findings will be highlighted.

Aho (1979) in a study designed to examine the health beliefs of individuals over the age of 60 in relations to obtaining a swine flu inoculation discovered that when participants found themselves susceptible to swine flu, believed that inoculation would be beneficial to them and perceived the vaccine as safe with few barriers, they were correlated positively with receiving the inoculation (Nemcek, 1990). Likewise, in a similar study on swine flu inoculation by Cummings et al. (1979), Perceived susceptibility, severity, benefits, and barriers produced a

statistically significant correlation with vaccination behavior. Furthermore, when a path analysis was conducted to test intentions to obtain inoculation, it was affirmed that these HBM constructs are indeed important in their influence on an individual's behavioral intention, which eventually leads to inoculation behavior (Cummings et al., 1979; Janz & Becker, 1984).

Weinberger (1981) in his study on adult outpatients to examine the susceptibility and seriousness perceptions for association with three levels of smoking found that to quit smoking, there needs to be a presence of both perception of susceptibility as well as seriousness. Alternatively, although other HBM constructs were not statistically significant in this study, findings by Tirrell (1980) on the compliance with individual exercise regimens revealed that perceived barrier has a significant impact on exercise compliance. The HBM constructs have also been tested in relations with mammography behavior in relations to breast cancer (Glanz et al., 2008). It was hypothesized that women are more likely to follow mammography screening recommendations if they feel susceptible to breast cancer, perceive breast cancer as a severe condition, think the barriers to screening are lower that the perceived benefits, have higher self-efficacy for obtaining mammograms and receive a cue to action (Glanz et al., 2008; Champion, 1984; Champion et al., 2000). Finding from this and relating studies have proven a significant association between mammography adherence and greater perceived susceptibility, lower barriers, higher benefits, and cues to action in for of recommendation from care providers (Champion et al., 2000; Philips et al, 1998).

In a more recent analysis, Davis-Bundrage (2017) examined the relationship between the construct of the HBM and the purchase intention of African American women towards natural and organic beauty products. In this study, a positive and significant correlation was found between purchase intention of natural and organic hair products and the constructs of the HBM.

Hence, based on these findings, it was concluded that black women are more likely to purchase natural and organic beauty products when their health beliefs are increased. Villaverde et al, (2018) in a study about utilizing the health belief model in the prediction of purchase intention of over-the-counter diet drugs discovered a significant influence of the construct of the HBM on consumer purchase intention. Although perceived susceptibility and perceived seriousness were significantly correlated with intentions to purchase, it is noted that, in accordance with the study by Champion & Skinner (2008), it is possible to observe low susceptibility levels despite individuals perceiving a certain condition as serious, leading to a lack of preventive behavior. In this same study, perceived barriers were identified to significantly reduce intention to purchase, suggesting that people don't believe that the purchase of diet drugs were suitable enough to outweigh the inconvenience of going on a diet to lose weight (Villaverde et al., 2018).

Considering the results from the above studies and the objective of this research, it is believed that black individuals are more likely to use and purchase sunscreen products if they feel susceptible to melanoma or hyperpigmentation, perceive melanoma or hyperpigmentation as severe conditions, think the barriers to engaging in sun protective behavior such as purchasing and using sunscreen are lower than the perceived benefits, have higher self-efficacy in using sunscreen and receive a cue to action. Hence, the following are hypothesized:

H_3: There is a significant impact of (1) perceived susceptibility (2) perceived severity (3) perceived benefits (4) perceived barriers, and (5) self-efficacy on a black person's (a) intention to purchase sunscreen (b) intention to use sunscreen and (c) attitude towards sunscreen use when cancer is the condition of focus.

H_4: There is a significant impact of (1) perceived susceptibility (2) perceived severity (3) perceived benefits (4) perceived barriers, and (5) self-efficacy on a black person's (a) intention to

purchase sunscreen (b) intention to use sunscreen and (c) attitude towards sunscreen use when hyperpigmentation is the condition of focus.

In the development of the health belief model, it was also stated that the probability of taking preventive action was directly affected by perception, and an individual's perception is indirectly affected by varying structural, demographic and sociopsychological variables (Becker et al., 1977; Nemcek, 1990). As the perceptions affected by these variables could possibly influence the uptake of health-related behavior, it is important that they be examined (Nemcek, 1990). For the purpose of this study, age, gender, and family medical history were the variables considered.

As Melanoma is 20 times more common in whites than in African Americans, and the lifetime risk of blacks getting melanoma is relatively low at 0.1% (1 in 1,000), there has barely been any demographic specific research done to probe these variables in relations to the occurrence and presentation of melanoma in black individuals (American Cancer Society, 2022). On the other hand, over 65% of African Americans experience hyperpigmentation due to skin damage or irritation. Although these stats, including the higher death rate in African Americans and black people in relations to melanoma should have spurred a discourse on this, scientific findings on this ethnic specific demographic seems to remain scant. Hence, relational reasoning grounded in the available statistical data (which is based on melanoma in white individuals) was used as a basis for the thought explication.

A variation in the occurrence of cancer by age and gender has been observed in more recent times. In the United States, melanoma is more common in men overall, but the rates are higher in women before the age of 50, after which the risk is higher for men (American Cancer Society, 2019a). While most epidemiological data point to skin cancer being predominantly a

disease of the elderly as the longer one lives, there is a buildup to sun exposure overtime, it is also found in younger individuals where melanoma is one of the most common cancers in women younger than 30 (American Cancer Society, 2019b). According to the American Cancer Society (2019a), young women are more likely to be diagnosed with skin cancer than young men but there is equality in the likelihood of either gender dying from cancer.

As hyperpigmentation is more of a cosmetic concern than a life threatening one, it is assumed that women, who have predominantly been evaluated by societal beauty standards and are the higher purchasers and traditionally the focus for skin care product marketing, are likely to be more concerned about the negative outcomes sun exposure can cause to their appearance than men. Also, as research has discovered, the fight against aging has started in individuals of younger ages, with the average age millennials begin to use anti-aging products being 26yrs old (SWNS, 2017). When it comes to anti-aging, younger women are more likely to use and reapply sunscreen than their elders (SWNS digital, 2021). Hence, it is safe to assume that young adults are likely to be more conscious about the occurrence and severity of hyperpigmentation, which leads to them engaging in preventive measures such as the purchase and use of sunscreen, as it is a factor in dealing with discoloration and pre-mature aging.

An occurrence of Melanoma in a black individual's family should result in an increase in their perception of the severity of melanoma as well as and their susceptibility towards the same, as the risk of developing melanoma is higher if one or more of your first-degree relatives has had it (American Cancer Society, 2019b). Although similar data cannot be found for hyperpigmentation and there is no indication that hyperpigmentation could be a genetic concern in any form, this variable will still be examined in relations to this. Based on the above information, the following hypothesis and research questions are proposed:

H_5: A black person's gender will moderate the relationship between fear and hope appeal and perceived susceptibility in relations to (a) melanoma (b) hyperpigmentation.

H_6: A black person's age will moderate the relationship between fear and hope appeal and perceived susceptibility in relations to (a) melanoma (b) hyperpigmentation.

H_7: A black person's family medical history will moderate the relationship between fear and hope appeal and perceived susceptibility in relations to (a) melanoma (b) hyperpigmentation.

RQ_3: Do individuals with family or acquaintances with a history of melanoma or hyperpigmentation perceive higher levels of susceptibility to these conditions?

Regulatory Focus Theory

In a general perspective, Regulatory Focus Theory (RFT) as conceived by Higgins (1997), deals with the approach towards varying situations and the avoidance of certain behaviors. It is used in the molding of health behavior change interventions and focuses on an individual's motivation to achieve gains or non-loses, or avoid losses and non-gains (Higgins, 1998; Ferrer et al., 2017). In its consideration of decision making and achieving goals, regulatory focus theory contends that people are either more inclined to focus on achieving positive outcomes (promotion-focused) or avoiding negative consequences (prevention-focused) when making decisions (Higgins, 1998; Paulson et al., 2021). These motivational systems which are also referred to as regulatory foci are found to also be the driving force of all striving action (Higgins, 1997).

According to Higgins (1998), there is usually a dominant regulatory focus present in everyone which is more salient and has an impact on individual planning and decision making. Where the promotion system focuses on progress and improvement, the prevention system is more concerned with the maintenance of the already achieved and the avoidance of decline

(Avnet & Higgins, 2003, Schmalbach et al, 2017). Promotion focused individuals are also more concerned about attaining pleasurable and positive outcomes, while prevention focused individuals are more interested in ensuring their safety and evading negative outcomes (Higgins et al, 2001). This, simply said, means that promotion-oriented persons are assumably more likely to look for and seize advantages and opportunities, where prevention-oriented persons are more likely to employ a careful approach and attempt to minimize risk (Avnet & Higgins, 2003). Though regulatory focus theory was originally developed and used in marketing and business, it has increasingly presented itself as a suitable framework for considering health behavioral studies, as this domain shares a similar interest in understanding how individual behavioral and cognitive patterns lead to differing outcomes (Ludolph & Schulz, 2015; Schmalbach et al, 2017).

The RFT has been incorporated widely in preventive health information strategy as it allows for the crafting of messages to suit the particular regulatory focus of its recipients (Mowle et al., 2014; Schmalbach et al, 2017). As individuals are different in thought and characteristics, the way they process and use information will vary and is bound to be affected by their regulatory foci orientation. It was discovered that behavioral change interventions that align with an individual's regulatory focus may be more effective than those which do not (Cesario et al., 2008; Spiegel et al, 2004). For example, Latimer et al. (2008) in an examination of the effectiveness of the congruency between message framing and regulatory orientation in the case of fruit and vegetable intake found that participants in the condition that aligned with their regulatory focus consumed more fruits and vegetables and were more likely to follow a feeding guideline than those in the conditions without regulatory foci compatibility. This phenomenon where individuals interact with or partake in activities consistent with their regulatory focus is known as regulatory fit (Higgins, 2005).

Still considering the use of RFT in the health context, individuals who are more promotion-oriented might focus on achieving long term or short-term positive health outcomes while prevention-oriented individuals will focus on avoiding negative health outcomes (Paulson et al., 2021). Previous studies suggest that some health behaviors such as smoking cessation (Fuglestad et al, 2013), HPV vaccination (Jin, 2010), Skin cancer prevention (Shao, 2012) etc. are affected by regulatory focus. In accordance with this, Paulson et al. (2021) found that individuals who are more prevention focused tend to make healthy decisions about their wellbeing (e.g., using sunscreen to prevent skin cancer or hyperpigmentation), while promotion focused individuals may take greater health risks and encounter worse health outcomes (e.g., failure to adhere to healthy eating or stop smoking).

As hope appeal when used in advertisements and in the passing of health information highlights possible positive paths to remedy a health concern or situation, while fear appeals highlight the possible negative consequences, the researcher hypothesizes as follows:

H_8: Skinfluencer advertisements using hope appeals will have significantly more impact on black individuals who are promotion focused than prevention focused, in relation to intention to use sunscreen.

H_9: Skinfluencer advertisements using fear appeals will have significantly more impact on black individuals who are prevention focused than promotion focused, in relation to intentions to use sunscreen.

CHAPTER 3

METHODS

The purpose of this study was to explore the effectiveness of skinfluencer appeals used in social media advertising on the behavioral intentions of black individuals in relations to their use and purchase of sunscreen. It also sought to observe the role an individual's health belief plays in affecting these behavioral intentions. More specifically, it examined the effects of fear and hope appeals, as well as the incorporation or lack thereof of statistical information used in advertising sunscreens on the purchase intention, intention to use sunscreen and attitudes towards sunscreen use. As quantitative approaches have been used over the years to tackle similar questions, a quantitative 2 (appeal type: fear vs. hope) x 2 (statistics info: statistics vs. no statistics) x 2 (skin condition: melanoma vs. hyperpigmentation) between subject experimental design was employed in examining the above hypotheses and research questions.

Sample and Inclusion criteria

Data was collected on the 19th to 23rd of May 2023 and I relied on a demographic specific survey which was launched on an online platform called Prolific. Prolific is an online research marketplace which provides vetted research participants in order to aid higher standard of online research. They assist in participant recruitment as well as enable fast, reliable, and high-quality data collection. As prolific aids in sourcing survey respondents, participants were recruited through their network of already vetted prolific survey takers. The questionnaire was designed using Qualtrics and the completed survey instrument distributed to individuals who fit the study criteria on prolific.

The inclusion criteria for this study encompassed the following: (1) participants must be at least 18 years or older; (2) participants must be ethnically Black, African, or African American (3) participants must reside in the United States of America. These criteria were stated and emphasized in the study description for perusal by prolific participants to ensure that only individuals who fell into those categories were invited to participate in the study. As an added measure, these inclusion criteria were also included as screening questions in the survey immediately after participant consent to ensure that these study criteria were strictly met.

Experimental Stimuli and Procedure

In this experiment, participants were randomly assigned to eight conditions which contained a persuasive skinfluencer sunscreen advertisement. As skinfluencer advertising was the focus of this study, the researcher made use of an existing skinfluencer Instagram reel and developed eight messages with fear, hope and statistical information as a substitute for the original video caption. The same Instagram reel was used in all eight conditions with the difference and condition manipulation occurring in the edited reel caption. Four messages each were created for the melanoma and hyperpigmentation skin ailment, with two messages each catering to the intended fear and hope appeal and statistical language used. These messages were similar in length and text with slight variations depending on the appeal the researcher intended to reflect, as well as the incorporation or absence of statistics. When skin cancer was the ailment in focus, condition 1 was the message with fear appeal and statistics, condition 2, fear appeal without statistics, condition 3, hope appeal with statistics and condition 4 represented hope appeal with no statistics. Similarly, when hyperpigmentation was the ailment in focus, condition 5 was fear appeal with statistics, condition 6, fear appeal without statistics, condition 7, hope

appeal with statistics and condition 8 represented hope appeal with no statistics (see appendix for stimulus material).

After verification by two associate professors, numerous edits, and rewording to ensure that each condition suitably reflects the appeals intended in each message, the stimuli were incorporated into the online survey. After answering introductory questions about their social media use, health focus, health beliefs and family history with both skin cancer and hyperpigmentation, participants were randomly assigned to one of the experimental conditions above. Following exposure to the persuasive message, participants were then asked to reveal how the stimuli made them feel, a question which was intended to check the effectiveness of the emotional manipulations (fear and hope appeals) used. Next, participants were also asked to state their attitude towards the use of sunscreen and their intentions to purchase and use the sunscreen in the reel.

Measures

For this study, multi-item scales were used to measure the model constructs. Beginning with the independent variables, Gender was a dichotomous variable with males coded as "1" and females coded as "2" (M=1.5, SD= 0.5). Age was measured with a standardized measure of age ranges (M= 2.8, SD=1.4). Health regulatory focus adopted from Ferrer et al., (2017) was measured with a 5-point scale (1= "does not describe my feelings", 5=clearly describes my feelings") by asking respondents how they pursue health related goals. The following items were used in measuring promotion: (a) "I frequently imagine how I can achieve a state of ideal health" (b) "I think of good health as a key to a happy life" (c) "Doing healthy things gives me a sense of accomplishment" (d) "I would do anything to maintain a good healthy body" (e) "I admire people who do things that make them very healthy". These items were averaged into a single

variable (M=3.9, SD=0.8). Prevention was measured with the following items: (a) “I often worry that I am not doing the best I can to improve my health” (b) “I often see myself being ill in the future” (c) “I am anxious that I am not following on my obligation and being as responsible as I should about taking care of my health” (d) “When I see people who are very sick because they did not take care of their health, I get scared thinking that could be me in the future” (e) “I often worry about not feeling as healthy as I used to be” (f) “Thinking about my health usually makes me worry”. These items were averaged into a single variable (M= 2.7, SD= 1.1).

Family medical history of skin cancer and hyperpigmentation were measured as a dichotomous variable where “No” was coded as “1” and “Yes” was coded as “2”. Family in this context includes parents, siblings, and acquaintances with a history of either or both of the above skin conditions.

In regard to health belief, adopted from Holwerda (2000), perceived susceptibility to skin cancer, perceived severity of skin cancer, perceived benefits of sunscreen use, and perceived barriers of sunscreen use were measured using a 5-point Likert scale (1= “Strongly disagree”, 5= “Strongly agree”). Perceived susceptibility to skin cancer was assessed with the following items: (a) “It is extremely likely that I will get skin cancer” (b) “I feel I will get skin cancer in the future” (c) “There is a good possibility I will get skin cancer in the next ten years” (d) “My chances of getting skin cancer are great” (e) “I am more likely than the average person to get skin cancer”. These items were then averaged into a single variable (M= 1.7, SD= 0.8). After substitution of the word “skin cancer” for ‘hyperpigmentation”, identical items were used to measure perceived susceptibility to hyperpigmentation and items were also averaged into a single variable (M= 2.5, SD= 1.4).

Perceived severity of skin cancer was assessed with the following items: (a) “The thought of skin cancer scares me” (b) “When I think about skin cancer, my heart beats fast” (c) “I’m afraid to think about skin cancer” (d) “Problems I will experience with skin cancer will last a long time” (e) “Skin cancer will threaten the relationship I have with my significant other”. These items were averaged into a single variable (M= 2.6, SD= 1.1). Following substitution of the word “skin cancer” for ‘hyperpigmentation”, similar items were used to measure perceived severity of hyperpigmentation and items were averaged into a single variable (M= 2.2, SD= 1.1).

Perceived benefits of sunscreen use were measured with the following items: (a) “When I use sunscreen, I feel good about myself” (b) “When I use sunscreen, I don’t worry about skin cancer” (c) “If I use sunscreen regularly, I will decrease my chances of getting skin cancer” (d) “If I use sunscreen regularly, I will decrease my chances of requiring radical treatment if skin cancer does occur”. These items were averaged into a single variable (M= 3.6, SD= 1.1). Just like in previous variable measurements above, after substitution of the word “skin cancer” for ‘hyperpigmentation”, similar items were used to measure perceived benefits of sunscreen when hyperpigmentation was the ailment in focus. These items were averaged into a single variable (M= 3.2, SD= 1.1).

Perceived barriers of sunscreen use with both skin cancer and hyperpigmentation as the focus were measured with the following items: (a) “Daily use of sunscreen is expensive per recommended use” (b) “It is inconvenient to use and reapply sunscreen daily as recommended” (c) “There are no suitable sunscreens for my skin color” (d) “When I use sunscreen, it leaves a white cast on my face” (e) “When I use sunscreen, I feel uncomfortable and sweaty” (f) “When I use sunscreen, my skin breaks out in blemishes”. These items were averaged into a single variable (M= 2.7, SD= 0.9).

In assessing self-efficacy, adopted from Babbin et al., (2015), a five-point Likert scale (1= “Not at all confident”, 5= “Extremely confident”) was used. Respondents were asked to identify how confident they were in their ability to carry out three tasks which were measured with the following items: (a) “I am confident that I can use sunscreen when I’m out in the sun for more than 15 minutes” (b) “I am confident that I can use sunscreen when no one I am with is using it” (c) “I am confident that I can use sunscreen even if I do not like how it feels”. These items were averaged into a single variable (M= 3.1, SD= 1.3).

The belief in the necessity of sunscreen by black individuals was measured on a five-point Likert scale (1= “Strongly disagree”, 5= “Strongly agree”) with a single item: “I think black individuals need sunscreen” (M= 3.7, SD= 1.3). After exposure to stimuli, effectiveness of the emotion manipulation used in the experimental conditions were measured on three, 7-point semantic differential scales (fearful-hopeful, distressed-excited, discouraged-encouraged) adopted from Watson & Clark (1994). We averaged these items to create an index (M= 5.2, SD= 1.3).

Considering our dependent variables, adopted from Muehling & McCann (1993), attitudes towards the use of sunscreen was measured by asking respondents to indicate to what extent they feel towards the use of sunscreen. Another 7-point semantic differential scale containing five items (Unfavorable-favorable, dislike-like, bad-good, unlikable-likeable, negative-positive) was used and averaged into a single variable (M= 5.7, SD= 1.3).

Adopted from Heijden & Verbagen (2004), purchase intention and intentions to use sunscreen were accessed on a 7-point Likert scale (1= “Extremely unlikely”, 7= “Extremely likely”) by asking participants to indicate how likely they were to purchase or use the sunscreen in the reel. Purchase intention was measured by the following items (a) “How likely are you to

purchase the sunscreen in the reel in the short term" (b) "How likely are you to purchase the sunscreen in the reel in the long term" (c) "How likely are you to purchase the sunscreen in the reel when you need a new sunscreen". These items were averaged into a single variable (M= 4.5, SD= 1.7). Intentions to use sunscreen was measured by the following items (a) "How likely are you to use sunscreen daily after watching the above reel" (b) "How likely are you to incorporate sunscreen into your skincare routine after watching the above reel". These items were averaged into a single variable (M= 4.8, SD= 1.8).

Validity

Before survey fielding and IRB approval, the survey instrument went through validity processes. The proposed questionnaire was evaluated for both content and face validity by two expert associate professors at the University of Georgia with vast experience in consumer behavioral research and knowledge in designing experimental studies. Appropriateness of language, as well as proper comprehension of terminologies used was ensured by conducting survey preview by individuals who fall into the intended target market but were excluded as final survey respondents. All edits and instrument adjustments were made based on experts' suggestion as well as survey preview feedback.

Reliability

After ensuring the validity of the survey instrument, the independent and dependent variables were analyzed for reliability using the Cronbach's alpha in an attempt to measure the internal consistency of our questionnaire (see Table 1). Beginning with the independent variables, the promotion subscale consisted of 6 items ($\alpha = .87$), prevention subscale consisted of 6 items ($\alpha = .92$), perceived susceptibility subscale for the cancer condition consisted of 5 items ($\alpha = .94$), perceived severity subscale for the cancer condition consisted of 5 items ($\alpha = .88$),

perceived benefits subscale for the cancer condition consisted of 3 items (α = .85), perceived susceptibility subscale for the hyperpigmentation condition consisted of 5 items (α = .97), perceived severity subscale for the hyperpigmentation condition consisted of 5 items (α = .87), perceived benefits subscale for the hyperpigmentation condition consisted of 3 items (α = .88), perceived barriers subscale consisted of 6 items (α = .79) and the self-efficacy subscale consisted of 3 items (α = .90). For the dependent variables, the purchase intention subscale consisted of 3 items (α = .96), intention to use subscale consisted of 2 items (α = .94) and attitudes subscale consisted of 5 items (α = .97).

Table 1

Instrument reliability showing Cronbach alpha of scale variables.

Variables	Scale items (N)	Cronbach Alpha (α)
Independent Variables		
Promotion	6	.87
Prevention	6	.92
Perceived susceptibility (c)	5	.94
Perceived severity (c)	5	.88
Perceived benefits (c)	3	.85
Perceived susceptibility (h)	5	.97
Perceived severity (h)	5	.87
Perceived benefits (h)	3	.88
Perceived barriers	6	.79
Self-efficacy	3	.90
Dependent Variables		
Purchase intention	3	.96
Intention to use	2	.94
Attitudes	5	.97

Protection of Human Subjects

Prior to the launching of the survey and data collection, this study was reviewed and approved by the Institutional Review Board (IRB) at the University of Georgia. An information preface was attached to the first page of every questionnaire prior to the survey questions detailing the nature of the study, an anonymity statement and contact information for the investigators of this study. Subjects were also provided the study institution's IRB information in the event of further questions or concerns. An informed consent statement that required forced response before further access to the survey questionnaire was also included alongside the study information to ensure voluntary participation by participants.

Data analysis

The statistical program IBM SPSS version 28 was used in analyzing the derived data from the online survey. Descriptive statistics were performed to examine the demographic and personal characteristics of the study participants. Next, one-way ANOVA was conducted to test the effectiveness of the emotional manipulations in the fear and hope conditions. Then, Independent sample t-tests and regression analysis were carried out. To test the moderation effects noted in the hypotheses in the previous chapter, interactions were created by multiplying standardized versions of the main effects variables to prevent multicollinearity between the interaction terms and component parts (Cohen et al., 2003). Given our relatively small sample size and the fact that the study relied on a single-exposure stimulus to move attitudes and behaviors, a less restrictive level of significance was set at ($\alpha = .10$) as opposed to ($\alpha = .05$)

CHAPTER 4

RESULTS

Descriptive Statistics

A total number of 630 initial responses where collected, which was reduced to a final count of 607, after data cleaning which saw the removal of 21 preview responses and two screened out respondents. Participants ranged from ages 18 to over 65years old with 16% (n=100) between the ages of 18-24, 31% (n=188) between the ages of 25-34, 21.4% (n=130) between the ages of 35-44, 18.3% (n=111) between the ages of 45-54, 9.1% (n=55) between the ages of 55-64, and 3.8% (n=23) aged 65 and above. 51.4% (n=312) of the population were male, 47.6% (n=289) were female, and 1% (n=6) of the population identified as other gender types. 20.3% (n=123) of the respondents reside in the northeast, 45% (n=273) in the southeast, 8.7% (n=53) in the west, 13.8% (n=84) in the Midwest and 12.2% (n=74) in the southwest. Participant income demographic recorded 41.4% (n=251) making less than $40,000, 35.2% (n=214) between $40,000-$79,999, 20.1% (n=122) between $80,000-$149,999 and 3.3% (n=20) making more than $150,000 per annum (see Table 2).

Manipulation Check

To examine the effectiveness of the fear and hope manipulations used in this study, an emotion scale which was answered by participants right after exposure to the stimulus was analyzed using one way ANOVA. This showed significance at the $p<.10$ level for both fear and hope appeal at [$F (1, 605) = 4.42$, $p = .036$]. Individuals who were assigned to the fear conditions reported lower levels of hope and higher level of fear. Likewise, individuals who were assigned

to the hope conditions reported lower levels of fear and higher levels of hope. Although when we consider the means of each emotion construct measured, it can be inferred that the

Table 2

Descriptive statistics showing sample gender, age, geographical location, and income.

Sample Characteristics	N = 607	Percentage (%)
Gender		
Male	312	51.4%
Female	289	47.6%
Other	6	1.0%
Age		
18 - 24	100	16.5%
25 - 34	188	31.0%
35 - 44	130	21.4%
45 - 54	111	18.3%
55 - 64	55	9.1%
65+	23	3.8%
Geographical Location		
Northeast	123	20.3%
Southeast	273	45.0%
West	53	8.7%
Midwest	84	13.7%
Southwest	74	12.2%
Annual Income		
Less than $10,000	69	11.4%
$10,000 - $19,999	43	7.1%
$20,000 - $29,999	67	11.0%
$30,000 - $39,999	72	11.9%
$40,000 - $49,999	63	10.4%
$50,000 - $59,999	61	10.0%
$60,000 - $69,999	33	5.4%
$70,000 - $79,999	57	9.4%
$80,000 - $89,999	21	3.5%
$90,000 - $99,999	22	3.6%
$100,000 - $149,999	79	13.0%
More than $150,000	20	3.3%

skinfluencer messages across all conditions were viewed as being rather hopeful, as they did not induce a high level of fear overall. That being said, the manipulations were found to elicit more fear in those assigned to the fear condition than those assigned to the hope condition as intended.

Hypothesis Analysis

A two-way ANOVA was performed to examine the effects of the advertising appeals (fear and hope) and statistical presentations (stats and no stats) used in skinfluencer advertisements on the purchase intention, intention to use and attitudes towards the use of sunscreen by black individuals. The results indicate that neither the appeal conditions [F(1,603) =.387, p =.534], nor the statistical presentation [F(1,603) =1.271, p = .260], had a significant effect on a black individuals purchase intention. Also, there was no significant interaction between the appeal conditions and the statistical presentation used [F(1,603) =.740, p = .390]. When intention to use sunscreen was the dependent variable, there was also no significant main effect observed from the appeal conditions [F(1,603) =.073, p = .787], from the statistical presentation [F(1,603) =.615, p = .433] and no interaction effect observed between the appeal conditions and the statistical presentation used [F(1,603) =.536, p = .464]. When attitudes towards the use of sunscreen was the dependent variable, there was no significant main effect observed from the appeal conditions [F(1,603) =.274, p = .601], as well as no interaction effect observed between the appeal conditions and the statistical presentation used [F(1,603) =1.001, p = .317], but a significant main effect was observed in the effect of the statistical presentation used on attitudes towards sunscreen use [F(1,603) =3.755, p = .053].

Next, as it was hypothesized in H_1 that fear appeals used in skinfluencer messages would have a more significant effect than hope appeal on the behavioral intentions of black individuals, a comparison of appeal condition means was carried out (see Table 3). When purchase intention

was the dependent variable, there was no significant differences observed between the means of the fear (M = 4.52) and hope (M = 4.61) conditions. Similarly, when intention to use sunscreen was the dependent variable, no significant difference was observed between the fear (M = 4.76) and hope (M = 4.81) conditions. Lastly when attitudes towards the use of sunscreen was the dependent variable, no significant difference between the means of the fear (M = 5.68) and hope (M = 5.73) conditions were observed. Based on these results, $H_{1a,}$ H_{1b} and H_{1c} are not supported.

This means that whether participants viewed the advertisement in the fear or hope condition, these appeals did not significantly impact a black person's intent to purchase sunscreen, intention to use sunscreen or attitudes towards the use of sunscreen. Also, it is important to note that while no statistical significance was found, the hope condition put up higher mean scores than the fear condition across all three dependent variables, thereby leading us to infer that despite the lack of significance, there is some evidence that hope appeals used may be a little more influential that fear appeal on the behavioral intention of black individuals.

Table 3

Impact of fear and hope appeals on behavioral intentions of black individuals.

	Fear	Hope
Dependent variables	M	M
Purchase Intention	4.52	4.61
Intention to use	4.77	4.81
Attitudes	5.68	5.73

Likewise, to prove or disprove $H_{2,}$ the means of the stats and no stats conditions were compared from the results of the two-way ANOVA above to determine its effect on the purchase intention, intention to use sunscreen and attitudes towards sunscreen use by black individuals

(see Table 4). There were no significant differences between the stats (M = 4.64) and no stats (M = 4.48) conditions in their effect on purchase intention. Likewise, no significant effect was observed between the means of the stats (M = 4.85) and no stats (M = 4.78) conditions on black people's intention to use sunscreen. Therefore, H_{2a} and H_{2b} were not supported. There was a significant difference between the means of those in the stats (M = 5.81) and no stats (M = 5.60) condition in relations to their attitudes towards the use of sunscreen. Since the means of the statistics condition is higher than the no statistics condition, it is deduced that skinfluencer advertisements crafted with statistical appeal will create statistically better attitudes towards the use of sunscreen in black individuals, than messages without statistics. Hence, H_{2c} is supported.

Table 4

Impact of statistics and no statistics on behavioral intentions of black individuals

	Statistics	No statistics
Dependent variables	M	M
Purchase Intention	4.64	4.48
Intention to use	4.85	4.78
Attitudes	5.81	5.60

Considering cancer as the skin condition in question, multiple regression analysis was carried out to test if the five constructs of health belief (perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and self-efficacy) significantly predicted intentions to purchase sunscreen by black people (see Table 5). The model significantly predicted purchase intention of sunscreen, F (8, 598) = 15.697, $p < .001$, with several independent variables having an impact on purchase intentions. These independent variables also explained 17.4% of the variance in the purchase intention scores, $R^2 = .174$. The individual

constructs were further analyzed to determine their influence on purchase intention. The results show that perceived severity (b = .094, t = 2.19, p = .029), perceived benefits (b = .217, t = 5.10, p = <.001), and self-efficacy (b = .219, t = 5.17, p = < .001) respectively had a significant positive impact on purchase intention. Hence, $H_{3a2,}$ $H_{3a3,\text{ and}}$ $H_{3a5.}$ were supported. This means that a black person's perceived severity of cancer, perceived benefit of sunscreen and self -efficacy in regard to the use of sunscreen has a positive impact on the intentions to purchase sunscreen. Perceived susceptibility (b = .020, t = .470, p =.638) and perceived barriers (b = -.045, t = -1.11, p = .267), where found to be non-significant. Therefore, H_{3a1} and H_{3a4} were not supported.

The second dependent variable (intentions to use sunscreen) was also regressed on the five constructs of health belief (see Table 5). The regression indicated the five predictors explained 35.6% of the variance, R^2 = .356, F(8, 598) = 41.257, p < .001. Looking at the individual independent variables, the results show that perceived severity (b = .125, t = 3.31, p = .001), perceived benefits (b = .263, t = 6.99, p = <.001), perceived barriers (b = -.105, t = -2.96, p = .003) and self-efficacy (b = .360, t = 9.64, p = < .001), respectively, had a significant impact on intention to use sunscreen. This means that a black person's perceived severity of cancer, perceived benefits of sunscreen, and self-efficacy in relations to the use of sunscreen had a positive impact on the intentions to use sunscreen. On the other hand, perceived barrier was seen to have a negative impact on intentions to use sunscreen, meaning that the higher a black person's perceived barrier of sunscreen, the less likely their intentions to use it. Hence, $H_{3b2,}$ $H_{3b3,}$ $H_{3b4\text{ and}}$ $H_{3b5.}$ are supported. Perceived susceptibility (b = .035, t =.938, p =.349) was found to have no significant relationship with the dependent variable. Therefore, $H_{3b1,}$ was not supported.

From the regression analysis of the third dependent variable (attitudes towards sunscreen use) with skin cancer as the ailment of focus, the regression indicated the five predictors

explained 27.8% of the variance (R^2 = .278, F(8, 598) = 28.723, p < .001 (see Table 5). Perceived benefits (b = .309, t =7.76, p = <.001), perceived barriers (b = -.102, t = -2.70, p = .007) and self-efficacy (b = .274, t = 6.93, p = < .001) respectively had a significant impact on attitudes towards sunscreen use. This means that a black person's perceived benefits of sunscreen and self-efficacy in relations to the use of sunscreen had a positive impact on their attitude towards the use sunscreen. Similar to the results from intentions to use sunscreen, perceived barrier was seen to have a negative impact on attitude towards the use of sunscreen. That is, the higher a black person's perceived barrier of sunscreen, the more negative their attitude towards the use of it. Hence, $H_{3b2,}$ $H_{3b3,}$ $H_{3b4\ and}$ $H_{3b5.}$ are supported. Perceived susceptibility (b = -.023, t = -.598, p =.550) and perceived severity (b = .020, t = .499, p =.618) were found to have no significant relationship with attitudes towards sunscreen use. Therefore, H_{3c1} and H_{3c2} were not supported.

Similarly, considering hyperpigmentation as the skin condition in question, multiple regression was used in analyzing the impact of the five constructs of health belief on intentions to purchase sunscreen, intentions to use sunscreen and attitudes towards the use of sunscreen (see Table 6). The model explained 20.2% of the variance (R^2 = .202, F(8, 598) = 18.980, p < .001 and results showed that perceived severity (b = .207, t = 5.14, p = <.001), perceived benefits (b = .197, t = 4.88, p = <.001) and self-efficacy (b = .237, t = 5.73, p= < .001) respectively had a significant positive impact on intention to use sunscreen. This means that when hyperpigmentation was the skin condition in question, a black person's perceived severity of hyperpigmentation, perceived benefits of sunscreen as a preventive against hyperpigmentation, and self-efficacy in relations to the use of sunscreen had a positive impact on their intentions to purchase sunscreen.

Table 5

Effects of health belief on behavioral intentions when skin cancer is the focus.

Independent variables	Purchase intention		Intentions to use		Attitudes	
	Beta	t	Beta	t	Beta	t
IV: Health Belief						
Perceived susceptibility	.020	0.47	.035	0.94	-.023	0.59
Perceived severity	.094***	2.19	.125****	3.31	.020	0.49
Perceived benefits	.217****	5.10	.263****	6.99	.309	7.76****
Perceived barriers	-.045	-1.11	-.105****	-2.96	-.102	-2.70****
Self-efficacy	.219****	5.17	.360****	9.64	.274	6.93****

Values for manipulation conditions are excluded from this table as they had no effect on the DV's.

*p<.10; **p <.05; ***p<.01; and p<.001****

Hence, $H_{4a2,}$ H_{4a3} and H_{4a5} are supported. Perceived susceptibility (b = -.060, t = -1.47, p =.142) and perceived barriers (b = -.045, t = -1.07, p = .284) were not found to be significantly related to purchase intentions. Therefore, H_{4a1} and $H_{4a4,}$ were not supported.

When analyzing the impacts of the independent variables on intentions to use sunscreen, the model explained 35.4% of the variance (R^2 = .354, F(8, 598) = 40.927, p < .001. All the constructs of health belief were found to have an impact on the intentions to use sunscreen when hyperpigmentation was the skin condition in question. Perceived susceptibility (b = .120, t = 3.24, p = .001), perceived severity (b = .186, t = 5.14, p = <.001), perceived benefits (b = .182, t = 5.02, p = <.001) and self-efficacy (b = .369, t = 9.89, p = < .001) all had a positive effect, while perceived barriers (b = -.157 , t = -4.17 , p = <.001) had a negative effect on the dependent variable (see table 6). This means that a black person's perceived susceptibility to hyperpigmentation, perceived severity of hyperpigmentation, perceived benefits of sunscreen as

a preventive against hyper pigmentation and self-efficacy in regard to the use of sunscreen positively predicted their intentions to use sunscreen. Also, a black person's perceived barriers of sunscreen will reduce their intention to use sunscreen. Thus, $H_{4b1,}$ $H_{4b2,}$ $H_{4b3,}$ H_{4b4} and H_{4b5} were supported.

From the regression carried out to test if the constructs of health belief impact attitudes towards the use of sunscreen when hyperpigmentation is the skin condition, the model explained 22.6% of the variance (R^2 = .226, F(8, 598) = 21.836, p < .001. Perceived susceptibility (b = .088, t = 2.17, p = < .030), perceived benefits(b = .181, t = 4.56, p= < .001), and self-efficacy (b = .313, t = 7.67, p = < .001) were seen to have significant positive effects while perceived barriers (b = -.124, t = -3.01, p = < .003) had significant negative effect on a black person's attitude towards the use of sunscreen when hyperpigmentation was the skin condition in question (see table 6). Hence, $H_{4c1,}$ $H_{4c3,}$ H_{4c4} and H_{4c5} was supported. Perceived severity (b = -.004, t = -.092, p =.927) was not significant. So, H_{4c2} was not supported.

A regression moderation analysis was carried out to examine whether age, gender and family history of cancer and hyperpigmentation will moderate the relationship between the fear and hope appeals used in skinfluencer advertising and a black person's perceived susceptibility to cancer and hyperpigmentation respectively. When skin cancer was the skin condition in focus, the results show that there was a significant positive main effect between perceived susceptibility of skin cancer and family history with cancer (b = .184, t = 4.97, p = <.001). Age (b = .026, t = .711, p = .477) and gender (b = -.037, t = -.992, p = .322) were not significant and had no main effect with perceived susceptibility of cancer.

Perceived severity (b = .363, t = 9.44, p = <.001), perceived barriers (b = .193, t = 5.02, p = <.001) and self-efficacy (b = .157, t = 3.89, p = <.001) all showed significant positive

Table 6

Effects of health belief on behavioral intentions when hyperpigmentation is the focus.

	Purchase intention		Intentions to use		Attitudes	
Independent variables	Beta	T	Beta	t	Beta	t
IV: Health Belief						
Perceived susceptibility	-.060	-1.47	.120****	3.24	.088**	2.17
Perceived severity	.207****	5.14	.186****	5.14	-.004	-.092
Perceived benefits	.197****	4.88	.182****	5.02	.181****	4.56
Perceived barriers	-.045	-1.07	-.157****	-4.17	-.124**	-3.01
Self-efficacy	.237****	5.73	.369****	9.89	.313***	7.67

Values for manipulation conditions are excluded from this table as they had no effect on the DV's.

*p<.10; **p <.05; ***p<.01; and p<.001****

main effects on perceived susceptibility to skin cancer, while perceived benefits (b = -.170, t = -4.15, p = <.001) presented a significant negative main effect.

Furthermore, no main effects were observed between the three manipulation conditions and perceived susceptibility to skin cancer. The results from the interaction effects shows that age (b = .006, t = .617, p = .867), gender (b = -.016, t = -454, p = <.650), and family history with cancer (b = -.041, t = -1.15, p = .251), did not significantly moderate the relationship between the fear and hope conditions and a black person's perceived susceptibility to cancer. This means that neither a black person's age, gender or their family history with cancer heightened the effects of the fear or hope condition on perceived susceptibility of cancer. Hence $H_{5a,}$ $H_{6a,}$ H_{7a} were not supported (see Table 7).

When hyperpigmentation was the skin condition in question, the regression analysis showed that gender (b = .213, t = -6.38, p = <.001), age (b = -.134, t = -4.11, p = <.001) and

family history with hyperpigmentation (b = .339, t = 9.97, p = <.001) were significant and presented main effects on perceived susceptibility to hyperpigmentation. These results also show that age had negative effects on perceived susceptibility to hyperpigmentation while gender and family history with hyperpigmentation had positive effects. No main effects were found between the three manipulation conditions and the perceived susceptibility to hyperpigmentation. Additionally, perceived severity (b = .165, t = 4.79, p = <.001), perceived barriers (b = .260, t = 7.44, p = <.001) and self-efficacy (b = .135, t = 3.76, p = <.001) all showed significant positive main effects on perceived susceptibility to skin hyperpigmentation, while perceived benefits (b = -.086, t = -2.46, p = .014) presented a significant negative main effect.

Further examining the interaction effects for the regression predicting perceived susceptibility in black individuals, family medical history with hyperpigmentation (b = -.022, t = -.674, p = .500) did not significantly moderate the relationship between the fear and hope conditions and a black person's perceived susceptibility to hyperpigmentation. Hence, H_{7b} was not supported. On the other hand, age (b = -.061, t = -1.92, p = .056) and gender (b = .053, t = 1.65, p = .100) showed significant moderating effects, with age and gender presenting negative and positive moderation effects respectively, meaning that a black person's gender and age does impact the relationship between the fear and hope condition and perceived susceptibility of hyperpigmentation as hypothesized. Thus, H_{5b} and H_{6b} were supported.

To graph the supported hypotheses, respondent age was recoded into a dichotomous variable where individuals between the ages of 18-34 were classified as young individuals and individuals between the ages of 35-65+ were classified as older individuals. As Figure 1 reveals, age does appear to significantly impact the effects of the fear and hope appeals on perceived susceptibility depending on the condition. Although the use of hope appeals had close to similar

Table 7

Regression predicting the moderation of gender, age, and family medical history on the relationship between the fear and hope conditions and perceived susceptibility.

	Skin cancer	Hyperpigmentation
Variables	Beta	Beta
Block 1: Demographics		
Gender	-.037	.213****
Age	.026	-.134****
Family medical history	.184****	-.339****
Inc. R^2 (%)	5.7****	28.7****
Block 2: Manipulations		
Cancer vs Hyperpigmentation	-.014	-.008
Fear vs Hope	.032	-.022
Stats vs No stats	-.018	.008
Inc. R^2 (%)	0.2	0.0
Block 3: Health Beliefs		
Perceived severity	.363	.165****
Perceived benefits	-.170	-.086
Perceived barriers	.193	.260****
Self-efficacy	.157	.135****
Inc. R^2 (%)	19.2****	11.8****
Block 4: Interactions		
Fear-hope x gender	-.016	.053*
Fear-hope x age	.006	-.061***
Fear-hope x family medical history	-.041	-.022
Inc. R^2 (%)	0.2	0.7
Total R^2 (%)	25.3	41.3

Cell entries are standardized regression coefficients except those in Block 4, which are before-entry standardized regression coefficients.
Dependent variable = Perceived susceptibility.
*p<.10; **P <.05; ***p<.01; and p<.001****

effects on both young (M=2.65) and old (M=2.58) participants, when exposed to the advertisement using fear appeals, young people (M=2.84) experienced increased perceived susceptibility to hyperpigmentation, while older individuals (M=2.34) seemed to experience a

decrease in their perceived susceptibility to hyperpigmentation. Plainly said, young people saw a significant increase in their perceived susceptibility to hyperpigmentation when exposed to the advertisement containing fear appeal while it had an opposite effect on older individuals as they reported lower perceived susceptibility to hyperpigmentation in this condition.

Similarly, the gender variable was also further examined to determine to what extent it had a moderating effect on the relationship between the fear and hope appeals used in skinfluencer advertisements and perceived susceptibility to hyperpigmentation. From Figure 2, we see that female respondents were generally more affected by the appeal conditions than male respondents. When exposed to the hope condition, male (M=2.31) and female participants (M=2.97) experienced differing levels of effects, with females experiencing more perceived

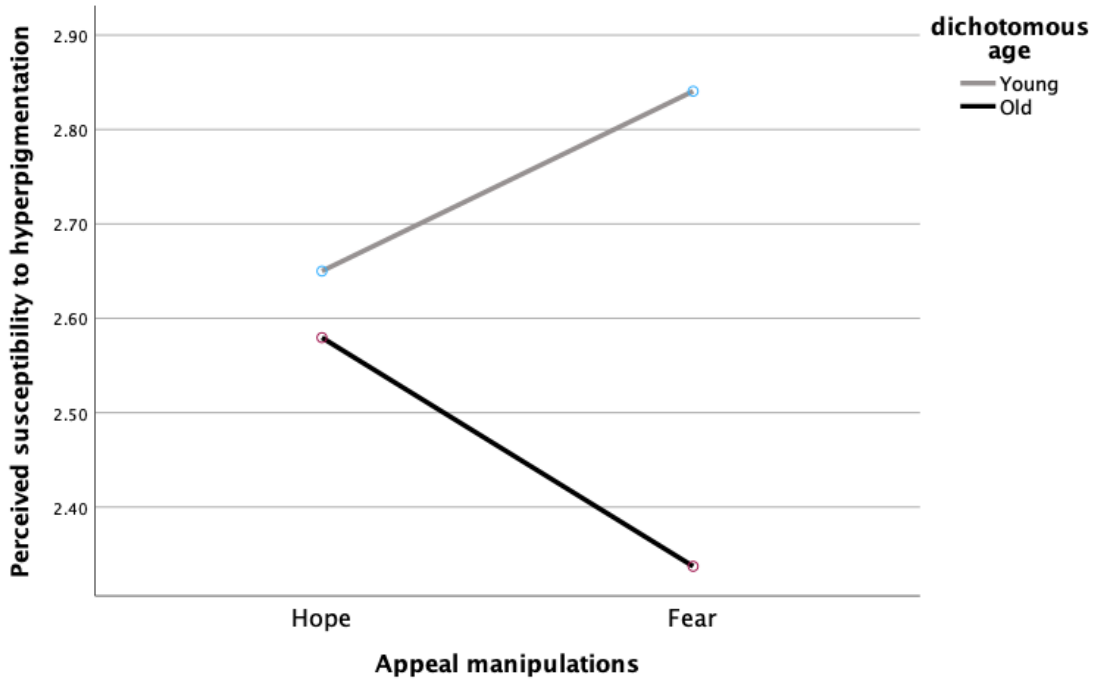

Figure 1: The interaction between age and appeal conditions on perceived susceptibility to hyperpigmentation

susceptibility to hyperpigmentation than males. When exposed to the advertisements using fear appeal, similar to the age variable, females (M=2.12) experienced an increase in their perceived susceptibility to hyperpigmentation while males (M=3.06) saw a decreased in their perceived susceptibility to the same skin condition.

To examine the moderating effects of the health regulatory focus variable on the relationship between the fear and hope appeals used and a black person's intentions to use sunscreen, the variable measures for promotion and prevention were transformed into one composite scale.

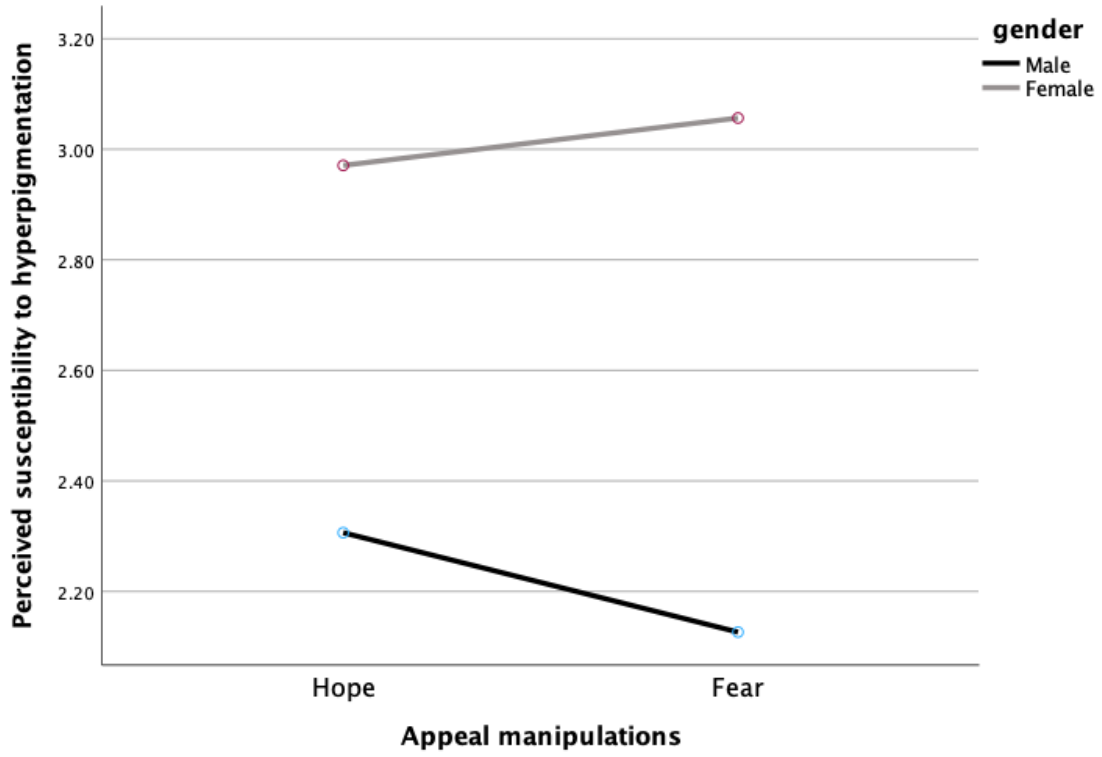

Figure 2: The interaction between gender and appeal conditions on perceived susceptibility to hyperpigmentation.

This composite health regulatory focus scale was created by subtracting the totaled individual promotion score from the totaled individual prevention score after averaging the 6 total items for both the promotion and prevention variables (Kees et al., 2010). A positive score on the composite scale signified that an individual was more promotion focused while a negative score signified that the individual was more prevention focused. Next, to observe the moderating effects of the health belief variables on the relationship between fear and hope appeals used and a black person's intentions to use sunscreen, the composite health belief variable was regressed upon the fear and hope appeals and intentions to use sunscreen, by means of SPSS process macro.

The model explained 0.1% of the variance (R^2 = .011, $F(3, 603) = 2.299$, $p < .001$). There was no significant main effect between the fear and hope appeals used and intentions to use sunscreen (b = .158, t = -.804, p = .422), likewise no significant main effect was observed between the health belief variable and the dependent variable (b = -.071, t = .918, p = .359). Similarly, no interaction effect was observed between the health regulatory focus variable and the fear and hope appeals used (b = .110, t = 1.03, p = .306). This means that a black person's health regulatory focus had no effect on the relationship between the fear and hope appeals used and their intentions to use sunscreen. It also means that regardless of whether a black individual was exposed to either the fear or hope skinfluencer message, their health regulatory focus had no effect on their intentions to use sunscreen. Hence H_8 and H_9 were not supported.

CHAPTER 5

DISCUSSION AND CONCLUSION

This chapter provides concise discussion on the results from various tests used in examining the study hypothesis and research questions. It provides essential findings and noteworthy outcomes that has considerable impact on the discourse of the effectiveness of skinfluencer advertising and the impact of individual health belief on a black person's behavioral intentions, while making mention of other studies sharing similar or differing findings. It provides possible reasons for our study outcomes and moves onto detailing study limitations. The implications of this study are also discussed with future research direction and possible study improvement ideas being detailed to bring this study to a close.

Findings and Implications

The aim of this study was to test the effectiveness of advertising appeals used in skinfluencer sunscreen advertisements on the behavioral intentions of black individuals in relation to both skin cancer and hyperpigmentation. It also set out to examine the role an individual's health beliefs plays in its relationship with a black person's intention to purchase sunscreen, intentions to use sunscreen and attitudes towards the use of sunscreen. In a bid to make suitable contributions to the discourse on the use of appeals in skinfluencer advertising and the effects of health belief on a niche group like black individuals, the following were the essential findings of this study: First, fear and hope appeal have no significant effect on the behavioral intentions and attitudes of a black person towards sunscreen use. Second, the use of statistics is more impactful than subjective language on a black person's attitude towards the use

of sunscreen and no significant difference was observed in their effects on purchase and use intentions. Third, the health belief model is a viable predictor of a black person's intentions to purchase sunscreen, intentions to use sunscreen and attitudes towards sunscreen whether skin cancer or hyperpigmentation is highlighted as the possible danger of sun exposure. Fourth, a black person's age and gender will moderate the relationship between the fear and hope appeals on perceived susceptibility used in skinfluencer advertisements when the skin ailment is hyperpigmentation.

As it was first theorized that fear appeals used in skinfluencer advertisements will have more significant positive effects than hope appeals on a black person's intentions to purchase sunscreen, intention to use sunscreen, and attitude towards sunscreen use, fear and hope appeals were first compared in their effects on the dependent variables. Results show that there were no significant differences in the effects of fear and hope appeals on these dependent variables. This indicates that regardless of whether fear or hope appeal was used in a skinfluencer advertisement, there was no impact on a black person's intention to purchase and use sunscreen. As well as no impact on their attitudes towards sunscreen use. While research findings are mixed on the discourse of the effectiveness of negatively framed (fear appeal) and positively framed (hope appeal) messages used in persuasion (Putrevu, 2010), our results are similar to findings by Chadwick (2015a) who discovered that fear and hope appeals had no significant effects on an individual's interpersonal communication intentions or behavioral intention in relations to climate change engagement.

On the other hand, my findings differ from previous studies which indicate that fear advertisement messages are indeed more effective than hope advertisement messages on subsequent indulgence intentions (Krishen & Bui, 2015). Nonetheless, although no significance

was observed, the hope conditions did emerge with higher means across all three dependent variables in comparison to those in the fear condition. This means that contrary to my initial belief of fear appeal being more impactful, there is some evidence showing that hope appeals may be slightly more effective on the behavioral intentions of black individuals. This may be because the manipulation stimulus in general might have been perceived as being hopeful overall. Hence, even fear messages which should have been more effective in encouraging processing of persuasion propositions due to its negative valence, were rendered not as effective because of how hopeful the manipulated message were perceived to be by respondents (Sobh, 2011).

Subsequently, the use of statistics in comparison to the use of no statistics or subjective language in skinfluencer advertising of sunscreen proved to have no significant effect on a black person's intention to purchase and intentions to use sunscreen but showed significance on their attitudes towards sunscreen use. This means that when statistics was used in skinfluencer messages, it showed no difference in its impact on purchase intention and intention to use sunscreen in comparison to the use of no statistics, but the use of statistics was seen to have a more positive impact than subjective language on the attitudes of a black person towards sunscreen use. This indicates that while the use of subjective language was effective in impacting a black individual's attitudes towards the use of sunscreen, the use of statistics was more effective. Although it is difficult to make a comparison between my findings on this and other studies because of the insufficient information on the examination of the use of statistical appeal in advertisement, my results are still consistent with other findings on the effectiveness of rational appeal on attitudes towards the use of consumer products, as statistics is considered a

form of rational appeal because of its utilization of reasonable logic and information (Akbari, 2015; Zhang, 2021).

When melanoma was the skin condition in focus, a black person's perceived severity of skin cancer, perceived benefits of sunscreen use, and self-efficacy was shown to have a positive impact on purchase intention of sunscreen. Correspondingly, all three health belief variables mentioned above were found to significantly impact a black person's intentions to use sunscreen, along with perceived barriers. In its effects on attitudes towards the use of sunscreen, excluding perceived severity, and perceived susceptibility (which was not found to impact any of the three dependent variables), the other constructs of health belief were seen to be impactful. This signifies that while a black person's increased perceptions of severity of melanoma, perceptions of the benefits of sunscreen and trust in their ability to use sunscreen has a positive impact on their intentions to purchase and use a product, increased perceived susceptibility would make no significant difference in these intentions. Also, a black person's perception of their susceptibility to melanoma and their perceived severity of it, did not create any substantial changes to their attitudes towards sunscreen use. Of importance is that, supporting the hypothesis, perceived barriers, while not having any significant effect on purchase intention, showed a significant negative effect on a black person's intentions to use sunscreen and their attitudes towards the use of sunscreen. This indicates that when considering melanoma, while a black person's perceived barrier has no impact on whether they intend purchasing sunscreen or not, their increased perceived barrier does reduce their intentions to use sunscreen and also leads to less positive attitudes towards the use of sunscreen.

When hyperpigmentation was the skin condition in focus, the results proved similar to the melanoma condition. A black person's perceived severity of skin cancer, perceived benefits of

sunscreen use, and self-efficacy had a positive impact on purchase intention of sunscreen. All health belief constructs were observed to positively impact the intentions to use sunscreen and attitudes towards sunscreen use, with the exception of perceived barriers which had a negative effect on both intentions to use and attitudes, as well as perceived severity, which had no effect on attitudes. This indicates that when hyperpigmentation was the skin condition being discussed, an increase in a black person's health beliefs, with exclusion of perceived susceptibility and barriers, will have a positive effect on intentions to purchase. Also, increased perceptions on all health belief constructs were impactful on a black person's intentions to use sunscreen. A change from the cancer condition was the significance of perceived susceptibility, meaning that an increase in a black person's perception of the susceptibility to hyperpigmentation will lead to higher intentions to use sunscreen. Although the perceived severity of hyperpigmentation caused no significant change on attitudes towards the use of sunscreen in comparison to the melanoma condition, perceived barriers maintained a negative significant impact on both intentions to use sunscreen and attitudes towards sunscreen use.

While perceived susceptibility was not significant in its effect on any of the dependent variables when melanoma was the skin condition in focus, it had a significant impact on intentions to use sunscreen and attitudes towards sunscreen use when hyperpigmentation was the skin condition in focus. In view of these results, it's notable that when the 607 respondents were asked to agree or disagree to a statement asking about their chances of getting skin cancer versus hyperpigmentation, a comparison of the frequency of answers shows that 503 individuals disagreed with the likelihood of getting melanoma while 308 individuals disagreed with the notion of having higher chances of getting hyperpigmentation. This differences between responses backs up the theory that black individual's indeed belief they are less susceptible to

melanoma and shows that although black people are more susceptible to hyperpigmentation than any other race, their beliefs don't necessarily reflect that.

Age and Gender were found to be non-significant in their effect on the relationship between the appeals used and perceived susceptibility to cancer but showed significance impact on perceived susceptibility to hyperpigmentation. While the hope appeal had rather similar effects on both young and old black individuals, the fear appeal increased the perceived susceptibility in young people, while causing a decrease in older people. This means that while the hope appeal seems to be impactful on black individuals between the ages of 18-65+, the fear appeal has even more impact on the perceived susceptibility to hyperpigmentation of younger individuals between the ages of 18-34. On the other hand, black individuals between the ages of 35-65+ are more impacted by the hope appeal than the fear appeal. With this revelation, it would be advisable for sunscreen brands to create skinfluencer messages framed with fear appeals when targeting a younger audience and hope appeal framing when the goal is to reach older population in the black community. Likewise, health organizations can also adopt this finding for their message dissemination in their attempts to cultivate healthy sun protective behaviors in black individuals. With this form of targeted advertising, maximum impact can be achieved, increasing the chances of the purchase and use of sunscreens, as well as improving the attitudes of black individuals towards the use of sunscreens.

Based on data analyzed on the health regulatory focus of black individuals, it can be inferred that when an individual is prevention focused, with a mindset tuned into mitigating loss as much as possible, in this case worrying about the effects of skin cancer and hyperpigmentation or imagining themselves encountering these skin conditions in the future, it has no main effect on their intentions to use sunscreen. It also has no interaction effect with the skinfluencer appeals

used. On the other hand, when an individual is promotion or gain focused, with a health orientation that constantly seeks to achieve an ideal state of health or engage in healthy behavior, they are more likely to use sunscreen. These findings provide insight into one of the ways in which sunscreen products could be advertised or talked about to black individuals to encourage the uptake of sunscreen use and the adoption of sun protective behavior.

In a bid to answer the first research question, respondents were asked about their belief in the necessity of sunscreen for black individuals. From the data analyzed, 66.2% of the survey population strongly and somewhat agreed, 15.7% were neutral and 18.1% strongly and somewhat disagreed. These results show that contrary to the premise of this study, black individuals do believe in the necessity of sunscreen, and a host of factors could have contributed to this outcome. Two factor which could be responsible for this is the widely available knowledge bank on cultivating healthy skincare routines made readily available and easily accessible by skinfluencers and dermatologist online, as well as the attempts made by brands to create inclusive sunscreen options for black individuals (Simeon, 2022; Romero, 2023). Although we cannot certainly say with conviction that this belief in the necessity of sunscreen by black individuals will translate to purchase and use of sunscreen, it is obvious that there is awareness of the need for sun protective behavior for black individuals, which is a step in the right direction.

The second research question was based on the need to discover whether fear appeals were more effective than hope appeals in encouraging the use of sunscreen by black individuals. From the results of the independent sample t-test carried out on H1, this turned out to be false. Results showed that black individuals in the hope conditions put up higher (although, not statistically significant) means than those in the fear conditions, meaning that hope appeals may

be more impactful than fear appeals. Hence, we can say that in regard to the use of sunscreen by black individuals, framing advertising messages with hope appeal may be more advantageous than the use of fear appeals. Also, this leads us to consider, whether as a collective community, black individuals respond better to hope framed skinfluencer messages than fear framed messages. With this finding, it is believed that if health organizations create hopeful messages that encourage sun protective behaviors by black individuals, more positive outcomes may be seen in the bid to increase skin cancer awareness. Granted, there could be other factors which could affect the impact of the hope appeals used in encouraging sun protective behaviors, but the use of hope appeals seems to present a promising line for future inquiry.

To answer the third research question which was concerned with whether individuals with family history with melanoma or hyperpigmentation perceive higher levels of susceptibility to these conditions, we compared the means of those with and without family or acquaintance history to both conditions with the average scale of perceived susceptibility to cancer and hyperpigmentation. From the results, it shows that individuals who have family history or friends with these conditions believed themselves to be more susceptible to both cancer and hyperpigmentation. Although our study shows no significant impact of perceived susceptibility on behavioral intentions when melanoma was the focus, it does show that increased perceived susceptibility of hyperpigmentation has a significant impact on intentions to use sunscreen as well as improves attitudes towards sunscreen us. Hence, with the results from the mean comparison and the relationship between perceived susceptibility to hyperpigmentation and behavioral intentions, it would be advisable for brands to employ advertising frames directed at individuals with family or acquaintance history with both melanoma and hyperpigmentation to encourage better sun protective behaviors amongst black individuals.

After stating several practical implications of this study, two theoretical implications in relation to the established theories used and their effect outcome were also observed. First, when considering the use of advertising appeals and their effects on behavioral intention, it can be said that although my study outcomes showed little effect of the appeals on consumer behavioral intentions, clarity was provided on the necessity of multiple pre-testing of appeal manipulations used in future studies. Although there is no clear reason why the fear and hope appeal and statistical presentations used were not significant in most cases, multiple pilot tests and manipulation checks to ensure that appeals used in future studies have the desired effect are recommended. As study outcomes do show to some extent that the hope appeals, while not significant, were indeed more effective than the fear appeals used, and similar patterns were observed with significance in relations to the statistical presentation used, it can be said that the use of advertising appeals is a suitable way of investigating the use, or lack thereof, of sunscreen by black individuals. Therefore, to advance the study on the use of advertising appeals and achieve significant results in future studies testing behavioral patterns, extensive pre-tests on message manipulation when using appeals should be carried out.

Secondly, it was observed that the examination of the health belief components showed much efficacy in their effects on the behavioral intentions of black individuals towards sunscreen. The result from this study reaffirm that the perceived susceptibility, severity, benefits, barriers, and self-efficacy of black individuals are very much significant factors when analyzing their behavioral intentions towards making beauty and health related purchases. This study also proved that the health belief model can be used in analyzing health phenomena with varying contexts and still provide significant results. Perceived benefits and self-efficacy proved to be highly significant in their effects on all three dependent variables in both the cancer and

hyperpigmentation conditions, while perceived susceptibility mostly showed no significance. Hence, identifying these differences adds to the ongoing discourse on the important role health beliefs plays in its effects on purchase related behaviors from a psychological perspective.

Limitations

As with all studies, the design of this research is subject to some limitations. First, in the manipulation of the study experimental conditions, a limitation of this study can be observed. While the manipulation check proved that the emotional appeals used indeed had the desired effect, it was also observed that in almost all instances, there were no significant main effect of the fear and hope appeals used on the dependent variables. This is probably because, in an attempt to keep the conditions as similar as possible and to avoid making the fear manipulations overwhelming to the participants with the choice of words used in framing the skinfluencer advertisement in the fear conditions, the emotional appeals, although effective, were generally viewed as being rather hopeful. Also, this study would have benefited more from having singular conditions for all appeals examined, as well as singular message framing in form of the use of statistics or subjective language. Because the fear and hope appeals were either grouped with statistics or evaluated on the absence thereof, we can't be absolutely sure that the impact from the combined conditions with emotional appeal and statistics were solely due to the emotional appeal used and not the influence of the statistical information included.

A second limitation concerns the social media vehicle used in disseminating the study stimuli. In this study, an Instagram reel of a skinfluencer was utilized with the study manipulation embedded in the reel caption as texts. While this seems like an effective way to test the hypotheses, there is no guarantee that study participants actually read the caption of the

Instagram reel, even though the researcher included forced timers to try to ensure this. According to Garan (2019), the use of video stimuli is more efficient than text, as individuals generally can retain 95% of a video's message as opposed to the 10% retained when reading text. With a supporting theory, Freeman (2019), states that because of its visual elements which assists with message processing and ease of remembrance, video communication is a better alternative compared to a text or paragraph. Considering this, embedding the stimuli in the actual reel as opposed to the reel caption may have had a significantly different effect on the impact of the appeals on our dependent variables. At the same time, it is worth noting that the use of text in such videos, along with background music (as was employed in this study), is a common way that videos are made and presented on social media platforms. So, while a stronger manipulation may have been possible by focusing on video and audio elements, this approach had a realism that fits a currently popular form of social media communication.

Third, the method of data collection may have affected the quality of responses to the questionnaire due to participant impatience and rapid responder bias. While online research crowdsourcing and marketplaces provide access to affordable and quick data, connect researchers to their desired target respondents, as well as allow for contact to vetted survey takers, the system is run on a reward per study basis. Hence, in a bid to receive higher payments and reward amounts, participants in these marketplaces sometimes rush through the studies, leading to lack of comprehension of the survey questions and less than quality responses. Since the data is collected online, it is rather unrealistic to monitor whether all participants actually paid attention to study cues and followed instructions. Short of including survey timers, which was done in this study to force respondents to pay attention to certain questions and survey

components and scanning the data for “straight-liners”, it’s rather difficult to say how the survey questions were answered.

Lastly, a lack of access to studies on skinfluencer advertising created another limitation. As social media marketing and specifically skinfluencer advertising is a relatively new niche which rose to prominence just a couple of years ago, it was difficult to find other studies that examined skinfluencers in relations to their use of appeals as opposed to their messenger characteristics. Where this study focused on the effectiveness of skinfluencer appeals used, a majority of existing studies on social media influencers have examined influencer characteristics and interactions such as credibility, parasocial relationships and influencer disclosure. With the passage of time and the ever-growing interest in social media advertising by researchers, there is sure to be more relevant studies to reference in the near future.

Future Research and Recommendations

Further research is needed to test the causal effects of advertising appeals and health belief on purchase intentions, intentions to use and attitudes towards the use of sunscreen. From this study, I discovered that although the use of appeals in skinfluencer advertisements are effective in their impact on the behavioral intentions of black individuals, with the utilization of differing considerations and other research methods of analysis, a different approach can be taken to enhance the possibility of more nuanced study outcomes.

First, a mixed method approach should be used in future research in relations to the effects of skinfluencer appeals on the behavioral intentions of black individuals. The current study utilized a quantitative approach in its analysis and while this method of analysis proved effective, there were questions left unanswered. For example, analysis of the survey data shows that more than half of the sample population belief in the necessity of sunscreen for black

individuals, but an even higher number of the population don't belief they could be susceptible to skin cancer. As sunscreen is usually marketed as a preventive measure for skin cancer and protection from exposure to UV rays (which contribute to hyperpigmentation), it would be an asset to know why black individuals think they need sunscreen, if not to protect themselves, based on their perceived susceptibility to the skin conditions in focus. Because of the nature of the survey, it would be difficult to find out the reason for this phenomenon, as the research design does not give room for that. Thus, it is recommended that a mixed method research design with the incorporation of interviews and focus groups before quantitative analysis be used, as it would prove highly beneficial. Discussing with black individuals before building the study questionnaire will aid in including targeted issues which black individuals face with the use of sunscreen, eventually leading to better targeted advertisement to this population.

Second, this study explored the impact of fear and hope appeals on the behavioral intentions of black individuals, and while these are relevant appeals to examine, it led to a rather narrow approach, in light of the availability of numerous advertising appeals used in marketing sunscreen products to the target population today. Although the examination of fear and hope appeals provided useful information on the effectiveness of advertising appeals, it would be incorrect to assume that they are the most effective types of appeals used in encouraging the use of sunscreen, without examining other appeals. Granted, advertising messages framed using fear and hope appeals have been the go-to approach for sun protection products, but without exploration of other appeals, who is to say a different appeal wouldn't prove to be more effective in its impact on behavioral intentions? Hence, to encourage a more diverse discussion on the effectiveness of skinfluencer advertisements, it is recommended that various types of appeals, alongside fear and hope appeals be analyzed.

In addition, it is recommended that other social media channels used in skinfluencer advertising be explored in future studies. Although this study made use of Instagram reels in the creation of its stimuli and message manipulation (after consideration of the study sample and their use of social media), it is important to note that skinfluencers are arguably found on all social media platforms. As skinfluencer can advertise sunscreen through different mediums, it would be a source of useful information to discover whether there are differences in the impact of skinfluencer appeals used based on the use of different social media platforms. For example, would there be a difference if the same skinfluencer video was launched on YouTube as opposed to Instagram? Although these are both platforms which rely heavily on picture and video content, it would be of value to observe if any changes in message medium increases or decreases message effectiveness.

Of importance also for consideration and further research is how the nature of an advertising message or communication, when used in a similar study, would affect the outcome and impact of the skifluencer message on behavioral intentions. As the stimulus for this study was set up without consideration for what specific type of communication the skifluencer utilized for her content, it cannot be said with utmost certainty that when varying methods of advertising communication such as electronic word of mouth (eWOM) or sponsored content are used, they will yield the same results. Generally, where consumers are more trusting of product recommendations reaching them through eWOM, as it is deemed as advice based on genuine user experience, they tend to be less trusting of influencer content identified or disclosed as being brand sponsored. Hence this provides an avenue to further the discourse on both influencer advertising, as well as the differing nature of online advertising and their effectiveness.

Conclusion

As the end goal of advertisements is to encourage consumer purchase and continuous use of a product overtime, it is important that marketing and advertising experts begin to pay attention to findings from studies such as this, in order to enable the creation of better targeted advertisements for black individuals and encourage their continuous use of sunscreen products. It would also be beneficial for both sunscreen manufacturing companies and health organizations alike, to utilize the findings from this study as they provide insight into the effectiveness (or lack thereof) of fear and hope appeals as well as the use of statistical message framing in encouraging the adoption of sun protective behaviors by black individuals. As this study provides information on appeal effectiveness based on demographics such as age and gender, it would be rather valuable to create demographic targeted infographics to encourage sunscreen use amongst certain subgroups in the black community, as well as the general population. With these considerations incorporated, it is believed that black individuals will attain higher level of health preservation, in relations to sun exposure concerns and adopting sun protective behaviors.

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APPENDICE A

TABLES

Table 1

Instrument reliability showing Cronbach alpha of scale variables.

Variables	Scale items (N)	Cronbach Alpha (α)
Independent Variables		
Promotion	6	.87
Prevention	6	.92
Perceived susceptibility (c)	5	.94
Perceived severity (c)	5	.88
Perceived benefits (c)	3	.85
Perceived susceptibility (h)	5	.97
Perceived severity (h)	5	.87
Perceived benefits (h)	3	.88
Perceived barriers	6	.79
Self-efficacy	3	.90
Dependent Variables		
Purchase intention	3	.96
Intention to use	2	.94
Attitudes	5	.97

Table 2

Descriptive statistics showing sample gender, age, geographical location, and income.

Sample Characteristics	N = 607	Percentage (%)
Gender		
Male	312	51.4%
Female	289	47.6%
Other	6	1.0%
Age		
18 - 24	100	16.5%
25 - 34	188	31.0%
35 - 44	130	21.4%
45 - 54	111	18.3%
55 - 64	55	9.1%
65+	23	3.8%
Geographical Location		
Northeast	123	20.3%
Southeast	273	45.0%
West	53	8.7%
Midwest	84	13.7%
Southwest	74	12.2%
Annual Income		
Less than $10,000	69	11.4%
$10,000 - $19,999	43	7.1%
$20,000 - $29,999	67	11.0%
$30,000 - $39,999	72	11.9%
$40,000 - $49,999	63	10.4%
$50,000 - $59,999	61	10.0%
$60,000 - $69,999	33	5.4%
$70,000 - $79,999	57	9.4%
$80,000 - $89,999	21	3.5%
$90,000 - $99,999	22	3.6%
$100,000 - $149,999	79	13.0%
More than $150,000	20	3.3%

Table 3

Impact of fear and hope appeals on behavioral intentions of black individuals.

	Fear		Hope			
Dependent variables	M	SD	M	SD	*t* (605)	*p*
Purchase Intention	4.52	1.84	4.61	1.68	.633	.527
Intention to use	4.76	1.88	4.81	1.76	.280	.779
Attitudes	5.68	1.36	5.73	1.26	.533	.297

Table 4

Impact of statistics and no statistics on behavioral intentions of black individuals

	Statistics		No statistics			
Dependent variables	M	SD	M	SD	*t* (605)	*p*
Purchase Intention	4.64	1.73	4.48	1.79	-1.13	.257
Intention to use	4.85	1.75	4.78	1.86	-.791	.429
Attitudes	5.81	1.12	5.60	1.40	-1.95	.052

Table 5

Effects of health belief on behavioral intentions when skin cancer is the focus.

	Purchase intention		Intentions to use		Attitudes	
Independent variables	Beta	t	Beta	t	Beta	t
IV: Health Belief						
Perceived susceptibility	.020	0.47	.035	0.94	-.023	0.59
Perceived severity	.094***	2.19	.125****	3.31	.020	0.49
Perceived benefits	.217****	5.10	.263****	6.99	.309	7.76****
Perceived barriers	-.045	-1.11	-.105****	-2.96	-.102	-2.70****
Self-efficacy	.219****	5.17	.360****	9.64	.274	6.93****

Values for manipulation conditions are excluded from this table as they had no effect on the DV's.

*p<.10; **p <.05; ***p<.01; and p<.001****

Table 6

Effects of health belief on behavioral intentions when hyperpigmentation is the focus.

	Purchase intention		Intentions to use		Attitudes	
Independent variables	Beta	T	Beta	t	Beta	t
IV: Health Belief						
Perceived susceptibility	-.060	-1.47	.120****	3.24	.088**	2.17
Perceived severity	.207****	5.14	.186****	5.14	-.004	-.092
Perceived benefits	.197****	4.88	.182****	5.02	.181****	4.56
Perceived barriers	-.045	-1.07	-.157****	-4.17	-.124**	-3.01
Self-efficacy	.237****	5.73	.369****	9.89	.313***	7.67

Values for manipulation conditions are excluded from this table as they had no effect on the DV's.

*p<.10; **p <.05; ***p<.01; and p<.001****

Table 7

Regression predicting the moderation of gender, age, and family medical history on the relationship between the fear and hope conditions and perceived susceptibility.

	Skin cancer	Hyperpigmentation
Variables	Beta	Beta
Block 1: Demographics		
Gender	-.037	.213****
Age	.026	-.134****
Family medical history	.184****	-.339****
Inc. R^2 (%)	5.7****	28.7****
Block 2: Manipulations		
Cancer vs Hyperpigmentation	-.014	-.008
Fear vs Hope	.032	-.022
Stats vs No stats	-.018	.008
Inc. R^2 (%)	0.2	0.0
Block 3: Health Beliefs		
Perceived severity	.363	.165****
Perceived benefits	-.170	-.086
Perceived barriers	.193	.260****
Self-efficacy	.157	.135****
Inc. R^2 (%)	19.2****	11.8****
Block 4: Interactions		
Fear-hope x gender	-.016	.053*
Fear-hope x age	.006	-.061***
Fear-hope x family medical history	-.041	-.022
Inc. R^2 (%)	0.2	0.7
Total R^2 (%)	25.3	41.3

Cell entries are standardized regression coefficients except those in Block 4, which are before-entry standardized regression coefficients.
Dependent variable = Perceived susceptibility.
*p<.10; **P <.05; ***p<.01; and p<.001****

APPENDICE B

FIGURES

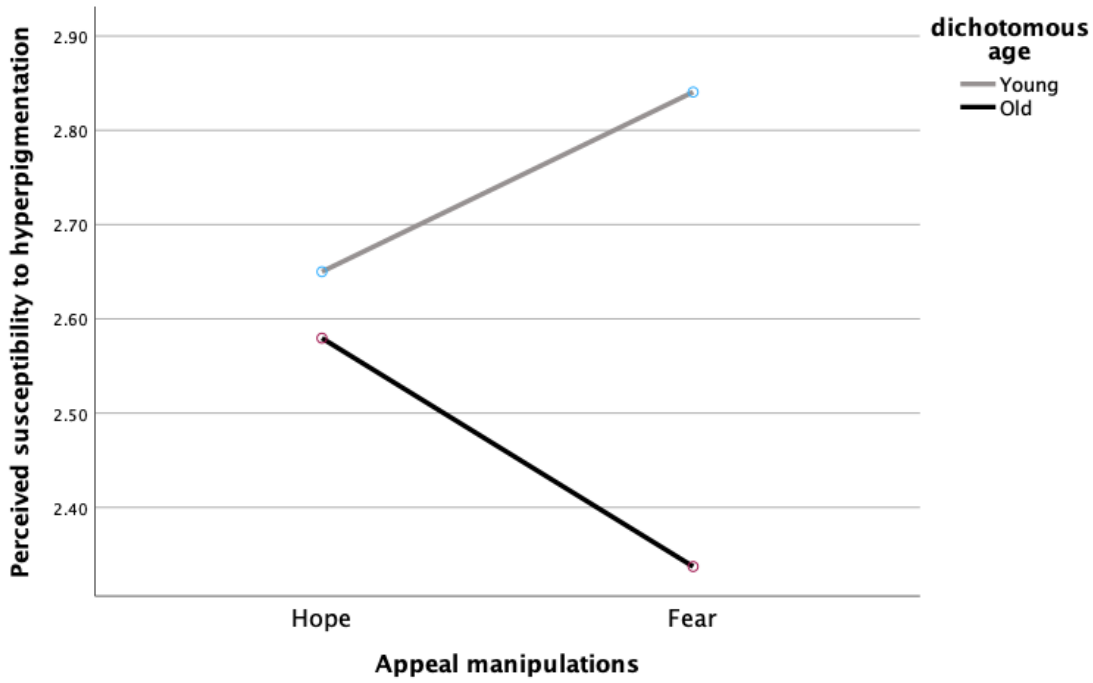

Figure 3: The interaction between age and appeal conditions on perceived susceptibility to hyperpigmentation

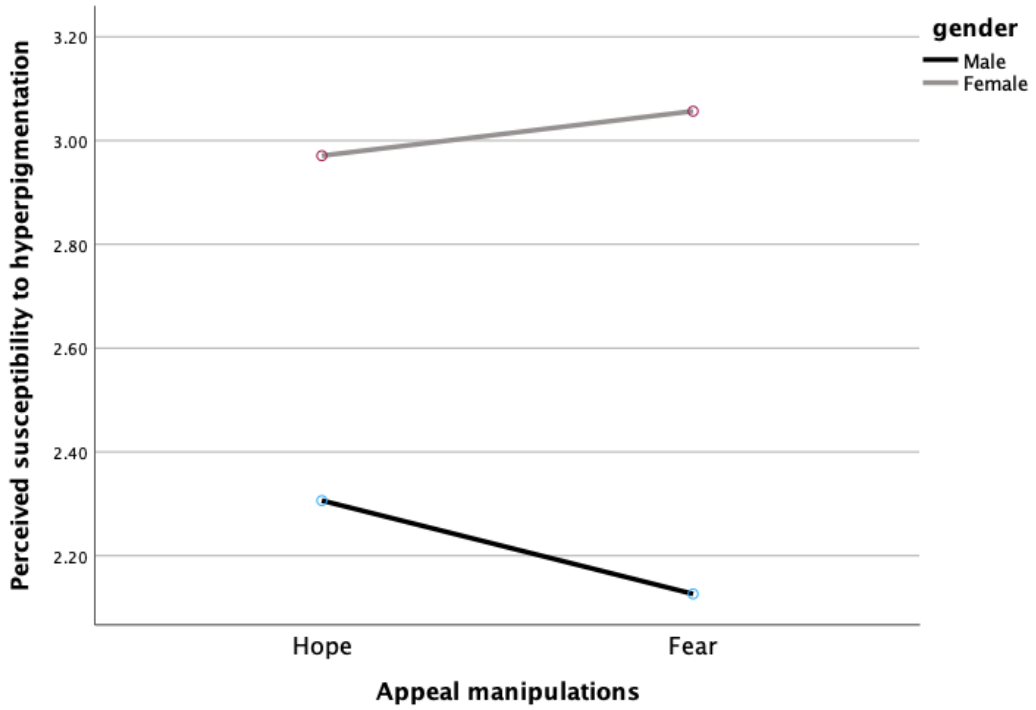

Figure 4: The interaction between gender and appeal conditions on perceived susceptibility to hyperpigmentation

APPENDICE C

SURVEY CONSENT FORM

The purpose of this study is to learn the effects of social media influencer advertising on the behavioral intentions of People of Color. Before we begin, we want to assure you that all the information you give will be kept completely confidential and that none of it will be released in any way that would permit identification of you or your family. Your participation in this study is, of course, voluntary. All research will be conducted on the Internet using an online survey.

If you decide to participate in this research, you will be asked to complete an online questionnaire. Participation will require answering a series of questions and viewing a social media post. You will be asked to complete one survey. While reading and answering the following questions, please do not visit other websites online.

The risks of this study are minimal. If you feel upset from this experience, you can tell the researcher, and he/she will tell you about resources available to help. We anticipate a minimal risk to you from you participating in this study. Also, we do not anticipate any direct benefits to you from participating in the study.

Faculty, students, and staff who may see your information will maintain confidentiality to the extent of laws and university policies. Personal identifiers will not be published or presented. Questionnaire data will be accessible to only the primary researchers of the study to reflect this. In other words, all data obtained from participants will be kept confidential and will be used

solely for the research purpose. If you have any questions complaints or if you feel you have been harmed by this research, please contact one of the Principal Investigators listed below:

Rhoda M. Olaleye (phone: 617-396-0939; email: rmo90977@uga.edu)

Michael A. Cacciatore (phone: 706-542-2711; email: mcacciat@uga.edu)

Contact the Institutional Review Board (IRB) if you have questions regarding your rights as a research participant. Also, contact the IRB if you have questions, complaints, or concerns which you do not feel you can discuss with the investigator. The University of Georgia IRB may be reached by phone at (706) 542-3199 or by e-mail at irb@uga.edu.

It should take approximately 15 minutes to complete the questionnaire. Participation in this study is voluntary. You can choose not to take part or not to finish the questionnaire.

By selecting "Yes" on the following question, you are acknowledging that you have read the information in this consent form and volunteer to participate in this study. Please print or download a copy of this consent form for your records if you so desire.

Thank you for your time and consideration in taking part in this research project.

CONS. I agree to participate in this study and have read the consent form above: Yes (1), No (2)

APPENDICE D

SURVEY QUESTIONNAIRE SCALES

1. Social media use

   a. We would like to know what your social media habits are (7-point Likert scale ranging from none (1) to a lot (7))

      I. How often do you watch skinfluencer content in a week?

      II. How often do you watch skincare content by Black or African American skinfluencers?

   b. Rate how often you encounter skinfluencer content on the following social media platforms (7-point Likert scale ranging from never (1) to often (7))

      I. YouTube

      II. Instagram

      III. Tik-Tok

      IV. Snapchat

      V. Twitter

      VI. Facebook

2. Health regulatory focus scale

Question - We would like to know how you pursue health related goals. Please tell us how much you agree or disagree with the following statements (5-point Likert scale ranging from does not describe my feelings (1) to clearly describes my feelings (5))

   a. Promotion

I. I frequently imagine how I can achieve a state of "ideal health."

II. I think of good health as a key to a happy life

III. Doing healthy things gives me a sense of accomplishment.

IV. When I engage in healthy behaviors, I am pleased with myself.

V. I would do anything to maintain a good, healthy body.

VI. I admire people who do things that make them very healthy.

b. Preventive

I. I often worry that I am not doing the best I can to improve my health.

II. I often myself being ill in future.

III. I am anxious that I am not following on my obligation and being as responsible as I should about taking care of my health.

IV. When I see people who are very sick because they did not take care of their health, I get scared thinking that could be me in the future.

V. I often worry about not feeling as healthy as I used to be.

VI. Thinking about my health usually makes me worry.

3. Family medical history

Question - Now, you are going to answer a few questions about your family medical history in relations to skin cancer and hyperpigmentation (Dichotomous scale where no is 1 and yes is 2):

a. With a yes or no, tell us if you have family history with:

I. Skin cancer

II. Hyperpigmentation

b. With a yes or no, tell us if you have friends or acquaintances with a history of:

I. Skin cancer

II. Hyperpigmentation

4. Health belief model

The same exact questions were used in testing health belief for both skin cancer and hyperpigmentation conditions, with the only differences the switch in condition name where appropriate.

Question - To aid in understanding your health beliefs, please tell us how strongly you agree or disagree with the following statements (5-point Likert scale ranging from strongly disagree (1) to strongly agree (5)):

a. Perceived Susceptibility

I. It is extremely likely that I will get skin cancer.

II. I feel I will get skin cancer in the future.

III. There is a good possibility I will get skin cancer in the next ten years.

IV. My chances of getting skin cancer are great.

V. I am more likely than the average person to get skin cancer.

b. Perceived Severity

I. The thought of skin cancer scares me.

II. When I think about skin cancer, my heart beats fast.

III. I'm afraid to think about skin cancer.

IV. Problems I will experience with skin cancer will last a long time.

V. Skin cancer will threaten the relationship I have with my significant other.

c. Perceived Benefits

I. When I use sunscreen, I feel good about myself.

II. When I use sunscreen, I don't worry so much about skin cancer.

III. If I use sunscreen regularly, I will decrease my chances of getting skin cancer.

IV. If I use sunscreen regularly, I will decrease my chances of requiring radical treatment if skin cancer occurs.

d. Perceived Barriers

I. Daily use of sunscreen is expensive per recommended use.

II. It is inconvenient to use and reapply sunscreen daily as recommended.

III. There are no suitable sunscreens for my skin color.

IV. When I use sunscreen, it leaves a white cast on my face.

V. When I use sunscreen, I feel uncomfortable and sweaty.

VI. When I use sunscreen, my skin breaks out in blemishes.

e. Self-efficacy

I. I am confident that I can use sunscreen when I'm out in the sun for more than 15 minutes.

II. I am confident that I can use sunscreen when no one I'm with is using it.

III. I am confident that I can use sunscreen even if I do not like how it feels.

5. Perceived Knowledge on the necessity of sunscreen for black individuals (Dichotomous scale where no is 1 and yes is 2):

I. I think People of Color need sunscreen.

6. Manipulation check

a. Please indicate the extent to which you felt the following (7-point Likert scale ranging from not at all (1) to very much (7)):

I. Hopeful

II. Fearful

III. Excited

IV. Distressed

V. Encouraged

VI. Discouraged

7. Attitudes

Question - Please indicate the extent to which you felt the following (7-point differential scale):

a. My overall attitude towards the use of sunscreen after viewing the reel is:

I. Unfavorable (1) to Favorable (7)

II. Dislike (1) to Like (7)

III. Bad (1) to good (7)

IV. Unlikable (1) to Likable (7)

V. Negative (1) to Positive (7)

8. Behavioral intention

a. Purchase Intention (7-p scale: highly unlikely (1) to highly likely (7)

I. How likely are you to purchase the sunscreen in the reel in the short term?

II. How likely are you to purchase the sunscreen in the reel in the long term?

III. How likely are you to purchase the product in the reel when you need a sunscreen?

b. Intention to use (7-p scale: highly unlikely (1) to highly likely (7)

I. How likely are you to use sunscreen daily after watching the reel?

II. How likely are you to incorporate sunscreen into your skincare routine after watching the reel?

9. Demographics

a. Because we try to get varying responses from different people, we would like to ask a few questions to help us reach people of different ages, gender etc.

   I. What is your sex?

   II. What is your age?

   III. What is your geographical location?

   IV. What is your total annual income?

APPENDICE E

EXPERIMENT AND MANIPULATION STIMULI

Instagram reel link: https://www.dropbox.com/s/fij91p8801jq9c6/Stimuli%20video.MOV?dl=0

Reel Captions (Manipulated scripts)

A. Skin cancer manipulations

- Fear-stats condition

  Finding the right sunscreen these days is like an unachievable goal but guess what? Skin cancer, wrinkles, and fine lines are all caused by the sun. Hence, there is a need for constant application of sunscreen. Outside of prescription and in-office procedures, your first line of defense to avoid showing any of these signs of sun damage and improve your appearance should be sunscreen. People of color are more likely to die from skin cancer due to late detection and diagnosis, with a 5-year survival rate of approximately 67%, compared to the 90% for non- Hispanics white patients. This sunscreen from Revolve is SPF 50 and helps improve overall skin health, fine lines, and wrinkles. It leaves no white cast while doubling as a moisturizer.

- Fear-no stats condition

  Finding the right sunscreen these days is like an unachievable goal but guess what? Skin cancer, wrinkles, and fine lines are all caused by the sun. Hence, there is a need for constant application of sunscreen. Outside of prescription and in-office procedures, your first line of defense to avoid showing any of these signs of sun damage and improve your appearance should be sunscreen. People of color are more likely to die from skin cancer

due to late detection and diagnosis, with a 5-year survival rate similar to that of Colon cancer, and comparatively lower than non-Hispanic white patients. This sunscreen from Revolve is SPF 50 and helps improve overall skin health, fine lines, and wrinkles. It leaves no white cast while doubling as a moisturizer.

- Hope-statistics condition

  Finding the right sunscreen these days is like an unachievable goal but guess what? Skin cancer, wrinkles, and fine lines are all caused by the sun. Hence, there is a need for constant application of sunscreen. Outside of prescription and in-office procedures, your first line of defense to avoid showing any of these signs of sun damage and improve your appearance should be sunscreen. People of color are more likely to have healthy skin with early screening and the daily use of the recommended amount of sunscreen. These actions can lower melanoma risk outcomes by an encouraging 50%. This sunscreen from Revolve is SPF 50 and helps improve overall skin health, fine lines, and wrinkles. It leaves no white cast while doubling as a moisturizer.

- Hope-no statistics condition

  Finding the right sunscreen these days is like an unachievable goal but guess what? Skin cancer, wrinkles, and fine lines are all caused by the sun. Hence, there is a need for constant application of sunscreen. Outside of prescription and in-office procedures, your first line of defense to avoid showing any of these signs of sun damage and improve your appearance should be sunscreen. People of color are more likely to have healthy skin with early screening and the daily use of the recommended amount of sunscreen. These actions can lower melanoma risk outcomes significantly. This sunscreen from Revolve is

SPF 50 and helps improve overall skin health, fine lines, and wrinkles. It leaves no white cast while doubling as a moisturizer.

B. Hyperpigmentation manipulations

- Fear-stats condition

  Finding the right sunscreen these days is like an unachievable goal but guess what? Hyperpigmentation, dark spots and wrinkles are all caused by the sun. Hence, there is a need for constant application of sunscreen. Outside of prescription and in-office procedures, your first line of defense to avoid showing any of these signs of sun damage and improve your appearance should be sunscreen. Hyperpigmentation is one of the top commonly diagnosed skin conditions in Black people, with an occurrence rate of approximately 65% in African Americans. While anyone can experience hyperpigmentation, it is often more severe and longer lasting in black people. This sunscreen from Revolve is SPF 50 and helps improve overall skin tone and skin texture. It leaves no white cast while doubling as a moisturizer.

- Fear-no stats condition

  Finding the right sunscreen these days is like an unachievable goal but guess what? Hyperpigmentation, dark spots, and wrinkles are all caused by the sun. Hence, there is a need for constant application of sunscreen. Outside of prescription and in-office procedures, your first line of defense to avoid showing any of these signs of sun damage and improve your appearance should be sunscreen. Hyperpigmentation is one of the top commonly diagnosed skin conditions in Black people, with an occurrence rate similar to that of Vitiligo. While anyone can experience hyperpigmentation, it is often more severe and longer lasting in black people. This sunscreen from Revolve is SPF 50 and helps

improve overall skin tone and skin texture. It leaves no white cast while doubling as a moisturizer.

- Hope-statistics condition

  Finding the right sunscreen these days is like an unachievable goal but guess what? Hyperpigmentation, dark spots, and wrinkles are all caused by the sun. Hence, there is a need for constant application of sunscreen. Outside of prescription and in-office procedures, your first line of defense to avoid showing any of these signs of sun damage and improve your appearance should be sunscreen. Hyperpigmentation is one of the top commonly diagnosed skin conditions in Black people, but the use of sunscreen can reduce its appearance by approximately 13.8% in a 12-week period. While anyone can experience hyperpigmentation, the daily use of sunscreen is a major key to keeping black skin healthy. This sunscreen from Revolve is SPF 50 and helps improve overall skin health, fine lines, and wrinkles. It leaves no white cast while doubling as a moisturizer.

- Hope-no statistics condition

  Finding the right sunscreen these days is like an unachievable goal but guess what? Hyperpigmentation, dark spots, and wrinkles all caused by the sun. Hence, there is a need for constant application of sunscreen. Outside of prescription and in-office procedures, your first line of defense to avoid showing any of these signs of sun damage and improve your appearance should be sunscreen. Hyperpigmentation is one of the top commonly diagnosed skin condition in Black people, but the use of sunscreen can significantly reduce its appearance. While anyone can experience hyperpigmentation, the daily use of sunscreen is a major key to keeping black skin healthy. This sunscreen from Revolve is

SPF 50 and helps improve overall skin tone and skin texture. It leaves no white cast while doubling as a moisturizer.