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Taking Race Out of the Picture: Health Communication and Disease Prevention for Black Americans

Amanda Lee Almond
University of Rhode Island, amandaalmond@my.uri.edu

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TAKING RACE OUT OF THE PICTURE: HEALTH COMMUNICATION AND
DISEASE PREVENTION FOR BLACK AMERICANS

BY AMANDA LEE ALMOND

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE

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DOCTOR OF PHILOSOPHY DISSERTATION

OF

AMANDA LEE ALMOND

APPROVED:

Dissertation Committee:

Major Professor   Lisa Harlow

                         Jasmine Mena

                         Pat Burbank

                         Nasser H. Zawia

                         DEAN OF THE GRADUATE SCHOOL

UNIVERSITY OF RHODE ISLAND

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Abstract

The dissertation being presented in the following chapters represents an examination of philosophy of science, underlying theory, empirical evidence, and research design targeted at understanding the relevance of race when communicating stroke prevention to Black Americans. In the introduction is a description of previous research and relevant course work pertaining to the construction of the research question: Is it a good practice of science to communicate race as a disease risk in attempts to modify health behaviors of Black Americans? The work begins with a description as to how race became a construct of interest in American science and demands a paradigm shift in order to ameliorate racial health disparities. This is followed with a discussion on the problematic nature of conceptualizing race as a disease risk. It reviews salient risk literature, specifically, on theories of behavior in response to risk messages. A study conducted as a pilot to this research is also featured and describes the modification of a scale so to measure racial microaggressions between physicians and their Black patients. The final piece, the experiment, reflects an exploration of organizational, interpersonal, and individual predictors of well-being, self-efficacy, and health behavior decision-making in response to the three difference public service announcements (PSAs). The announcements serve as treatment conditions and vary on degrees of racial salience. The effects of communicating race as a disease risk in a PSA that stated "Stroke targets by color" as well as previous experiences of microaggression are determined. The findings are discussed in the context of eliminating health disparities via the critical examination of experts' research and communicative practices.

Acknowledgement

It is important for me to acknowledge the help and support received from numerous people in my life, five of whom, I am fortunate enough to have as committee members. Lisa Harlow has been an excellent advisor who has guided me on this process with honesty, kindness, compassion, and a great deal of expertise. The efficacy that I have established in regards to quantitative methods has been invaluable, and I truly believe that she was the only person out there capable of doing so. Likewise, Jasmine Mena has been a mentor, and personal role model. As a fellow woman of color, you have served as an inspirational force. A thank you to Kat Quina who recommended that I apply to the university is necessary, and I must also note that our discussions on self-care have been quite valuable.

I would like to acknowledge the wonderful women of the Nursing department: Pat Burbank, who introduced me to the topic of Philosophy of Science, and since, I have never looked back. It was single-handedly one of the most important topics I have ever studied, and I plan on continuing to do so. Also, Donna Schwartz-Barcott, I would like to thank because she taught me so much about my own methodological preferences, qualitative research, and the mixing of methods.

My peers and colleagues who I have shared numerous discussions with at AWP conferences are also to thank, as well as my inspirational classmates. The students who I have taught over the past three years have also given me the confidence and clarity through their beautiful questions on the topic of psychology and behavior. They are truly who I have worked so hard for.

I would like to end by thanking my family members and my soon to be husband whose support has been instrumental in this process. I will now have more time to spend with you. Thank you for your patience and understanding.

Dedication

This dissertation is dedicated to my father, James Frederick Almond, who passed away in 1991. He would have loved this. For everything I do, you are the reason.

Preface

Manuscript formatting has been used for this dissertation as it is representative of a series of manuscripts submitted for publication that criticizes the conceptualization of race in the field of science and the communication of race as a risk to Blacks in the United States. The elimination of racial health disparities requires a collaborative effort from academia, medicine, societal institutions, policy makers and individuals. In the same vein, sources of this inequity are likely mixed in nature as well. The paradigm in which the concept of race was developed is representative of some of the less favorable discourse in U.S. history (i.e., slavery). The role science played in the proliferation of race and thereby racial disparities is something that needs to be addressed. Those in the social sub disciplines of science have come to understand the importance of critically examining the roles played by all parties by obtaining information about the lived and interactive experiences of Blacks in the United States both historically and contemporarily.

Given the way in which science was used to argue that race exists as having a biological basis (i.e., in a time in which 'men were created equal' and others were created for exploitation), it has come to the attention of some researchers that any and all scientific research on race is in need of a paradigm shift (Mertens, Bledsoe, Sullivan & Wilson, 2010). Such a change is not easy, nor is it self-evident as to what it would entail. It will not be accomplished in one paper. But it is widely understood that the key to understanding race and eliminating health disparities related to race requires a sense of multidimensionality. Intersections between the researcher and the researched, science and time, are crucial to examine when investigating and ameliorating the health problems of Blacks in the United States. The way in which race is conceptualized by researchers in science needs to be critically examined.

A concept that appears salient in the health science literature is that an individual's race is representative of a certain degree of risk (e.g., Nikulina & Widon, 2013; Robinson, Pickworth, Heishman & Waters, 2014; Taber, Aspinwall, Heichman, & Kinney, 2014; Torres, Romano, Vous, de la Rosa, & Lacey, 2014; Tsai, Desai, Cheng, & Chang, 2014; Younge, Corneille, Lyde, & Cannady, 2013) regardless of any other potentially relevant factors such as weight, diet, exercise or use of tobacco. The consequences of this type of conceptualization of risk have not been explored, and therefore they are perpetuated today, with the dominant outcome being racial health disparities. A feminist standpoint, in contrast to the historical androcentric standpoint, seeks to place marginalized groups at the center of critical analysis. Doing so places systematic contributors to disparities front and center. Beginning with a consideration that science has a preoccupation with power and control, which might be a possible predictor of health disparities, might very well be the future way we study these problems.

Methodologies, the measurement of constructs, the people conducting research, and philosophies of science all contribute to the way in which questions are formulated and answered. Two themes related to these components of knowledge generation are constant throughout my dissertation: the need for strong objectivity and mixed methods design. My early days of research on the health of Blacks in the United States began with a literature review in a Master's level health psychology course. From this I learned that science was concerned with identifying correlates to health and the related behaviors among Blacks such as income, diet, policy, accessibility, and insurance. Questions that were formulated included what do Blacks perceive to be healthy and what are the barriers to obtaining good health? I had begun my research endeavors by inadvertently blaming Black individuals for not

engaging in health behaviors for reasons (correlates) aforementioned, while missing important systematic contributors.

An independent study that I conducted while in my Master's program was that of investigating Black women's motivations and barriers to exercise engagement. I did this by going to churches and beauty salons to recruit a community sample. I gave these women disposable cameras and asked them to photograph things in their daily lives that related to exercise: things that prevented them or motivated them to engage in physical activity. Following the development of these pictures, I conducted semi-structured interviews. In hindsight, I suppose that it was expected to reveal 'Black' explanations related to the topic, seeing as how my sample was all Black. I learned that things like time-constraints, parenting, working, in essence being too busy, like all women, were related to their experiences with exercise engagement. It became evident that as a researcher, in order to obtain the answers to why Blacks experienced poorer health than their White counterparts more objective, quantitative measures were required.

The thesis completed for my Master's degree in psychology used both surveys and interviews to understand the role that disease prevalence played in the decision-making of Black women. Questions included were 'how aware are you of the prevalence of stroke, breast cancer, influenza, and heart disease in Black Americans?' 'How susceptible do you think you are?' and I triangulated these survey results to in-depth interviews. Two interview responses stuck out in my mind and have partially shaped my present research. First was the experience of a woman whose close friend had been diagnosed with breast cancer and was undergoing treatment. She discussed knowing that breast cancer was a problem specific to women, especially Black women. The woman presented herself as emotionally stressed as a direct result of this area in her personal life. In the interview I asked whether watching her

friend go through multiple treatments motivated her to go to her physician for a mammography. Her response came to my surprise, as I recall her stating "no". She elaborated "it would just be too much [emotionally]"

A second interviewee described taking care of and eventually losing her mother to diabetes complications. She expressed that she knew this was a major concern for her family, and specifically her own health. In the same vein as my question to the first interviewee, I asked, "Do you diet and exercise to prevent yourself from getting diabetes?" She admitted, "no". She expressed that her busy schedule and daily hassles were to blame. To my surprise she added, "I know that diabetes is manageable, so when the time comes, I will be prepared to exercise and manage my diet." Both of the women's responses resonated with me. The development of my dissertation was partially to try and understand and explain these women's "no's".

In my own personal life, during my Master's program, a sedentary lifestyle as well as poor eating habits and being a heavy smoker took its toll on me, and I was diagnosed as hypertensive. Naïve that the aforementioned were to blame, at the time, I asked my physician "How is it that I am so young and have high blood pressure?" My physician's response was simple: 'It's common among Blacks.' He prescribed me a diuretic, but no behavioral prescriptions. I was taking a Behavioral Medicine class that semester and the course helped to make sense of my own life experiences as well as the experiences of my participants. Knowing that something is common, or eminent for your racial group is not motivation (enough, or at all) for healthful behavior adoption. In the same context, I had learned about a construct called microaggression in which the words of my physician echoed in my head. It was unintentional, automatic, perhaps even well-intentioned, but telling me

that high blood pressure was a problem for Blacks, not just for me, reminded me that I was different and health-wise inferior to other members of society.

The year following I entered a PhD program in Behavioral Science. The first research project that I engaged in served as the pilot study featured in this dissertation. A scale for the measurement of microaggressions from physicians was developed. From the heart of all my research questions over time, the topic for my dissertation emerged: Is communicating race as a health risk harmful? My coursework, specifically classes on social psychology and multicultural psychology provided me with possible mechanisms through which the harm of 'race as a risk' may perpetuate. Automatic processes related to racial groups, and the history of how these racial groups were studied by scientists raised criticisms that a Philosophy of Science class gave me the language to elaborate upon in a scholarly fashion. Classes on qualitative analysis taken simultaneous to structural equation modelling provided me the tools necessary to answer my questions, but brought forth this major criticism: Science (including my own research efforts) is not as objective as it is thought to be regardless of the methods of analysis. A main argument being, if science were purely objective, research findings would have been applied and racial health disparities would have long been reduced. One reason objectivity has been lacking in the scientific investigation of race and health is that it has not been designed by or for people who are affected by racial health disparities and seek to answer the question: is race as a risk useful or harmful?

This dissertation aims to tackle racial health disparities using an objective and reflective lens that has been developed via scholarship and my own lived experiences as a Black woman who was once plagued by an illness 'common among my race.' (It is worth noting that I have since adopted exercise, lost and maintained a healthy weight, and ceased my use of tobacco for some time now). This approach is markedly different from other

works on Black health because I am not looking to compare the health of Blacks to Whites, nor am I seeking to identify correlates specific to Blacks in terms of health outcomes.

Scientific communities have perpetuated the notion that race is a risk for health and disease processes. If science is to be an agent of social justice so as to ameliorate racial health disparities, then it must simultaneously be examined as a source of these disparities. Currently, Black health advocates are operating under the guise that science is capable of bias-free explanations and predictions. Even when this is addressed, a form of restitution has often been to increase methodological rigor by the use of more advance modes of analysis (e.g., logistic regression models delineating potential predictors of disease). But this plan of action can in fact reduce objectivity and result in the identification of non-modifiable risk factors. For example, if race or similarly gender are seen as statistically significant predictors of an illness and communicated as such, there is little individuals can do to alter their risk. The real potential for harm lies in the application of such knowledge, i.e., communication of these risks, which I have learned, (unempirically at first), is unsuccessful.

The dissertation begins with identifying the threat of decreased objectivity when applying modes of scientific inquiry to social problems such as racial health disparities. It ends with an examination of the effects of the American Heart Association's Public Service Announcements that state "Stroke target by color" on antecedents of health behavior adoption. Between those two chapters one will find a theoretical criticism highlight the problematic nature of conceptualizing race as a risk, as well as the pilot study, which used mixed methods to develop a measure of microaggression from physicians to their patients of color. Combined, this dissertation represents a critical analysis of philosophy, theory, measurement, and lastly the use of an experimental design to explore an under identified source of racial health disparities: the "experts."

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Chapter 1

Philosophy of Science: Increased Objectivity Capable of

Reducing Racial Health Disparities in the U.S.

by

Amanda L. Almond, PhD[1]

is submitted to the Journal of Theoretical and Philosophical Psychology

[1] Behavioral Science, University of Rhode Island, Kingston, RI, USA

Abstract

Objectivity is often thought of as bias-free or value neutral and when used as an epistemological stance, knowledge is thought to be generated without the influence of personal beliefs. In science, objectivity is an ideal that researchers hope to achieve, but quite often we see that important beliefs of the researcher or the field remain ignored and unexamined. This type of objectivity has been referred to as 'weak' objectivity with the potential to harm marginalized groups in our society. This occurs when science does not critically examine the construction of social groupings and/or assumes that between-group differences are inherent and uninfluenced by time and within group differences are sources of error that need to be reduced. Increasing objectivity, as presented here, suggests that science and its researchers examine the interactions between subject and object. Strong objectivity, to naïve objectivists, may seem somewhat subjective as it requires the researcher to identify their values, put them into their research so to be removed, and ultimately identify that there is no way of ever knowing all of one's beliefs. The differences found within social groups of people should be a starting point from which inquiry begins and is capable of identifying structural and societal bias and values that inevitably ignore important interactions. This paper describes the need of increased objectivity when researching racially marginalized groups in order to promote social justice. The stance presented is that operating under the guise of value-neutrality or weak objectivity is unethical as it results in the mistreatment of groups of people, made evident by national disparities in health and well-being.

Introduction

Objectivity is representative of a value held by modern scientists. Often thought of as value-neutrality or epistemologically capable of eliminating all bias; it is neither. Instead, objectivity is an ideal with varied degrees of achievability. When formulating predictions about the actual state of the world, objectivity is thought of as a tool allowing researchers to do so with a great deal of certainty. When one thinks of science as an objective field, inherent is the notion that people interact with and within reality via sensory perception. These perceptions can generate knowledge through inductive logic (e.g., facts are discovered by scientists and are absolute) or deductive thinking capable of generating or creating knowledge (e.g., knowledge is reflexive and socially situated). Capable of capturing the faulty heuristics of all people, deductive logic is often abandoned by those with inquiries are scientific in nature and inductive logic is favored as appearing to be more objective. Perceptions of reality appear as self-evident and valid to the knowledge seeker whether inductively or deductively derived. Through this acceptance or rejection of an experience, a validation of the senses occur (Bessinger & Perikoff, 1990). It is not then about how knowledge is generated, but instead about the definition, achievability, and conceptualization of 'objectivity'.

The misidentification of knowledge generated inductively as being more objective than deductive logic stems from differing standpoints or characteristics of what people believe science to be capable of and its place in time. Scientific knowledge truly falls on a continuum from contextual to absolute (with absolute being a goal albeit unattainable). When scientific inquiry is viewed as being capable of achieving objectivity in its findings, often guised as value neutrality, there becomes potential for harm. The social circumstances in which that knowledge is created can be ignored under this false pretense. The interaction

between inductive and deductive knowledge generation is overlooked. The production of knowledge via inductive logic alone possesses characteristics that threaten the well-being of individuals for whom such knowledge will be communicated. Far too often the standpoints of the scientist and their understanding of objectivity are mismatched. I will know turn to an example which demonstrates the perpetuation of the concept of race as natural.

The Birth of Race: A U.S. President's Call to Science

Race is a modern construct and the work of American historians has recently brought this to light. The work of Smedley and Smedley (2005) revealed that race was a folk concept in the English language which emerged in North America during the 16th-18th century. The use of the term increased throughout this time period. Reaching a head in the 18th century, race discerningly categorized humanity. Political leaders had very deliberately chosen individuals of African descent to be permanent slaves. The sole literary work of a man who stated that "All men are created equal," described his sneaking suspicion that Africans and Europeans were inherently different (i.e., see discussion on Thomas Jefferson, below). Prior to this time, personhood had been defined without the terms 'Black' and 'White'.

Thomas Jefferson covered the topic of race in his *Notes of the State of Virginia.* Observable differences between African and Europeans, i.e., skin color, sparked his conclusions drawn about equality amongst mankind. These differences were described by Jefferson as being so real that it was as though the reason and explanation for such had always been known to us (1787). Remarking that such a difference deserves more attention, he turned to measurable, observable differences in appearance, such as hair texture and pigmentation. Aesthetic superiority had been worthy of attention when constructing scientific knowledge about animals, so Jefferson inferred; 'why not with man?' (Jefferson,

1787). He continued to note the ways in which Blacks were different from Whites, e.g., Blacks required less sleep than Whites; the superior nature of Black physical strength and labor efforts; the inferior intellectual ability of Blacks; and ends with "I advance it therefore as a suspicion only, that the blacks, whether originally a distinct race, or made distinct by time and circumstances, are inferior to the whites in the endowments both of body and mind."

Thomas Jefferson's words- "We will not be able to know this until science gives us the answers" is a key focal point of this chapter.   Science was called upon to inductively conceptualize race using their most objective tools of the day: measurable, observable differences. Race was born and subdivisions of human life were created and in need of explanation. Scientists worked hard to prove that there were indeed natural distinctions between man that were related to their worth and potential, and these differences were determined by skin color. Quite often these efforts sought to prove the inferior nature of Blacks. Beginning first with measuring skull size, later intelligence testing, and most recently the human genome project; American science has been working towards resolving Thomas Jefferson's initial claims for many decades. Today race has become relative to all it encounters; status, housing, health, well-being, disease, potential, intelligence, and the like.

Consequences of the Construction of Race

In the time following Jefferson's assertions and the birth of race, a scientific obsession with analyses morale (Hacking, 1999), or the study of deviation, emerged. The ways in which people were similarly different was established using count and other measurement techniques. These techniques are what have been used through modern time for understanding the ways in which individuals of the same grouping are similar and the ways in which they are different from other groups. Hacking (1999) describes this as the

making up of people, which will be discussed in greater length later. This type of knowledge generation portrayed reality as consisting of permanent inequalities or differences as being natural (Smedley & Smedley, 2005), and this still resonates today. Negative consequences of this ideology include slavery in the United States and continued throughout the second half of the 19th century. The emergence of interracial conflict, once a burden specific to the United States, became universal.

The concept of race was exported to Europe, with Nazi Germany having taken it to a new extreme in the extermination of Jewish people. A superior race of blonde-haired, blue-eyed individuals was part of the Nazi agenda and science was used as one of Hitler's rationalizations. Contemporary conflicts have recently been identified as interracial conflicts because historically the two groups involved have been similar-looking or of the same 'race' i.e., English-Irish, Serbians-Croatians, Indians-Pakistanis, Armenians-Turks, and Japanese-Korean (Smedley and Smedley, 1999). Genetic variation between races, at best, explains up to 10% of shared differences that represent ancestry in terms of geographic location *not* physical characteristics (Bamshad, 2005). Interracial conflict such as slavery or the Holocaust had more to do with outward appearance than genetic differences between people, while the contemporary conflicts perceived as 'race-less' have in fact more to do with 'biological race'. These concepts are not broadly understood and allude to the use of physical characteristics as markers of race as scientifically flawed.

The question that American historical discourse raises is how did science perpetuate such a faulty concept, 'race,' in spite of reputation and goals of achieving objective knowledge? Furthermore, how has the way in which we use and study race not yet undergone a major paradigmatic shift? Feminists and Black scholars have raised such criticisms against scientific objectivity, mainly as a result of the detrimental consequences,

i.e., the marginalization of these groups in society. Blacks and women in our country

represent groups of people who have had to deal with the backlash of science ascribing

differences between people as natural or inherent. In terms of the power dynamic between

science and the people it studies, racial and sexual minorities have been on the downside end

of things. Historically, science has perpetuated the marginalization of these social groups

through power and domination via falsely objective knowledge generation. With objectivist

goals comes order and predictability; however the denial of the realities surrounding

marginalized groups creates knowledge capable of perpetuating harm and inequalities. In

their criticisms of science, both Evelyn Fox Keller (1999) and Patricia Hill Collins (1986)

vocalized these concerns with potentials for rectification. While other scholars of race and

gender will abandon objectivity in terms of measurement and analysis all together, (e.g., We

can't dismantle the master's house using the master's tools) (Lorde, 1984), others see

scientists and their methods as capable of increasing, or strengthening its objective lens.

Feminist Criticisms of Science: The Ability to Increase Objectivity

Keller (1999) inferred that domination not only within science, but also in how it is

used in society must be considered as an impulse that scientists (and members of society)

have to control rather than a non-modifiable characteristic of science per se. Such an

impulse might be traced back to our nation's paradoxical desire for all men to be created

equal, while accepting the existence of 'natural differences' to serve as the rationale for

owning slaves. Expressions of dominance are aggressive in spite of the goals of scientific

research, thought, and practice. The impulse to control is the evil twin of the objectivist

ideal as it deters people uninterested or negatively affected by dominance to enter the fields

of science. It can be asserted here that Thomas Jefferson had mistakenly called on science

to understand differences in skin color under the assumption that objectivity and control

were synonymous. However, scientific domination should be understood and acknowledged as the projection of a paradigm (i.e., social circumstances and place in time). Control mustn't be viewed as inherent in the scientific goals and inductive knowledge generation.

A paradigm in which power is projected as objectivity is one in which superiority over others is prioritized (e.g., periods of slavery in the United States). That is to say, criticisms that objectivity perpetuates aggressive concepts of power and dominance should be considered within its historical context. Learning from such a history should in turn strengthen modern objectivist epistemologies, not subjugate its abandonment. The question that remains: how much have we learned? When the existence of racial health disparities continue, even worsen, for decades and during periods of vast medical technological growth, one has to ask.

Keller (1999) described a criticism of science that if challenged or dealt with, is capable of increasing objectivity. This is the predominance of men in the field of science. It has been noted that male-domination (and arguably White domination) has contributed to a bias in identifying the problems that science has chosen to address. Some have combined this notion with the aforementioned view of science as androcentric because of its emphasis on control and domination. Potentially resolving these criticisms would be the increase of the presence of Blacks and women in fields of scientific inquiry so to separate the narrow-minded intentions of White-men's research questions and findings from what is deemed as fact or knowledge. Such a notion might grant marginalized groups with what they have been denied in and as a result of science.

Social scientists must make an effort to develop an understanding of the world that is both rationally and objectively interpreted through critical self-reflection (Keller, 1999). These efforts describe increasing objectivity. To paraphrase Piaget, thought is not conscious

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of itself, so we fall victim to confusing what is objective with what is subjective; the real and the apparent. From the critical-reflection of our country's historical use of science, we might begin to understand the aspects that contradict claims that scientific knowledge is objective, free of bias, and absolute. Where we see the projection of domination on scientific agendas, the source of the knowledge and its intended use must be addressed! That is to say, the historical conceptualization of race is related to the perpetuation of disparities today and should be evaluated in terms of who it was generated by and who it was generated for. In this vein, to 'fix' or reverse racial health disparities in the United States, science should increase its adoption of Blacks' and feminists' ideals of objectivity and practices.

Black Feminist Criticisms of Science

Patricia Hill Collins responded to criticisms of science related to who designs and conducts scientific research, in her paper *Learning from the Outsider Within* (1986). She stated that Black, female intellectuals have done an excellent job at making creative use of their marginality in knowledge generation. Her claim was that people of marginalized groups can make use of their outsider status and generate knowledge that is more objective than that of, historically, White males. This is done by having a greater understanding of the subject-object interaction. For example, the relational status of Black women in the United States references the experience of Black women who were hired as 'help' by White families. Black women earned the status of 'one of us/them' within White families as a result of the closeness that came from raising the family's children. It may bring to mind of some of the relationships depicted in the contemporary film "The Help." This 'outsider within' status also became a standpoint specific to Black women in academics today (Collins, 1986). These notions can also be extended to individuals from both Black and White ancestry as well. The 'mulatto' or biracial intellectual is capable of increasing objectivity in scientific practice

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as a result of this outsider within status as well. Benefits of this status include objectivity as 'a peculiar composition of nearness and remoteness, concern and indifference' (Simmel, 1921 as cited in Collins, 1986); the inclination for people to confide in outsiders in ways in which they would not with one another; and lastly, the ability of outsiders to see patterns that those immersed in a phenomena cannot see (Collins, 1986).

The aforementioned criticisms of scientific discourse by both Patricia Hill Collins (1986) and Evelyn Fox Keller (1999) represent an idea that objectivist epistemology, when re-conceptualized, can be useful in understanding problems that Blacks in the United States are faced with today. Some female philosophers of science have identified distinct, intersecting ontologies and standpoints capable of improving objectivity in the scientific study of race and/or gender. The intersection of dynamic nominalism and agential realism and the intersection of symbolic interactionism and critical perspective will be elaborated upon (Barad, 1999; Burbank & Martins, 2009; Hacking, 1999; Harding, 1991). But before such elaboration, this chapter will now turn to the description of strong objectivity.

Strong, Not Dominant Objectivity

Sandra Harding's writings were on what she termed 'strong objectivity' of socially situated knowledge. She has asserted that the dichotomy between relativism and realism has resulted in the over-confidence and attractiveness of objective measures laid against the backdrop of over-progressive claims made by relativists about subjective research (1991). For example, given the context of this paper, the over-confidence in race as a biological measure to be used inductively and the over-progressive notion of there being a 'Black experience' for scientists to deduct from in the generation of knowledge. A second, more specific example which will be elaborated upon in following chapters is the notion that the communication of race as a disease risk is effective in producing behavior change. The

modern use of race as an objective measure would be labeled as 'weak' objectivity capable of dominance over or immobility within a racialized group. The conceptualization of race has occurred under the assumption that objectivity is the same as value-neutrality. Bias-free objectivity and thereby predictions are unattainable: the assumption that such things exist has proliferated the conceptual contradictions and consequences of 'race' and 'gender'. The history of objectivist epistemology consists of domination and power both of which have contributed to the gender and racial bias found in research questions, measures, and findings (e.g., skull size, intelligence tests, medical procedures). The methodological commitment that value-free implies is, again, unachievable.

What Harding ultimately suggested was that the idea of achieving objectivity as though all values and bias are capable of elimination is weak and incorrect. It has been used only by socially dominant group members leaving members of marginalized groups to often side with its rejection (1991). The potential within pairing strong objectivity with the scholarship of marginalized individuals has been untapped and it is now, if ever essential to bringing about social justice for Blacks in our society for whom health disparities persist.

Strong objectivist epistemology is the ideal for social scientists interested in studying race and health. Race and health is an area within the field of science in which strong objectivity has yet to flourish. What Harding's strong objectivity advocates for is an acknowledgment that all knowledge (including scientific knowledge) is socially situated; such knowledge requires a critical examination of social situations; and that absolute knowledge about social problems is unattainable as it is contingent upon its place in time (1991). Strong objectivity requires accounting for the relationship between "historically located belief and maximally objective belief" (1991, p.142).

Weak objectivity is contradictory, and for this reason, has been useful and appealing to dominant groups: specifically Thomas Jefferson's initial interest in rationalizing slavery while not deviating from standards of morality in which all men are equal. What weak objectivity offered (via analyses of deviation) were scientific claims supposing an "epiphenomenon of nature" (Harding, 1991, p. 147). Harding described that if historically, the scientific community had excluded Blacks and women because of larger social stratifications, than science today was composed of individuals who benefit from racism and sexism, whether it was intentional or not (Harding, 1991). Fortunately there have been philosophers of science of marginalized status whose coherent epistemological conceptions incorporate distortions of objectivity and interactionism, even when used by individuals who have somehow benefited from racism or sexism.

Harding (1991) elaborated upon methodological applications that increase objectivity, particularly for the social sciences and referred to the continued use of inductive logic, however, from a different starting point:

"In a society structured by gender hierarchy, starting thought from women's lives increases the objectivity of the results of research by bringing scientific observation and the perception of the need for explanation to bear on assumptions and practices that appear natural or unremarkable from the perspective of the lives of men in the dominant groups. Thinking from the perspective of women's lives makes strange what had appeared familiar, this is the beginning of any scientific inquiry." (Harding, 1991, p. 150).

By conducting research from within marginalized groups, knowledge generation becomes less likely to deny the interpretive core (bias) of traditional scientific claims (Harding, 1991). This same notion was supported and elaborated on by Collins in terms of Blacks (1986). An important distinction of this methodology that needs to be emphasized is that this type of research is not what relativists might call 'going native', but instead maintains a realist perspective that requires the examination of the idiosyncrasy of culture

from a critical and objectifying stance (Harding, 1991). Promoting strong objectivity thus requires the examination of the relationship between self and other (researcher and subject): it does not seek to control nor deny this relationship, but rather generate its critical examination. This epistemological standpoint of weak objectivity was generated out of scientific thought beginning with dominant groups (e.g., White men) and has been inherently biased. Today, it can be reversed by acknowledging that unbiased research is unachievable and increasing objectivity requires an increase from marginalized thought and scholarship standpoints.

The promotion of this strong objectivity argues for the 'intentionality of nature' being no different from the intentionality of human beings. That is to say that the main role of scientific claims should be to identify strategies capable of generating a critical examination of its claims without defensiveness from those who have historically used science to dominate (Harding, 1991). For example, it is important to examine multiple structures as potential sources of disparity, including organizations, interpersonal relations, and individual history as they are all products of place in time. The aim of contemporary scientists must include the installation of a system of checks and balances so as to avoid undue harm resulting from its claims; an epistemic offer that is desirable for eliminating the harm done to Blacks as a result of the construction of race. The checks and balances presented here include knowledge generated by members of marginalized groups as well as a critical reflection of science itself being a source of inequality capable of its own correction.

Authors on the topic of conceptual and philosophical issues pertaining to social research design also advocate for increased objectivity (Mertens, Bledsoe, Sullivan & Wilson, 2010) similar to the arguments presented here by Harding (1999), and do so in a fashion that makes objectivity an ethical issue. They emphasize the role that historical events play for

marginalized groups and that ethical codes for research should reflect an acknowledgement of culture, power, histories of dominance, and social justice. One system through which science implements its checks and balances are ethical review boards and these authors argue that the conceptualizations of respect, beneficence and justice are 'weak', or lacking the ability to ensure that research best understands knowledge in the context or community in which it arises.

Mertens and colleagues (2010) describe a transformative paradigm in which ontologies, epistemologies, and methods are mixed so to promote the ethical choice of researchers to include the realization of discrimination. The value of doing such would be increased objectivity, moral responsibility, and the production of research that challenges social processes as opposed to maintaining the status quo, or persistent disparities. A shift in ethical principles is elaborated upon. Currently the concept of respect in human-subjects research refers, very narrowly, to the informed consent process. While the trust and permissions of people to be researched 'on' is critically important and reflect a shift from the nightmarish research paradigm in which experiments such as Tuskegee were permitted, it is not enough. In a transformative paradigm, that is, a use of science that promotes social justice via agency, the concept of respect would be extended to include an examination of cultural norms of diverse and cross-cultural interactions.

Beneficence in our current research paradigm can be described as a maximization of outcomes simultaneous to a reduction of harm (Mertens et. al., 2010). That is to say that current research, in order to be deemed as ethical, must produce more benefits than harm. A transformative paradigm would consider beneficence to encompass the promotion of human rights and an improvement to social justice. Currently the concept of justice in social research is to ensure that the knowledge accrued benefits those who participate in research.

The authors' extension of this was to link research processes to research outcomes to further promote social justice. An example of doing such would be to mix methods and critically reflect on the privileges we possess as researchers. In the determination of what is real knowledge or fact, our privilege as scientists to know the consequences of accepting different versions of reality must come through in our work on others. This is of the utmost importance when conducting research on marginalized groups.

We will now move on to the other tools useful for critically examining the inductive knowledge generated by researchers. Ontological standpoints and perspectives capable of reducing racial health disparities are presented.

Agential Realism and Dynamic Nominalism

Barad (1999) described agential realism as an approach to science that recognized the power-laden distinction between object-subject, nature-culture. She demanded an examination of the consequences of power-laden structures under which science had been operating. It is an ontological stance that described science as a material-discursive practice of production, not just simply description. Acknowledging the agency that science possesses, Barad (1999) called for an understanding that 'the world kicks back;' denying the idea that the relationship between the knower and the known is anything but symmetrical.

Agential realist ontology is concerned with the intra-action of the material-discursive, and Barad (1999) described this with a focus on instrumentation. That is to say people or knowledge come to exist the moment of discovery and are inextricably linked to the instruments used by the discoverer (i.e., material-discursive). Measures or apparatuses that are successful at capturing a concept require a broad range of practices that are related to time, place, and social interactions. An apparatus, where in the case of social science is the researcher his/herself, simultaneously constructs the subject and object and this is the first

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step in discovery (Barad, 1999). This must be taken into consideration in the measuring of health differences by race in the United States. Bohr stated in an essay on the description of nature that "theoretical concepts are defined by the circumstances required for their measurement" (1963). The circumstances surrounding the initial measurement of race has produced responses in our society, the most evident being inequality. This agency of science was at the time, ignored. That is to say, the reasons that our nation became concerned with race in the first place echo today long after Blacks were granted their freedom from slavery. Race has not been granted freedom from scientific inquiry under the false guise of objectivity being bias-free. The object and the agency of observation are inseparable (Barad, 1999) and this notion should be in the forefront of research questions, measures and design so as to promote social justice.

Rouse (1996) expressed the idea that feminists have sought a deeper understanding of science, beyond just gender issues, to more epistemological and ontological concerns. Barad (1999) serves as an example of this. She would describe the measurement properties of a phenomenon such as race as a physical-conceptual intra-action whose ambiguity requires the description of all features of its observations (Barad, 1999). That is to say Bohr (1996) recognized the social nature of science and called for an articulation of the 'apparatus' (i.e., researcher for social science) that acknowledges more complexity. In order to obtain true objective knowledge, the idea that the object-subject relationship is referent needs to be replaced with the stance that observation itself is a material-discursive phenomenon (Barad, 1999). Agential realism poses that scientific representations of knowledge are about consequences, possibilities, and interventions of the intra-acting world (1999) and pairs well with a strong objectivist epistemology (i.e., redefined objectivity).

The writing of Hacking (1999) elaborated upon dynamic nominalism, an ontological stance that converges with agential realism in a number of ways. Hacking described the making up of people. The social constructions of groups, such as race, were attributed to the observation of differences in appearance via the apparatus of skin color. The contrasts that are made between people and things as a result of the object-subject distinction produce actions/behaviors that are intimately connected to their description (Hacking, 1999). Descriptions of people and things as 'Black' (e.g., Black television, Black music, Black fashion, and Black health) are more than just language because these descriptions are deeply embedded in society. When the descriptor is gone, then the intentional actions related to it disappear. This notion is appealing to scientists concerned with the elimination of racial health disparities because it means, in theory, that if we simply got rid of 'race' as a descriptor of ill health, a reduction in disease prevalence for Blacks would follow.

When new modes of 'being' come to be so do new modes of action and behavior (Hacking, 1999). The logic of making up people might be compared to science. When feminist criticisms of science as being inherently dominant first emerged, so did a reflection from the field on its preoccupation with measuring difference, social control, and the categorization of people. This weak (or misidentified) objectivity had been deemed as the main producer of stigma and discrimination from these critics. Contemporary scientists whose desires are not to abandon objectivist ideals must come to understand science as an agent for social justice and continually work to remove inherent, historical biases in their work via constant critical reflection. Perspectives on causes and predictors of disparities need to be examined synergistically rather than in opposition to one another in order to undo the harm caused by a once domination-orientated science. The agency of science today can focus on multiple sources that contribute to racial health disparities in the United

States including the researchers, their tools, and organizational bodies responsible for the dissemination of related knowledge.

A statement by Hacking (1999) offered hope in the undoing of the harm caused by the construction of race; for every which way there is to be a person, it is only possible to be any one person at a certain time, in a certain place, and within a certain setting. Race is related to the historical preoccupation with deviance and therefore, as a result of time having passed, can be undone. The ethos of Black health generated by health psychologists has not been as effective as it could be for the elimination, or at least reduction of racial health disparities. Under a strong objective lens, the statistical procedures that dominate the health and medical fields (i.e., analyses of deviation) can be calculated from a new material-discursive standpoint so as to create opportunities for health promotion and abandon the measurement of racial health differences to calculate risk. This includes a critical reflection on macro- and micro-, nature and culture, object and subject relationships in the modeling of reality. Through these processes the agency of science would be to achieve social justice, not to perpetuate dominance and power.

Critical Interactionism as a Standpoint for Black Health Research

Denzin (1997) called for a synergy of perspectives when attending to behaviors or characteristics that are considered biological, gendered, or otherwise classifiable. Critical interaction has been described by Burbank and Martins (2009) as a new paradigm under which critical perspective and symbolic interactionism was synergistic as opposed to historically having been in opposition. Critical interactionism draws from symbolic interactionism the notion that situations are capable of being re-conceptualized and transformative through our interaction with others (Burbank & Martins, 2009). It is being suggested here that if the scientific community re-conceptualized the agency of science

under a strong objectivist lens, it would become capable of social justice via the way in which we interact with our data (subjects, observations, and people). Burbank and Martins (2009) pointed out an area of convergence between symbolic interactionism and critical perspective capable of achieving equality for those with whom we research.

In their writing Burbank and Martins (2009) turn to Kim's (1993) suggestions on the use of theory in nursing practice. The ideal use of theory in the research on race and health can be paralleled to what Kim (1993) described as a reflective approach in which the nurse (or researcher) adopts theories that are congruent to their own perspective and meaning of the problem by using their own reflections on the situation. The critical interaction approach has been deemed as being capable of solving complex health problems (Burbank & Martins, 2009). The approach allows for an understanding of how different types of knowledge (i.e., lay and expert perspectives) interact, and that the products of this type of interaction are informative and valuable. The identification of varied beliefs and larger societal meanings and how these two interact are what shape people's realities. As an expert, it is our privilege and ethical responsibility to understand the consequences of numerous realities. In sum, critical interactionism is capable of incorporating dual perspectives while maintaining their similarities and differences so as to understand micro- and macro-problems simultaneously (Burbank & Martins, 2009). This ability has been described by numerous authors as being achievable through strong objectivity and by members of science who are also members of marginalized groups (whether Black, female, or both) (Barad, 1999; Collins, 1986; Harding, 1991; Keller, 1991; Rouse, 1996). This is an ideal approach for understanding racial health disparities as it takes into consideration the complexities of understanding the meaning of race and health. Deriving research questions with personal meaning pertaining to historically marginalized groups contributes to the generation of an

objective lens through which structural, interpersonal and individual contributors to inequality may be identified.

Final Thoughts

Going back to the main thesis of this paper, objectivist epistemology has the potential to help in the elimination of health disparities when scientists become more capable of looking at the world from the outsider within. Black and feminist criticisms of the epistemology of science have resulted in increased or strengthened objectivity. This objectivity is capable and necessary for achieving social justice. It is capable of undoing the harmful use of categorizations that were measured, defined, and used to dominate via a descriptor of inferiority under weaker objectivity standards. This making up of people by science has perpetuated the racial health disparities we see today. The ontology and perspectives of feminists and Black academics has annunciated the intersections of several philosophies of science perspectives capable of promoting health and justice for marginalized groups in the United States. Agential realism, dynamic nominalism, and critical interactionism are perspectives for social scientists to adopt so as to increase objectivity for the greater good without abandoning objectivity as a goal of science all together and adopting absolute relativism.

I would like to end this paper with a metaphor about music that stems from a personal childhood experience. In this metaphor I am comparing racial and gender minority researchers to myself, the early learner of music. In this example, music is a symbol for objectivity and the events described are a metaphor for having gained a skill under false pretenses of what music/objectivity is.

When I first began to learn how to play the piano, it was made clear to me that I was following in the footsteps of all the great women in my family. Both I and family were eager

for my success. I recall the beginning of the primary music book used to teach the fundamentals of reading music, notes, and time signatures. This part of the book consisted mostly of words, and I was more concerned with getting to the music pages with pictures above the title of each song: this was representative of the far more interesting sounding songs. It was a red book with white font on the cover and contained songs like "Indian Dance" and "She'll Be Coming 'Round the Mountain". It wasn't too long before I was excelling and making my way through the part of the book and on to the 'good' stuff. I was successfully playing my assigned song each week without making too many mistakes in order to move on to the next.   The book ended with a duet spanning two whole pages! My teacher and I played this duet "Home on the Range", and in those moments, I was a prodigy in my own right. The two of use playing together sounded amazing the first time I heard it. The song was so rich and expressive, I could vividly envision the range where the buffalo roamed and the deer and the antelope played each time the melody was played. This to me was the epitome of what learning the piano was about: the ability to play beautifully complex music such as the great classic "Home on the Range." I was certain that these were the steps that Mozart must have first taken.

At the end of that very memorable lesson, I was given, rewarded with, my secondary music book. A book which contained songs by classical composers and music that took up more than one page containing complicated time signatures and combinations of notes that I hadn't seen before. We opened up to the first page and I was given my first piece to work on. It was played for me by my teacher, and I was left to rehearse throughout the rest of the week on my own. But, when she left, instead of elation, I sensed deep panic.

My secondary book did not contain the finger numberings, or labels, used to identify which finger to put on the respective piano key. At first, I didn't quite understand what this

meant or what was expected of me. I was, at the time, only five years of age. I sat there looking at the pages and was unable to make sense of what was before me, let alone play the music. I was baffled, confused, hurt, and utterly discouraged. What I had thought were notes were actually just descriptors of the fingers that I was supposed to use to strike the key- not the note itself! How was it that I was able to create music prior to my understanding of reading music? It was the numbers above each note that I mastered playing, not the music itself. My disappointment peaked the following day, when after much contemplation, I knew I had to 'face the music' and tell my family that I was no musician at all.

Heartbroken, I entered the kitchen to approach my grandmother and tearfully told her that I had let everyone down. My rapid success in the primary book, my promise for becoming a prodigy much like my hero Mozart, and my ability to play music was over. I wanted to abandon the idea of being a musician; after all, what was worse than having to admit that it was all a lie? "Home on the Range" was history. But I knew that by doing that, by abandoning music all together, I would never be able to play the complex and beautiful pieces of my favorite composers, let alone be the composer that I had dreamed of becoming. I had to admit that I had relied on the numbers, or labels to identify the notes rather than learning how the notes were intended to be read. It was a terrible feeling; but not one that I would ever regret having come clean about. I started from scratch, I faced my music teacher the next week with my grandmother by my side to break the news to her that I was a phony. My music teacher smiled. I was not the first pupil to whom this had happened.

It was painstaking, but I eventually learned how to read music. From there I continued to play more music, and from more music, to more instruments and to this day, I can sit down with *no* music at all and play my favorite pieces in their entirety on a number of

different instruments. Today I am not a composer which I had one day hoped to be rather I am a behavioral scientist. And this lesson has resonated with me in all endeavors I pursue. From this important lesson I learned to endorse critical reflection whether it is in music or in science. After all, science and art intersect constantly in the world in which we live.

Objectivity has the potential to generate knowledge that is intended to improve the quality of life for all people by creating complex, meaningful, and truer understandings of the world that in the past seemed impossible. It need not rely on historical labels, as the intention of such categorizations serve science in a particular place and time and cannot be carried forth. Such labels were created only to assist in the future generation on knowledge and at some point we must learn that their utilization is not scientific at all. Early scientists' goals of objectivity in the study of human life were contingent upon political agendas and preoccupations with power, control and dominance. That type of objectivity, when used today, is a failure of science because it relies on rough distinctions incapable of identifying people from one another instead of what should be truly represented. Objectivity, when done right, is capable of generating meaningful, complex knowledge capable of transforming the space in which we live. This lesson of labelling, transformation, and objectivity is one that I had learned firsthand at an early age. Through critical reflection it has served me and metaphorically, it may do the same for social justice agendas in science.

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Chapter 2

Consequences of conceptualizing race as a risk:

Science's naïve preoccupation with risk management

by

Amanda L. Almond, PhD[1]

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[1] Behavioral Science, University of Rhode Island, RI, USA

Abstract

The paper is an analytic essay that discusses the problematic nature of conceptualizing race as a health risk. Using a cultural framework, the apprehension of risk by individuals in society is discussed as interacting with the culture of health professionals. Statistical estimates of risk based on race are, in essence, a cultural value of experts that has been shaped by a modern health risk epidemic that encourages the communication of race as a disease risk. For Black Americans, being labelled as at risk by virtue of race is futile and generates criticisms and stereotypes pertaining to risk responses and the rationality of health behaviors. A critical investigation of how race as a risk might perpetuate racial health disparities is covered.

Risk in Behavioral Science Research

Psychological approaches to understanding risk in our society have historically been at the individual level. Risk apprehension in particular, has been studied by psychologists and brought into the picture factors like trust and culture (Talyor-Gooby & Zinn, 2006a). Social psychologists have also been concerned with the extent to which a risk evokes dread (Slovic, 2001). Psychological perspectives on risk apprehension allow for the opportunity to examine cultural factors related to the perception of risk, responses to risk, and how risk is communicated (Taylor-Gooby & Zinn, 2006a). A cultural approach to understanding risk in our society incorporates social interactions, personal meanings, and behavioral decision-making: this is an extension of the field's foci being primarily on the individual. This approach is salient to health psychology. Understanding risk and culture together might prevent health professionals from 'victim-blaming' or assuming that the individual is solely responsible for their health risk management. Larger social structures through which health risks are defined and communicated can be identified as playing a role in health-risk management when using a cultural approach.

The analysis of risk originated in the insurance business (O'Malley, 2004). This spread rapidly to members of other fields, such as epidemiology. Epidemiology is concerned with calculating two types of risk; one being the efficacy of a treatment or technology, and the other being the chances of an individual falling ill (Zinn & Taylor-Gooby, 2006). Translating risk from its use in the insurance business to epidemiology has changed its analysis in both a quantitative and qualitative fashion. Zinn and Taylor-Gooby (2006) referred to this translational pattern as a crisis of probability and statistics: outcomes are ascribed; damages, harms, and losses are measurable; and causes or results are controlled and isolated.

Central to risk analysis is probability theory. It asserts that variables are objectively measured; however society and its members can be put in danger if hypothetical assumptions replace truth and empirical knowledge becomes replaced with probability assumptions. This danger is the result of damages, outcomes, and causes failing to be measured objectively (Zinn & Taylor-Gooby, 2006). Researchers in social science must constantly work to ensure that variables of interest are measured objectively and that individual, group level, and sociocultural influences are considered.

The Importance of Frameworks in Risk Research

Cognitive psychologists have studied risk using a top-down approach that can be useful to understanding how individuals deviate from theoretical assumptions of risk. This is referred to as the 'rational actor model' (Zinn & Taylor-Gooby, 2006). It distinguishes between an individuals' acceptance of a rational choice in the face of a risk from the process of decision-making in daily life; the latter of which is more complex and takes into account sociocultural influences. The notion has been that the lay publics' interpretation and response to risk is irrational and that only experts are capable of identifying and defining what rational responses are. By focusing on choice in the face of risk separate from sociocultural influences denoted in everyday life, both social group membership and the individual's place within their group are ignored.

More generally, psychology has used two main frameworks from which risk-related behavioral decision-making has been researched; the psychometric paradigm and mental modeling (Zinn & Taylor-Gooby, 2006). Both frameworks are essentially linked to the aforementioned 'rational actor model'.

The psychometric paradigm is based on the assumption that lay perceptions of risk are not adequate for predicting decision-making because they rely on individuals' faulty

constructions of reality (Slovic, Fischoff, & Lichtenstein, 1977). Tverysky and Kahneman

(1974) add that although such constructions of reality may present themselves as faulty,

deviations from rational behavior are far too vast and systematic to be ignored. That is to

say, our reliance on heuristics, albeit useful, can lead to systematic and severe biases or errors

in risk-based decision-making (Zinn & Tyaylor-Gooby, 2006). It would then be the role of

the social scientists to uncover the patterns of systematic errors that influence risk

apprehension.

It is rather difficult to predict not only the rationale behind a risk response, but to do

so empirically is a challenge as well. This may be seen as unsatisfactory or less than ideal for

dealing with items on both social welfare and social justice agendas. Slovic, Fischoff, and

Lichtenstein (1981) suggested that some of these distinguishable patterns of risk responses,

within the psychometric paradigm, include perceived personal control over a risk, familiarity

with a risk, and the source and situation. This framework began as part of the systematic

evaluation of risk by psychologists. This evaluation also includes perceptions of the risk as

offering equal gains and losses or the ability to place blame outside of oneself. Otway and

Thomas (1982) and Swaton and Renn (1984) explained that beliefs and attitudes about the

nature of the risk, its consequences, personal history, and justifiability of the decision are

important when trying to predict responses to risk. Rohrmann (1999) however, reminded

researchers that before any of the empirical findings from within this research paradigm are

generalized, cultural context needs be explicated. These points were summarized as risk

perception being both a technical-statistical and social-subjective topic (Zinn & Taylor-

Gooby, 2006). This is to say that methodological approaches to this topic need to be diverse,

and that there is no sole research design capable of effectively analyzing risk. Its analysis

requires mixed methods and multiplicity, particularly when trying to predict responses to risk.

The second main framework, mental modeling, is used to understand risk assessment and apprehension as well. The mental modeling paradigm can be compared and contrasted to its psychometric counterpart, but pedagogically, they should be used in concert. It differs from the psychometric approach in it uses of primarily qualitative methods to identify lay perspectives of risk. Atman and colleagues (1994) expressed the importance of understanding mental models as they tend to be overgeneralized and misconceptions can inhibit learning. Similar to the psychometric paradigm, mental modeling is an approach that attempts to identify the accuracy of lay knowledge in comparison to expert knowledge. The goal of this approach is to make lay frameworks more similar to those of experts and to avoid biases and errors from influencing rational decision-making (Zinn & Taylor-Gooby, 2006). Criticisms of this approach are that it is misleading to assume that expert knowledge is cohesive and objective, and individual's orientation to expert knowledge varies greatly based on trust (Zinn & Taylor-Gooby, 2006). Nonetheless, both paradigms are necessitated by social research and should be integrated so as to indicate correspondence and dissimilarity between lay and expert perceptions of risk.

An integrated approach for social researchers could aid in identifying how experts are sources of error or systematic bias in lay risk-responses. Because risk apprehension is dynamic, identifying sources of error within risk communication, or those who identify risk (i.e., scientists) is a critical part of our analysis of risk and eventually prediction of risk responses. This is not, however, too common a practice within social science. Examining expert risk communication as a source of error for predicting risk apprehension is novel to the field of behavioral science. The question being raised here stems from the

aforementioned risk-analysis paradigms and that is: are we as researchers taking into account the systematic biases/error of experts the same way in which we are taking into account the 'faulty thinking' of lay people? Reliance on heuristics by either expert or lay person alike could inform researchers when trying to predict 'rational action'. This point, regarding heuristics, becomes critical as the discussion moves towards the conceptualization of race as a risk and later, the communication of such risk knowledge by experts to laypeople. The basis for this chapter is to explore the relationship between physicians' use of probability statistics in risk communication and racial health disparities, both of which speak to the need of a more integrative framework so as to empower individuals. It is being asserted that health probability statistics, specifically prevalence of illness within a racial group, is a heuristic all too commonly used among health professionals, and this is made evident by their communication of race as a risk.

The ways in which heuristics contribute to bias in decision-making (for all, both expert and lay) include representativeness, availability, anchoring, and adjustment (Zinn & Taylor-Gooby, 2006). Tversky and Kahneman (1974) developed this range and described its relatedness to the assessment of risk. The concept of representativeness is the tendency for individuals to compare risks with others and use superficial indicators (e.g., probability estimates) to determine whether or not a risk is specific to a certain social group (e.g., race). The risk of cardiovascular disease among Blacks, for example, might be assessed by recalling the number of Black acquaintances (or patients, for physicians) that have had cardiovascular disease. The second source of bias in risk-assessment is availability. It relates to representativeness because it refers to the ease at which such matters are brought to mind and this, too, helps to determine the perceived probability of a risk actually occurring. For example greater exposure to superficial indicators would make the assessment of a risk more

available. Anchoring refers to respective past experiences and their role in determining the starting point from which a risk is assessed. Finally, adjustment refers to individual differences among orientations to gains and losses.

The first two heuristics mentioned (representativeness and availability) are of significance when discussing the topics presented here. It is being asserted that these sources of error when assessing risk have the potential to perpetuate racial health disparities because they are unrecognized within, among, and by experts and as a result make 'truths' communicated to society far less objective then they are perceived. Biases in risk perception and communication held by experts need to be systematically addressed by social science. Representativeness and availability can systematically contribute to bias in decision-making and risk communication because they rely on exposure, media coverage, frequency, and immediacy of a risk (Zinn & Taylor-Gooby, 2006). This supports the idea that overall, expert knowledge is neither cohesive nor purely objective and thereby, expert conceptualizations of risk are likely to have the same characteristics. Rejections of 'rational action' by the lay person are not only influenced by trust and culture, but perhaps the lack of consideration that science has given to expert's sources of knowledge.

It is important to highlight a final, and perhaps more appropriate framework stemming from the work of Kasperson and Kasperson (1988) and Renn and colleagues (1992): a sociocultural framework for understanding culture, risk and behavior known as the social amplification of risk framework approach (SARF). The SARF approach is intended to combine risk perception and risk communication into one domain. This framework has been deemed as appropriate when examining why race is considered a risk by health professionals because it takes into account the role of the expert by addressing risk-communication. The key to this approach is that risk messages are understood as social

events and are therefore subject to transformation via individual and social amplification (Pidgeon, Kasperson, and Slovic, 2003). The SARF approach consists of two phases: first, how risk perceptions are formed by social processes (e.g., heuristics and risk source) and secondly, how risk messages are disseminated in our society (e.g., mass media and social interactions). These processes interact with one another to either attenuate or amplify the risk 'signal.'

SARF is a more integrative psychological approach towards understanding the sociocultural nature of risk. It has been constructed under the objective ideal of science (Zinn & Taylor-Gooby, 2006b), that is, the rational actor or psychometric model, but that is not to take away from the idea that this is a framework that encourages focusing on the subjective nature of communication. The qualitative research that has dealt with the sociocultural nature of its communication has been historically subjective. Thereby, support for the SARF framework as the most adequate basis for all types of risk research (i.e., responses and/or communication) has been because of its realist ontological orientation, inherently making a strong distinction between the subjective and objective (Rosa, 2003). That is to say, social amplification theory incorporates both top down and bottom up approaches to research. Such a framework raises the potential to examine phenomena not otherwise understood. Gaining a stronger sense of objectivity while distinguishing and considering the more subjective influences on risk perceptions and responses is encouraged for the achievement of social justice. Social amplification theory can handle the dualistic nature of the risk conceptualization, allowing for meaningful research among and for those who have been identified as 'at-risk'.

The Emergence and Culture of a 'Risk Society'

Tulloch (2006) discussed the cultural turn that the risk research debate has taken; it has shifted its aim from modernist welfare to personal responsibility. It parallels a shift in our medical cultural from control over one's health being in the hands of a medical doctor or deity to being in one's own hands. This cultural turn also parallels a shift in health research from a macro- to micro- focus; all of which is indicative of a shift in the meaning of culture itself. Tulloch (2006) described a shift towards 'cultural ordinariness', which is the notion that all people are *with* culture and thereby researchers need to identify the deep personal meanings of risk among the many (lay and expert, Black and White). This macro-to micro- shift further necessitates integrative approaches to empirically developing objective knowledge pertaining to risk and its affiliated behaviors. The premise in this argument is that subjective experiences (culture) are vast but necessary to consider, so as to avoid replacing truth with assumptions of probability.

Social groupings in our society are becoming less significant when explaining risk-related differences or health disparities and people, today, are more individualized and reflexive (Jones, Abbott, & Quilgars, 2006). Paradoxically, empirical evidence has been in support of the idea that some groups experience more risk-apprehension than others (i.e., Jamieson et al., 2012). Some psychologists still conceptualize risk-responses as an individual's ability to perceive and respond to risk with deliberate calculations (Jones, Abbott, & Quilgars, 2006); ignoring what is social and interactional. Personal identities are created by the individual and, most often, from preexisting, disintegrative groupings (e.g., race, gender, class) that determine opportunities and possibilities in our society; hence the dualistic nature of risk (both individual and social) (Baxter & Britton, 2001; Jones et al, 2006). All of which is to say, cultural shifts in our society from industry to risk; collective to

individualistic; subjective to objective; and community to public all have the tendency to leave the most disadvantaged group endangered by 'risk' (Jones, Abbott, & Quilgars, 2006).

When inequalities in our society become individualized, the influence of structural inequality is often ignored. Blame can become placed on the individual and their faulty-decision making. Societal crises (such as racial health disparities) become viewed as the result of individuals' action (with expert and social influences deemed as unrelated) and this action becomes characteristic of the group to which the individual is affiliated. With race and ethnicity, this viewpoint leads many to believe that differences between racial groups are natural rather than socially derived or that certain behaviors are to be expected of a racial group. So while the promise that individuation of culture allows for creativity and choice, Jones and colleagues (2006) point out that social and structural influences on culture continue to shape both individuals and their groups and cannot be ignored or misinterpreted without undesirable consequences.

Cultural influence and risk make for more intensive work in order to generate objective knowledge regarding the prediction of risk behaviors. But long before this work had or can be done, the principle of increasing risk awareness has been adopted by researchers and practitioners of health promotion on a very large scale. Their aim has been to reduce the number of individuals who are ignoring early-warning signs by communicating health precautions. In the context of social amplification theory, communicating health risk as a medical practice might open up the door for eliminating 'rationally-unfounded rejections' (Zinn & Taylor-Gooby, 2006a), or better put, then attenuations of risk communication become the faults of the individual, not the expert communication, or risk identifier's (e.g., scientists, medical staff or health officials).

The modern conceptualization of risk and its related behaviors lacks coherence between its estimated magnitude and subjective acceptance (Skolbekken, 1995). This conceptualization has materialized in Westernized countries (especially the U.S.) into taking a 'worse-case scenario' approach to all health risks. For example, perinatal practices in the United States evolved into the treatment of all women as being at a high-risk for birth related complications and as a result, the employment of modern technologies such as fetal and maternal monitoring has become the norm. Empirically, support for the worst-case scenario approach adopted by the United States can be found in the systematic review of articles published in international medical journals containing the word "risk". From this, Skolbekken (1995) identified what he called a 'risk epidemic', or, a 300% increase in the use of the term "risk" in medical journal article titles over the past 30 years.

Skolbekken (1995) attributed the origin of this modern risk epidemic to the mis-application of scientific appraisals of risk. He pointed out that less-than-ideal risk responses are in part, the result of experts and their application of probability estimates. He stated that researchers' lack of interest in the epistemology of risk and ideas that natural phenomena can only be identified by means of science, not human conduct, have shaped this epidemic. Noting that risks are attended to and handled based on ethnicity, these processes presents a challenge for social scientists to tackle. Ahmad (2006) spoke to this dilemma specific to Blacks in our country, citing that medicine has expropriated the definition and treatment of health and illness from the individual (Illich, 1977).

The role that culture plays in risk-assessment and response is beyond just race or ethnicity. The everyday lives of individuals, while deemed as a challenge to understand, are critical to risk management because social identity and group membership are intertwined with behavior. Therefore it is critical to mention that the extant research on risk has been on

isolated risk *not* mutual or interactive risks (Zinn & Taylor-Gooby, 2006b). This culture of risk, especially health risks, demands that researchers and practitioners approach the micro-, mid- and macro- levels of individuals' sociocultural environment in order to promote and predict desirable responses to risk communication. Zinn and Taylor-Gooby (2006b) asserted that when taking an approach to increase risk awareness, professionals and researchers alike should capture the experience, anticipation, and biography of individuals. This is particularly salient to Blacks and other social groups to whom structural influences are undeniable, yet often overlooked or deemed as naturally occurring.

The culture of risk is nested within psychological and medical contexts. That is to say in our 'risk society' social and health sciences would be the governing bodies. For example, locus of control research done by psychologists has gone from focusing on factors outside of the individual to focusing on ones that are seen as within our control. Simultaneously, considerable advances in the field of medicine have shaped how we handle our control over a risk. Modern technology has eliminated nature as the primary threat to our health and replaced it with human behavior (Skolbekken, 1995). This has shaped our modern culture of risk tremendously. While technology has increased the amount of control that individuals have over nature, the prediction of behavioral responses to risk remains aloof. The link between risk-assessment and risk-response has proven to be difficult to define in strictly objective terms.

There is much to be gained (and lost) by exploring the risk epidemic. A benefit of the epidemic has been a shift from a monocausal paradigm to one in which multiplicity is central. Today researchers discuss the factors that relate to health and illness, not in terms of a direct cause and effect, but instead that multiple factors vary and relate to one another and that those relationships are not always reliable or reproducible. This can be partially

attributed to an emphasis on risk. But it has also brought into question which variables are the best to focus upon. For example, what exactly are the effects of identifying and communicating a non-modifiable risk factor? This uncertainty underlies much of the problem with risk assessment research and challenges the utility of communicating probability assumptions.

The statistical paradigm under which science has operated is not simply the origin of the risk epidemic, but rather a 'necessary condition' (Skolbekken, 1995). The use of probability statistics in risk communication research needs to be treated and understood the same way in which other technological advances have been treated and researched. There are lessons to be learned, perhaps interdisciplinary, as to how risk-regulation is operationalized (e.g., environmental law and risk regulation). Amidst our cultural preoccupation with risk, health risk communication benefits (and dangers) have remained uncalculated. So how might we understand appropriate responses to risk in the first place? Particularly, how might we identify an appropriate response to communicating a health risk that is not modifiable? Only in a 'risk culture' would one even suggest that the risks of communicating risks need to be assessed.

Health Risks in Social Science

Currently, risk assessment is central to medicine. Health promotion has become prevalent over the mere absence of illness, and fields such as behavioral medicine have emerged. But previous technological successes in medicine (e.g., vaccinations, disease eradications) have left scientists perhaps overly optimistic in pursuing risk management as a means to health promotion. Behavioral experts have hoped to generate 'rational' (or simply appropriate) reactions to their communication of risk; however, most often the 'risks' are just probability statistics guised as objective truth communicated to the general public.

Health and social science's ability to relate (with varying degrees of accuracy) unwanted illness or death to multiple, interrelated factors has led those outside of the field (i.e., the majority of people) to believe that that risk estimation is the rational way to gain control over illness and disease. As mentioned earlier, this approach ignores the importance of examining the social nature of risk communication and its effects on health promotion.

Health experts have shifted towards linking risks to causes, which I would argue, makes for poor science as exact causal links are difficult to establish. Slobekken (1995) offered the example of heart disease, which has more than 300 risk factors associated with it, all of which have gained 'causal status.' This is partially explained by the increase in statistical and diagnostic tools available for measuring and identifying risk. As a result, risk factors have become the subject of treatment, instead of the individual or specific behaviors or contexts. Cause and risk become the diseases that health scientists aim to cure. This is poor science because as the identification and quantification of risk increases (so as to eliminate it), so does the likelihood of identifying new ones in the process (Skolbekken, 1995). As a result, the identification of risks relies less on actual human experience for validation and more on the science and technologies employed for their identification.

Health risks are becoming validated not by having been experienced, but by having been approached scientifically by experts. This makes a distinction between whose deciding what's happening, and who it's happening to. This notion is detrimental to the health of Blacks in the U.S. who have a long history of marginalization. Ahmad (1994) has argued this point as the monopolization of the definitions of truth. Specific to the health of Blacks, he added that both the concept of race and the institution of medicine are socio-political constructions, supported by dominant ideologies and often serve to legitimize and reinforce the other (Ahmad, 1994). This is not to say that scientifically calculated health risks are not

real threats, but often their social construction is ignored, playing a large role in their conception and management. Paralleling this notion is the idea that race is not a true 'risk' for one's health, it is a social construct used in probability estimates of disease. Thereby managing race as a risk and apprehending this risk (i.e., eliminating health disparities) would require sequences of dynamic 'rational action**s**' by many members of society and *not* simply the rational action of just one. Experts and individuals both need to take rational action in our risk society to apprehend real (experienced) health threats and eliminate perceived (estimated) risks capable of lessening well-being. With an appropriate understanding and conceptualization of race in this country, its identification as a health risk becomes less meaningful, and from a psychological perspective, downright dangerous for the health and well-being of Blacks in United States.

Finding Race on the "Risk List"

What determines a risk to be real or true is not well understood. This was described earlier as science not being concerned with the epistemology of risk. Scientists are now presented with 'challenges' that some risks gain the status of real without the use of scientific methods, but instead by reports of personal experience. By studying the scientific construction of risk (i.e., psychometric paradigm vs. mental modeling) it becomes more evident *why* certain constructions have been labeled fact while others are ignored. On a quest for objective truth the necessity of integrating subjectivity was somehow lost. Examining these practices can either substantiate or suggest the elimination of communicating estimates of risk as a health care practice. When non-modifiable health risks emerge and are communicated and the outcome of such is never evaluated- the elimination of such a practice seems desirable and assessing the construction of the risk is necessitated. Social scientists are among some of the experts most capable of addressing this so as to promote

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health, good science, and effective health care practices, particularly among groups of people labeled as 'at-risk.'

The relationship between our culture's preoccupation with risk and disease prevalence among social groups is an interesting one to consider. While the relationship between the two cannot be simply explained, acknowledging the scientific approaches and frameworks for analyzing risk can increase our understanding. When risk-responses are viewed by experts as a mode of health promotion and seen in the eyes of the 'actor' as anything else, misappropriations in risk communication persists. Skolbekken (1995) made the same point- simply rephrasing certain risks and communicating them to the general public yields misinterpretation and confusion about health promotion and medical resources. Perhaps the most important consequence of misconceptualizing a health risk is that despite the controversies surrounding how to manage, eliminate, or reduce a particular health risk, it can, and will, continue to be identified as fact or expert knowledge and applied in clinical practice (Skolbekken, 1995). When group membership (race) is labeled as a risk, how/what is one to manage?

In an institution founded on the premise to 'do no harm' it might be assumed that such a fundamental issue had already been addressed by those in the field of medicine. But not only do non-modifiable risk factors for illness persist; they remain inept in terms of promoting health. Non-modifiable risk communication from health experts is itself, risky business. Becoming cognizant of one's own health risks is capable of reducing subjective health, leading to disease and confirming the knowledge of such risks (Skolbekken, 1995). Individual strategies for dealing with health risk communication is actually more fatalistic than supporters of non-modifiable risk communication would care for. At best,

communicating race as health risk results in worrying about matters that are beyond one's control or worse, ignoring matters that are within one's control.

The Problematic Nature of Non-modifiable Risk Communication

Empirical evidence in support of there being a 'dark-side' to health risk communication is found in the work of Gillespie (2012). He asserted that statistical health risks were widely misunderstood by the general public and more important to the present topic, misapplied by professionals. Measuring the vulnerability of a patient for a particular disease was found to alter one's health identity. This is primarily due to the fact that health risks in our society are viewed as being causal or even as an illness itself. Vulnerability, in the eyes of many, is a disease to be treated with medication, behavioral modification, and surgical intervention. In efforts towards understanding the experience of being labeled 'at-risk', Gillespie (2012) generated a basis for its reconceptualization. He focused on the social conditions and personal meanings of risk and their interaction with probability assumptions. In his research, individuals examined those whose illness vulnerability was assessed numerically and had a threshold, that if crossed, represented being 'at-risk' (specifically cholesterol and prostate antigen levels).

The aim of Gillipsie's research was to identify the subjective meaning of being at risk to understand the meaning people attach to health and the impact that such a meaning has on their daily-lived realities (2012). A common experience reported was that participants no longer viewed themselves as healthy after finding out that they were at risk. Being over the numerical threshold for either cholesterol or prostate antigen levels constituted the self-perception of ill-health. Another theme was that their 'risk' was always in the back of their minds. Being screened at the physician's office was the most salient reminder of the risk, and between visits, the risk would remain in the background of their thoughts. The theme

of embodiment reflected the lack of trust in one's body to communicate health and illness because their vulnerability was symptomless. This can be related back to points made by Ahmad (1994) who suggested that modern medical practices have expropriated health and illness from the individual. Conceptualized by participants as a symptomless illness, risk required expert technologies such as screening and calculating in order to be identified, defined, and treated. The individual, and their body, was deemed as inadequate. In essence, as a result of being unable to calculate statistical risk on their own, individuals felt that their bodies were inadequate and their personal experiences were of no value. Numerical risk status was seen as potential rather than probability (Gillespie, 2012) and the biggest problem with this is that people viewed themselves as living a limited life.

Being 'at-risk' has been conceptualized by individuals as being on the brink of illness and this made them feel vulnerable (Gillespie, 2012). It influenced their current health status and the future of their health. The consequences were very real and impacted more than one aspect of their life. This is particularly problematic for health promotion because of the lack of a normative risk role. Individuals have no prescriptions or clues as to how to go about their lives after being identified as 'at-risk' (Gillespie, 2012).

A metaphor presented by one of Gillespie's participants described the experience of being labeled as 'at-risk': it's like a stone being dropped in a pond, the ripples representing how the risk spreads outwards and affects other aspects of an individual's social world. Perceived health status becomes altered by the identification of a risk and influences our social interactions. Gillipsie (2012) described how people who were identified as 'at-risk' did not go about presenting their statistical probability to others; they were defending and representing a version of themselves to society at-large. This research points to a critical flaw of risk communication: estimates of probability when treated as fact by experts are

interpreted, by individuals, as potential and ultimately limiting. This suggests that experts need to undergo careful consideration of the risks they chose to identify and communicate.

As previously mentioned, science has aimed to remain objective so it has adopted, primarily, the 'rational actor' framework. It assumes that to improve risk responses laypeople are required to alter their perceptions of the risk to be more similar to those of experts in order engage in behaviors that will lower or eliminate a risk. But this is a theoretical assumption, not a response that has been empirically documented, such as the work of Gillespie (2012). In fact, when we look at the psychological theories used in behavior change interventions, concepts like self-efficacy are often the best predictors of engagements, not the assimilation of risk perception among lays and experts. With insight from the participants in the Gillespie study, we have learned that lives are altered upon communicating the probability of ill health. Non-modifiable risk communication creates uncertainty and vulnerability rather than clues for health management. Among some individuals, screenings were avoided to delay the experience of stigma surrounding being 'at-risk.' Individuals labeled as at-risk ought to be directed towards engaging in preventative action through empowerment, rather than disarming them of their subjective experience through the communication of a non-modifiable risk.

Future directions should specify the role of the physician in risk designation, as this is part of the interaction that could inform the response and experience of being at-risk (Gillespie, 2012).   As physicians increasingly use health screenings to assess their patient's level of risk, this topic will generate concern from individuals within health, social science, and public policy. The responses of patients need to be understood and deemed valid so that risk communication be employed appropriately, if at all. Psychological frameworks and behavior science research is most capable of contributing to this body of knowledge.

Multiplicity in disciplines as well as methods might explain personal meanings of health and perceived risk; measure the effects of risk communication; and model the social, cognitive, and behavioral processes related to being labeled at risk via group membership, all simultaneous to identifying a potential explanation for racial health disparities in the United States.

When Being Black is Deemed Bad for Your Health

Blacks in the United States have been labeled as being at-risk for numerous illnesses. The modern application of risk, one in which social group membership constitutes a risk, has landed Blacks on the 'risk list' for a number of health conditions. This has been based on the prevalence rates of such illnesses in comparison to other racial (both minority and dominant) groups. The Centers for Disease Control identify the "conditions and risk factors" most prevalent among Blacks in the U.S. as being hypertension, smoking, obesity, poor nutrition, physical inactivity, high cholesterol, influenza vaccination (under-vaccinated), infant mortality, teen pregnancy, asthma, and tuberculosis (2012).

Compounding risk with race presents yet another challenge for social scientists to overcome. The two must be disentangled in order to identify what produces optimal behavioral responses to vulnerability so that health disparities might be reduced. In a 1978 publication of the American Journal of Public Health, an article articulating the relationship between skin color and high blood pressure stated that the social relations between Black and Whites were determined by skin color index (Tyroler & James, 1978). The caveat to that logic was that even when the explicit intention of experts was to reduce racial disparities in health, the perpetuation of racial discrimination remained problematic. Psychologists have long been concerned with this perpetuation because of the known mental and physical health consequences.

The psychological approach to understanding behavioral responses to risk has focused on the trust between expert and layperson. Most infamous is the Tuskagee experiments. Poortinga and Pidgeon (2005) suggested that the trust that an individual has in an expert is intertwined with attitudes and fundamentals (heuristics) about the risk-topic and are contextually sensitive. Empirical support suggesting personal experiences and mistrust play a role in health behaviors has recently been gained in the comparison of risk responses between Blacks and Whites. Jamieson and colleagues (2012) identified direct and indirect pathways between perceived racial discrimination and health disparities serving as an example of a psychological approach to this topic.

Discrimination was operationalized in this research by rejecting Black participants via computer-based cross-racial interactions in the work by Jamieson and colleagues (2012). Its effect was indicative of physiological, affective, cognitive, and behavioral responses to risk-taking. It can be imagined that such responses would have been even more provocative if the experimental conditions were face-to-face interactions. They found that anger, increased cortisol levels, increased memory, increased sensitivity to rewards, and an increase in risk-raking behaviors were all part of the response profile of Blacks in the cross-racial experimental conditions. When these findings were taken together, it became clear that social interactions were related directly and indirectly to health behaviors (i.e., risk-taking and reward sensitivity) and physical health measures (i.e., arterial blood pressure and cortisol levels).

In addition to these findings on the relationship between perceived discrimination and risk-taking behaviors, a meta-analysis conducted by Pascoe and Richman (2009) offers more empirical support to the notion that social interactions relate to, and in some cases predict health behaviors. These findings (Jamieson, et al., 2012; Pascoe & Richman, 2009) in

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concert, portray how perceptions of discrimination, for which skin color is a proxy for, relate directly to mental health, physiological stress responses, physical health, health behaviors, and risk-taking. These findings raise pragmatic concerns that scientists need to address. For example, do the benefits of conceptualizing race as a health risk outweigh the negative consequences of communicating this risk and it being perceived as discrimination? How might race as a risk being communicated via physician-patient interactions mirror stereotyping or prejudice? Just how useful are racial categories in medical practice? These questions permeate cultural competency debates; however, will remain difficult to resolve if the epistemic concerns about non-modifiable risks remain unanswered by social scientists.

In attempts to answer the latter of these concerns, Braun and colleagues (2007) posed the question: how useful are racial categories in medical practice? Racial categorization has shifted over time and in meaning and has shaped medical pedagogy, practice, and thinking (Braun et. al., 2007). Occurring over the past three decades, simultaneous to the aforementioned 'risk epidemic', is the widespread use of U.S. Census racial categories in medical research and practice vis-a-vis the National Institute of Health requiring the categorization of participants by race to be included in the research that they fund (Braun, et al., 2007). Braun and colleagues point out that there is nothing naturally occurring about the U.S. Census categories, yet genetic research on identifying variations related to race has become even more prominent since its emergence. It is being contested here that racial categorization is neither a reasonable proxy for genetic variation research nor an effective technology in reducing the diseases prevalent among such groups.

In support of the notion that racial categories are historical rather than natural, the work of Bamshad (2005) looks at the relationship between genetic variation and race. In a word, the relationship was described as *modest*. What Bamshad (2005) found was that genetic

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variation is highly correlated with geographical ancestry. In evaluating the usefulness of racial categories in predicting health, Bamshad looked for correspondence between genetics and ancestry, racially prevalent diseases being influenced by the same versus different gene variation within that group, and whether or not such effects (if any) are the same for other racial groups. Better put, the research sought to address, respectively, the validity of race as naturally occurring, within group homogeneity, and between group heterogeneity. Findings suggested that there are alternatives, even genetically derived alternatives, to race that are better predictors of health among ethnic groups. These include geographical ancestry (i.e. environment) and explicit genetic information- which was found to be unique, rather than shared by individuals of the same racial group. Categories of race capture little-to-no information about ancestry, making it a poor predictor of genetic risk, and in turn also a poor predictor of individual responses to medical treatment. Overall, this line of research reveals that genetic factors (for which race has been falsely assumed to be a proxy) are not adequate at explaining the prevalence of diseases among racial minority groups.

The application of race by physicians, as well as the nature of cross-racial interactions in a medical setting is worthy of deeper investigation. Interactions between physicians and patients are becoming more central to understanding the role that risk communication plays in health decision-making and behavior. Empirical support regarding physicians' use of race in medical treatment can be gained by the work of Snipe and colleagues (2011). Data from their qualitative research revealed differences in the role that race played in medical-decision-making between Black and White physicians. By presenting physicians with a written profile of an individual who was a smoker, had untreated hypertension, and Type II diabetes, Snipe and colleagues (2011) elicited from the physicians the medical information that would be necessary to treat the patient and the importance of race for treating the patient. Focus

groups were conducted separately for White and Black physicians. Findings revealed that all of the doctors wanted to know more about medical and family history and the weight of the patient for making treatment recommendations.

Differences were evident between Black and White physicians in terms of the importance of race for treating the patient (Snipes, et. al., 2011). Black physicians stated that race was an important factor for determining treatment. Rationale for wanting to know the race of the patient was offered by some of the Black physicians, stating they would offer more aggressive treatments to minorities because of disease prevalence as well as racially-specific medications. Black physicians expressed that by knowing the race of the patient, they could better interpret their understanding of risk and cultural values surrounding alternative treatments. On the other hand, White physicians were less likely to use race when informing their medical treatment for the patient. They felt that patients should be treated aggressively regardless of race, and that other factors were more important for determining potential treatment outcomes. Snipes and colleagues (2011) discussed this finding as White physicians not consciously, or overtly viewing race as important as did the Black physicians. It was also interesting that the White physicians highlighted the potential negative effects of using race as a health factor as potential stereotyping. The findings regarding White physicians might suggest that as a group, they were not as forthcoming, or perhaps unaware, about their perceptions of the role that race played in their decision-making or interactions.

Final Thoughts

Race itself has been misconceptualized as naturally occurring by experts in nearly all fields and across all disciplines. What we've been really measuring when we try to capture and define one's race has really been their potential for the experience of discrimination, not

race in the (falsely) biological sense. Jaffe (2012) reiterates a point mode by James Jackson at a keynote address to the American Psychological Society: statistically identical Blacks and White have similar health statuses. So it is not that race predicts health as would a risk, but rather the co-occurring socially inferior statuses are a threat to health and well-being (i.e., education, income, and housing). Communication from health experts that being Black puts one at risk for illness and vulnerability is an addition to other potential co-occurring inferior statuses. Problems with medicine's current conceptualization and treatment of race have influenced the way in which we understand health disparities, and in turn, how health professionals manage and communicate risks they may attribute to race (Jaffe, 2012).

In regards to race as a risk in science, the debate between a biomedical conceptualization of race versus a socially constructed one goes unresolved as we ignore the epistemology of such a risk. Communicating race as a risk is even less understood, but just as likely to be a challenge due to the competing meanings of race between and among experts and lay people. Being Black in U.S. has been historically debated upon as representing either a natural occurring group or a socially constructed concept, captured only by checking a box on the U.S. census or being visibly dissimilar. The objectivity of race, in terms of measurement properties, is weak as both a physiological and social measure. Not fully understanding the experience of 'living while at risk' makes complex the examination of deviations from 'rational action.' The absence of a homogenous 'Black' experience furthermore confounds the identification of what is rational in response to being identified as at-risk as the result of belonging to a specific racial group. At the heart of risk analysis is the demand that both gains and losses are objectively measured and known. In the face of what has been presented in the present paper, the idea of conceptualizing race as a risk has become nearly futile. Conceptualizations of any risk, specifically non-modifiable risks such

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as gender or sexual orientation continue to occur and will continue to be problematic for social scientists concerned with investigating and resolving health disparities. Psychological perspectives on how to approach the consequences of racial and risk experiences would benefit greatly from increased objectivity and the adoption of a sociocultural framework for research and clinical application.

Experts can rely too heavily on the heuristics of their own culture, ranging from statistical probability in risk calculations to the subjective nature of qualitative work, without placing enough of an emphasis on the social interactions between and among the individuals they seek to benefit. Social science will continue to strive towards the elimination of racial health disparities and the improvement of well-being for Blacks in this country. But as long as there is ignorance of scientific knowledge illustrating the health and behavioral consequences of perceived discrimination in clinical practice, the progress made my social science to bring about social justice for Blacks will be impeded. The extent to which progress will be hindered depends on the risk-related use of race diagnostically in medical interactions.

Understanding the construction and consequences of race in our country is not an easy task for any one discipline. Understanding the problems that arise with race *as* a risk is therefore a challenge for social scientists. The extent to which race as a risk has yielded undesirable outcomes is not yet fully understood, but is currently being identified within multiple disciplines. The aforementioned literature alludes to the possibilities that health risk communication can be a faulty practice with results often being opposite of what has been expected by medical and social experts alike. Health professionals and social scientists are in need of the ability to perceive, interact, and conceptualize race more accurately (Hall, 2005). Racial health disparities are well known by professionals in our society and are unique to our

country, culture, and chronology. This necessitates risk management strategies less prone to bias. The gold standard of scientific objectivity might serve scientists when measuring race as a social construction rather than as a naturally occurring phenomenon.

When physical characteristics have historically been used to generate and validate differences between Blacks and Whites, a greater understanding of what the concept of race truly assesses becomes necessary. Attempts to understand stereotyping, discrimination, or health risk responses attributed to Blacks, as a group, has been a practice with limited capabilities for social justice via science because in many of these instances, race has been implied as being a homogenous and valid construct. Neglecting that physical characteristics (i.e., skin color, hair texture) are experienced as sensory and result in the validation of this sense, the aforementioned research on social interactions are often interpreted as shared by all Blacks, and not as on a continuum influenced by the salience or presence of physical/racial characteristics. This is to say, the social construction of race makes it less about 'being' Black and all about whether you are 'perceived' as 'being' Black. Members of our society must familiarize themselves with the infinite number of Black perspectives shaped at multiple levels (i.e., individually, interpersonally, and structurally). As Hall (2005) suggested, in order for science to uphold its distinction as striving to be unbiased and objective, the conceptualization of race needs to be less confined to intellectual domination and more inclusive of the social nature in which race is defined in our country to effectively increasing scientific rigor.

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Chapter 3

Initial Validation for the Racial Microaggression in Medical Practice Scale:

Exploring Reliability, Factor Structure, Predictive Properties, and

Open-ended Responses

by

Amanda L. Almond, PhD[3], Lisa Harlow, PhD[4],

and Brittney Richmond, B.A.[5]

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[3] PhD, August 2014, Department of Psychology, University of Rhode Island, Kingston, RI 02881, Email: amandaalmond@my.uri.edu

[4] Professor, Department of Psychology, University of Rhode Island, Kingston, RI 02881, Email: lharlow@uri.edu

[5] Research Assistant, Master's Candidate, Smith College

Abstract

Validation of a 10-item scale intended to measure microaggression towards minority patients from their physician is the primary focus of this research. The 'Microaggression in Counseling Scale' was employed to minority participants, replacing the term *therapist* with *physician*. Psychometric properties, including generalizability, and predictive features are discussed.

Introduction

Microaggression is a construct and area of research whose emergence in the field of psychology has occurred over the past ten years or more. It describes the brief commonplace indignities that are verbal, behavioral, or environmental and occur unintentionally and automatically to Black Americans (Sue, et. al., 2009). Unlike overt racism, messages behind microaggression are more subtle and every day. Racial microaggressions are a dynamic that manifests itself within the social interactions of Blacks in the United States (Sue, et. al., 2009). The cumulative nature of microaggression is traumatic and impacts individual's identity as well as their mental and physical well-being (Sue, et al., 2009). They are capable of creating health inequities among Blacks in our country (Smedley & Smedley, 2005). In cross-racial therapeutic relationships, microaggressions were related to weaker alliances, less satisfaction, and a lower rating of provider cultural competence (Constantine, 2007). Microaggression specific to physician-patient interactions has yet to be understood, but its impacts would be expected to be similar to the ones described here.

Given the everyday, automatic nature of microaggressions, it can be expected that they occur within cross-racial patient-provider interactions naturally. Although not identified specifically as microaggression, there is empirical support for the role that race plays in the physician-patient dyad. The work of Cline and McKenzie (1999) identified the clashing of numerous cultures in the doctor-patient relationship. By way of their education, medical language, and training, physicians tend to be a fairly homogenous group. All patients are dissimilarly a heterogeneous group. Routine interactions have developed a common physician communication style that asserts dominance and creates distance (Cline & McKenzie, 1999). A lack of acceptance, respect, and regard can occur in this type of interaction as a result of the layers of in-group and out-group statuses (e.g., physician-patient,

Black-White, expert-lay, and Westernized-alternative). One of these layers is race, or as Cline and McKenzie (1999) asserted, ethnicity in the patient-provider interaction: despite a lack of observational research on the topic, communication in cross-racial relations consists of readily available cultural differences which only increase the 'us' and 'them' mentality. A measure of microaggression between physicians and their minority patients has become increasingly necessary. Before moving on to describe the extent to which microaggression measures have been developed, we will first discuss briefly the ways in which patient race influences the nature of interactions with a health provider, necessitating the need for a patient-provider-specific microaggression scale.

Race in Patient-Provider Interactions

The research of DeCoster (1999) reported the effects of gender and race on a physician's treatment of patient emotion. The emotions of White patients were more likely to be considered important than the emotions of minority patients. In the same vein, Whites were more likely to receive treatment as a result of their emotional expression. Interactions between the race and gender of the patient revealed that physicians were least likely to avoid and most likely to treat the emotions of White females, followed by White males, then minority patients (between which there was no significant gender difference).

Snipes and colleagues (2011) assessed the medical relevance of race during treatment among Black and White physicians. They found that Black physician's indicated the patient's race as important to treatment decision-making and the patient understanding of the illness more than White physicians. White physicians stated that race was not more important than medical history and that all patients should be treated aggressively. Both Black and White physicians reported that medical history, family history, and weight were essential for treating a patient; however, only White physicians brought up concerns of stereotyping and

discrimination when considering race in medical treatment. This may have been an expression of their avoidance for using stereotypes. It does not, however, speak to the idea that White physicians may subconsciously be using race as a health determinant, despite their training to avoid doing so. The idea that racially concordant patient-provider dyads might improve the health of Blacks, has gained mixed empirical support.

Franks, Fiscella, and Meldrum (2005) found that compared to Whites, Blacks had lower recommendations for Pap tests, rectal exam, smoking cessation, and mental health treatment; suggesting that Blacks are treated differently by primary health care physicians. Strumpf's (2011) research on this topic found that the physician's race is more likely to predict the patient's health outcomes than is the racial concordance between the two for high-cholesterol treatment among minorities. Noteworthy is an article articulating the relationship between skin color and high blood pressure which stated that the social relations between Black and Whites were determined by skin color index (Tyroler & James, 1978). The caveat to that logic was that even when the explicit intention of experts was to reduce racial disparities in health, the perpetuation of racial discrimination remained problematic. Lastly, the work of Meghani and colleagues (2009) sought to identify if racial-concordance between physician and patient improved physical health outcomes through a systematic literature review, only to find that it was unrelated to positive health outcomes of Blacks in the research.

All of the researchers mentioned described their findings as evidence of some form of discriminatory interaction that happens in cross-racial patient-provider dyads, despite having varying outcomes. In many ways the previous research speaks to an unknown construct related to the interaction between White physicians and their ethnic minority patients that is potentially mediating the relationship between patient health outcomes. In

light of their findings, the trend suggests that what may be occurring are patient-provider microaggressions. Aforementioned physicians' responses have been described as being unintentional or even automatic responses to visible minorities that had negative mental and physical health outcomes. In the past five years there has been an emergence of microaggression measures. Their validation can be useful for this type of psychological research. We will now turn to reviewing such measures.

Measuring Microaggression

Blume and colleagues (2012) had conducted their research on the relationship between alcohol use and anxiety among ethnic minorities on a college campus using a count-measure. They quantified microaggression by asking participants the number of microaggressions (out of 51 different types) that they had experienced in the past month and in the past year. It was outside of the scope of the research to look at the factor structure of the measure, but they reported the measure having good internal consistency (α range for items=0.914 - 0.940). The items on the scale were developed using focus groups. This is the only example in which microaggression was measured by count.

Both of the next measures discussed utilize subscales to identify the different types of microaggressions experienced by participants in their research. The Racial Microaggressions Scale (RMAS) was developed by Torres-Harding and colleagues (2012). The RMAS was hypothesized to have a six-factor structure. Exploratory factor analysis identified six factors that were theoretically identified by Sue (2010). These microaggression taxonomies included invisibility, criminality, low achieving/undesirable culture, sexualization, foreigner/not belonging, and environmental invalidations. The multifactor model fits suggested that sets of items be treated as subscales for each factor rather than using items as a single composite. Still, the internal consistency of the full set of items was good (α

range=0.78 - 0.89). A similar scale developed by Nadal (2011) called the Racial and Ethnic Microaggresions Scale (REMS) also had this six factor structure. Nadal (2011) conducted both an exploratory and confirmatory factor analysis with the latter having an internal consistency that was slightly higher (α=0.892) than for the range of items for Torres-Harding and colleague's scale.

The next measure, the Inventory of Microaggressions against Black Individuals (IMABI), captures the general psychological distress associated with the experience of microaggression, which had been theoretically conceptualized by Sue (2010) as microinsults and microinvalidations. Mercer and colleagues (2011) developed and gained initial validation for the Inventory of Microaggressions against Black Individuals (IMABI), however, this measure's factor structure was unidimensional as compared to the studies previously mentioned. The authors used item response theory (IRT) analysis to narrow down the 45 items in the exploratory analysis to the 14 item measure used in their confirmatory analysis. In both instances, the measure's unidimensional structure remained intact. Internal consistency for the final measure was high (α=0.94) and approximate fit indices of the model were acceptable (Comparative Fit Index: CFI=0.99; root mean square error of approximation: RMSEA=.05). The measure also underwent invariance testing between gender groups and the result was a non-significant change in chi-squared, supporting the measure's reliability across gender groups.

Microaggressions have also been studied qualitatively, and in these next examples were conceptualized as an explanatory construct using mixed-methods. Schoulte, Schultz, and Altmaier (2011) gained subjective validation for the experience of microaggression in therapeutic relationships. For their research, minority participants described a transgression that had occurred that they considered being a form of racial microaggression. These

recorded experiences were then related to measures such as self-rated stress and the impact

of the event scale. Torres, Driscoll, and Burrow (2010), similarly, used a mixed-methods

approach consisting of open ended questions and the Racism and Life Event subscales of

the Daily Life Experience Scale. All of the aforementioned studies raise interesting questions

about the diverse ways in which microaggression are currently being measured in

psychology; in addition to it having been identified as a construct with both a uni- and multi-

factorial structure.

The last two examples of microaggression measurement presented here developed

strategies that were context specific, and as suggested by the multifactorial nature of

previously validated measures, focused on one specific type (or subscale) of microaggression

at a time. This is the path in which the present research has more or less chosen to take.

Most recently the work of Wang, Leu, and Shoda (2011) experimentally manipulated

conditions to create the potential for interpreting such events as a microaggression and

related them to emotional intensity and well-being. Using microaggression in this way, as an

independent variable, is perhaps a more objective way in which to assess its effects on an

individual. Constantine (2007) did not use experimental manipulation, but instead, developed

a scale specific to the relationship in which he was interested. The Racial Microaggression in

Counseling Scale (RMCS) was developed through the use of focus groups. Twelve themes

specific to the patient-therapist relationship were identified, from which the 10-item scale

was developed. Its internal consistency was adequate but less than ideal ($\alpha=0.73$). The scale's

predictive properties were, however, excellent; predicting perceived counselor cultural

competence, counseling satisfaction, perceived microaggression, and poor counseling

alliance. It is later suggested in this paper that using the two approaches in concert

(experimental manipulation and context-specific microaggression measures) might be the most objective way to measure microaggression within cross-racial interactions.

Present Study

"With new measures, or measures being transferred to unusual conditions, a fresh study is in order" (Cronbach, 2004, p. 392).

The purpose of the present study is to validate the Racial Microaggression in Counseling Scale (RMCS) (Constantine, 2007) when the term therapist is replaced with physician so as to constitute a Racial Microaggression in Medical Practice Scale (RMMPS). The items on the scale were developed in focus groups and use the twelve themes from Constantine's study (2007). The scale consists of ten items. We now cover the themes identified by the focus group members and parallel them to the medical practice context.

Colorblindness was described by members of Constantine's focus groups as the practitioner's denying the existence of any racial or cultural differences. This was exemplified by White physicians in the work of Snipes and colleagues (2011) who reported that race was irrelevant when treating someone for an existing medical treatment. On the other hand, the concept of over identification refers to denying racial bias because of assumed similarities (Constantine, 2007). This concept parallels the Black doctors for whom race being identified was seen as helpful for understanding how much a person knew about an illness or what treatment would be best (Snipes, et. al., 2011).

Other themes from Constantine's (2007) focus groups paralleled the findings on cross-racial patient provider interactions. These included the denial of racism, e.g., "I'm not racist, I'm Black"; the assignment of a unique status as a result of race, e.g., Black physicians stating Blacks need more aggressive medical treatments (Snipes, et. al., 2011); stereotypic assumptions about race, e.g., the unavoidability of discrimination between patient-provider

(Tyroler & James, 1978); alleged hypersensitivity to race, e.g., DeCoster (1999) and the treatment of patient emotion based on race and gender ; as well as culturally insensitive treatment recommendations, e.g., the under-recommendation of screenings for ethnic minorities (Franks, Fiscella, & Meldrum, 2005). The myth of mediocrity was described by Constantine's (2007) participants as ignoring the sociopolitical forces that shape race. The theme of idealization described the over-estimation of abilities based on race. Yet, on the contrary, the theme of accepting dysfunctional behaviors as a result of one's race was also brought up by focus group members. Lastly was the concept of patronization or help being offered to an individual on the premise of race rather than their amount of need. All of these make up the nature of the items on both the RMCS and RMMPS. It was through the parallels between the themes of Constantine's research and the work on cross-racial patient-provider communication that a modification of the RMCS so as to create the RMMPS seemed reasonable and desirable.

Based on the mixed empirical support on the effects of racially discordant patient-provider interactions on health outcomes, the predictive properties of the scale (i.e. RMMPS) need to be understood and identified. Furthermore, if such a measure were to obtain predictive properties in an initial study, it would be promising. The future utilization of such a scale, given the well understood negative consequences of microaggression, might contribute to the generation of empirical research. Such a scale, given its contextual nature, and ideally if used in experimental conditions, might answer some of the questions left unanswered about the interaction between Black patients and their physicians that predict health outcomes.

Method

Participants

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Participants for the present study were recruited using Craig's list, an online forum from which volunteers can be recruited. The survey was internet based and incentivized by the entrance of participants into a raffle to win one of two $50 Amazon gift cards by submitting their email address to a separate web link. Surveys were posted as a listing underneath the volunteers' sections. Potential participants were informed that individuals were being recruited who were over the age of 18 years, identified as an ethnic or racial minority, and had a willingness to participate. The listing was first posted under Providence, Rhode Island, followed by Boston, Massachusetts, New York, New York, Hartford, CT, and Philadelphia, Pennsylvania. The recruitment process lasted about 6 weeks, until a sample size of 104 was reached. Of the initial 104, only 91 had completed the survey. The final sample size was n=91, and was made up of self-identified ethnic minorities from the Northeastern United States.

Measures

Demographic variables were assessed via self-report. Participants provided their age and gender, followed by a categorical response to education level. The participant's race was assessed open-endedly. Those who identified as Black and African American were categorized and coded the same, and so were those individuals who reported being of mixed racial backgrounds. Frequency of visits to the doctor's office was assessed open-endedly as well by asking the individual to write how many times they had seen a physician in the past 12 months. The participants were asked to describe their primary physician's race as being either the same as their own, different, or unsure. The last measure was the Racial Microaggression in Medical Practice Scale (RMMPS), a ten-item measure intended to measure the experience of microaggression from a physician (see Appendix).

Participants were given the option to respond to four open-ended questions about experiences with their physician, both general and race-specific, their physician's racial attribution of health or illness, and lastly, a chance to describe any experience with a physician race-specific or otherwise. These questions were: "Do you like you physician? (or physician most recently visited) Why or why not? Do you have a racial preference for physicians? That is, would you prefer your doctor to belong to a specific cultural group? Or not belong to a specific cultural group? If so, which one(s)? Has a physician ever told you that a condition/symptom/issue that you were experiencing was common or typical among people in your cultural group? If so, please elaborate on this experience and whether or not you found that information to be true/false or helpful/unhelpful? Please use this space to share any other experiences you may have had with your physician (doctor, health practitioner) that was race-related. Please feel free to write as little or as much in order to describe your experience. You may use this space to also add any additional comments."

Analyses

Statistical analysis included the use of the software program SAS 9.3. Descriptive data was analyzed using procedures to calculate means, and assess the distribution of scores for normality. Principal components analysis was performed to identify the factorial structure of the measure. Components of variance were assessed in a random effects model ANOVA and results were used to calculate a statistic of reliability based on generalizability theory. Lastly, the predictive properties were examined by looking at a simple linear regression model analysis consisting of the variables of interest.

Qualitative data was analyzed using mixed-methods. Concept mapping and thematic analysis were both employed and inter-rated reliability was calculated for each open-ended question analyzed. Disagreement on the mapping of concepts was discussed and later and

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resolved to optimize on the calculated inter-rated reliability. Research assistants worked with the main investigator to take each participant's response and, when necessary, break the responses into individual concepts. When a response touched upon what was thought to be two or more topics, or 'concepts', the sentence was literally divided based on these differences. Each concept was then transferred on to an index card. Once all of the concepts were on index cards and each card was numbered, the research assistants organized, or mapped, the concepts, or response segment, into what were believed to be related groupings. There was no limit as to how many groups could be made. Once each group was made, that is, once all of the index cards had been sorted, the groupings were logged. This procedure was completed separately for each question. The cards were then shuffled, and the same process was done by the main investigator. Once each of the researchers had completed the tasks, thematic analysis was employed. That is, the process of labelling the groupings that held across each researchers concept-mapping. Themes for each question were developed. These themes were analyzed in direct comparison to the qualitative results of Constantine, and therefore the items on the scale. The use of the qualitative data in this way is for validation, or in qualitative terms, trust-worthiness. This information can help to confirm that the themes or concepts evidently validate the existence and use of a scale designed to capture racial microaggression in medical practice.

Results

Descriptive Results

A total of 91 participants completed the study, 72% of who self-identified as women. Participants age ranged from 18 years to 68 years of age (m=31years). About 45% of participant had a Bachelor's degree followed by some-college (31%), Master's degree (10%),

high school diploma/GED (5%), associates or vocational two-year degree (4%), less than high school (2%), doctoral degree (1%), and post-doctoral training (1%).

Participants were asked how many times they had seen a physician in the past year and responses varied from one (13.5%), twice (24%), three times (17%), four times (5%), five times (4%), and more than five times (22%) (i.e., the range between five or more proceeds through twelve). Seventy two percent of participants stated that their doctor was a different race than them; 25% stated that their physician was the same race as them, and 3% were unable to identify. In terms of the participants racial make-up, 35% of participants identified as either Black of African American, followed by Hispanic (20%), mixed-race (18%), Asian (13%), Native American (10%), and 5% did not specify their race.

Factor Structure

A principal components analysis was conducted to assess the factor structure of the ten-item RMMPS measure. A one factor structure was revealed to account for 58% of the variance, with only one eigenvalue greater than 1.0 ($\lambda=5.79$). A scree plot was visually consulted to confirm this finding. Factor loadings ranged from 0.63 ("My physician avoided discussing or addressing cultural issues with me") to 0.85 ("My physician seemed to deny having any cultural biases or stereotypes"). See Table 1.

Reliability/Generalizability

The reliability of the measure was assessed by looking at variance components, as recommended by generalizability theory. Using a one-facet design, the reliability coefficient was calculated and found to be excellent ($\alpha=0.91$). For the present study, a one facet design was used, so in effect, the generalizability coefficient is the same as Cronbach's alpha. In fact, when Cronbach's alpha was calculated, it was found to be slightly higher ($\alpha=0.93$) than the generalizability coefficient.

Table 1: Factor Loadings for RMMPS

Item:	Factor Loading:
1. My physician avoided discussing or addressing cultural issues in our visit(s)[6]	**0.63**
2. My physician sometimes was insensitive about my cultural group when trying to understand or treat my concerns/issues	**0.81**
3. My physician seemed to deny having any cultural biases or stereotypes	**0.85**
4. My physician may have thought at times that I was overly sensitive about cultural issues	**0.77**
5. My physician at times seemed to over-identify with my experiences related to my race or culture	**0.80**
6. My physician at times seemed to have stereotypes about my cultural group, even if he or she did not express them directly	**0.76**
7. My physician sometimes seemed unaware of the realities of race or racism	**0.68**
8. My physician at times may have overestimated or underestimated my capabilities or strengths based on my cultural group membership	**0.76**
9. My physician sometimes minimized the importance of cultural issues in our visit[7]	**0.83**
10. My physician[8] may have offered medical[9] assistance that was inappropriate or unneeded based on my cultural group membership	**0.68**

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[6] Revised from "counselor/session" to "physician/visit"
[7] Revised from "session" to "visit"
[8] For all items, the term "physician" replaced the original "counselor"
[9] Revised from "therapeutic" to medical

Comments on the difference between Classical Test Theory and Generalizability are made later in the discussion section.

Predictive Properties

The predictive properties of the RMMPS were assessed using simple linear regression analysis. After running descriptive analyses and residual plots, it was revealed that the data were normally distributed. Following this, macro- and micro- level results were generated from the regression analysis. Macro-results for the microaggression scores using the variables racial concordance between patient and provider, and the frequency of doctor's visits in the past year, $F(2,88) = 7.04$ p= .0015 show a significant effect size, indicated by an R^2 of 0.14, 95%CI [0.01, 0.27]. Micro-results show that only patient-provider racial incongruence (t=-3.49, p<.001) was significant at the alpha level of .05. The findings revealed a significant relationship between patient-provider racial incongruence and microaggression scores, suggesting that cross-racial interactions with one's physician are related to the experience of microaggression. This finding supported the initial literature which could only suggest that racially-incongruent patient-provider interactions gave rise to the experience of microaggression. While by Cohen's convention, an R^2 effect size of around 0.15 is considered medium, a literature review on the topic of perceived discrimination and health found that effects sizes were, on average, 0.15 for physical and mental health outcomes, as well as health behaviors (Pascoe & Richman, 2009). Within this context, an effect size of around 0.15 is informative, if not to be considered large.

Open-ended Responses

Qualitative data were analyzed by the researcher and research assistants. Inter-rater reliability was calculated using the conventional statistic, Cohen's kappa ($\varkappa$). Across the four open-ended questions from which concepts were mapped, reliability ranged from $\varkappa=0.774$ to $\varkappa=0.945$. Disagreement between raters was discussed and resolved for each question, to optimize Cohen's statistic. The 22 concepts that were discovered across all of the questions were Sensitivity of physician, Personality of physician, Perceived competence, Communication, Unconcerned physician, Bad physicians, Asian Indian physicians, African American physicians, White physicians, Gender of physician, Language of physician, Physician qualifications, Racial congruence, Racial attributes of health as fact, Racial attributes as unhelpful, African Americans and high blood pressure, Translation needs, Cultural sensitivity, Religion congruence, Open-mindedness, Immigration, and Race is not a factor. These concepts were used to establish themes. The analysis of these themes was done by paralleling them to those developed in Constantine's research, which were used to develop the present scale RMMPS.

Derived from the open-ended responses, the themes discussed here include Physician Characteristics (Positive & Negative); Physician Race and the Physicians Use of Race as Diagnostic. The revision and use of the Microaggression scale modified for the present study (Constantine) was initially deemed reasonable because of the similarities between focus group results and empirical research on physician-patient interactions. It is therefore important that the qualitative data generated be examined more closely within the context of the original themes used to develop the items of the scale. We now look at each theme from the present study more specifically, using direct quotations to illuminate similarities with the qualitative responses from Constantine's work. From this, the usefulness, validity, and trustworthiness of the present scale can be evaluated. The use of

race as diagnostic or the use of stereotypic assumptions was also directly explored as it pertains to expanding on the present topic and exploring relationships with experiences of microaggression and stereotype threat, to be discussed later.

Physician Characteristics.

The first theme reflects, primarily, the responses of participants related to what they found either desirable or undesirable about their physician. Positive characteristics represent the features of the physician that participants found to be useful and made them good at their job as physicians. Examples of such are "warm and outgoing," "honest, works with me money-wise," "attentive," "friendly," "helpful," and "nice and concerned." Most of these data comprising this theme were in response to the first open-ended question, "Do you like your physician?" While quantitatively there were more people who reported liking their physician than not, qualitatively, those who disliked their physicians offered more in-depth descriptions.

Among those who reported that they did not care for their physician as a result of personal characteristics, were individuals that felt their physicians were disrespectful, non-compassionate, or flat-out racist: "My physician joked about the fact that all gas stations were owned by Indians now. I did not like that comment too much." These responses were similar to the themes developed in the research of Constantine using focus groups to develop the microaggression measure. For example, with respect to Over identification: "My doctor who is Caucasian tries to sound like a black person sometimes or deliberately uses black lingo and that really annoys me."

With respect to Assignment of unique status: "He [physician] told me I had an incurable disease just by looking at me and not even taking any tests…" and

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Regarding Stereotypic assumptions: "He [physician] is old and grumpy and seems to harbor a lot of stereotypes about race and gender."

Physician Race.

The race of participants' physician was discussed in the context of whether or not they had a racial preference for who they receive their primary care. The race of the physician was also mentioned in terms of personal characteristics as they relate whether or not they liked him/her. For example, "When it comes down to it, I would rather have a good doctor than a Latin doctor- it would be nice to find a great Latin doctor but the fact is they are hard to find." Paralleling responses from within this theme to the twelve themes found in Constantine's work, the following similarities arose with respect to several areas itemized, below.

Patronization and cultural insensitivity: "I am an Asian Indian and I tend to avoid Asian Indian physicians. My life situation and lifestyle are somewhat unconventional for an Asian Indian female of my age. I am single, for example, and this doesn't come up if the physician isn't an Asian Indian."

Idealization: "I would prefer a Caucasian physician because they are more intelligent. Whites attend better schools" and

Assignment of a unique status: "I believe and African or African American physician may have more insight into race-related issues."

Physicians Use of Race as Diagnostic.

This third theme that emerged from participant responses relates to the extent to which a physician attributed health to race and the degree to which it was helpful. Responses varied; while some found it useful, others found it offensive, and while some

thought it to be fact, others disagreed on the usefulness of such fact. Open-ended

optional/additional comments also tapped into several of Constantine's themes, including

stereotypic assumptions, accepting dysfunctional behavior, and assignment of unique status.

One participant wrote: "As a black male, I get the impression that I'm expected to be a black

stud with all the attached racial profiling that goes with being a black male. And, it's

expected that I have low literacy, impatience, and I can't keep my zipper closed. Therefore,

I must be riddled with diseases that I don't know I have…also a slew of babies that I don't

support financially…that may be true in lower economic classes; but, that's not who I am."

A similar story was shared from a person visiting multiple health professionals,

stating;

"He [physician] was Mexican, but my case worker was white. She referred me to the

food bank, like I was some kind of homeless kid, which I am not. That bothered me."

While several individuals stated that there physician expressed that certain illnesses

(high blood pressure, asthma, and diabetes) were common among people of color, few of

the participants reported this as being useful. One individual stated, in response to being

told that high blood pressure was common among African Americans: "It wasn't helpful.

Whether it is common or not has nothing to do with fixing the problem."

Another participant wrote, "I have had a physician claim that my avoidance of going

to the doctor is culturally-based which did bother me because my cultural background had

nothing to do with it."

One individual expressed that "During a discussion about my diet with my physician

I was informed that diabetes is often common among African Americans."

Among those individual who expressed the communication of this type of

information to be useful were the following elaborations; "I had an experience where a

physician insinuated that I was at a higher risk for a particular disorder given my racial background. Given the incidence of the disorder among African Americans, and among my family specifically, I found the information to be factual and helpful."

Similarly, a participant expressed that knowing that diabetes and high blood pressure are common among African Americans was simply "the truth'; and another stating "It was truthful [based] on medical literature that I've read."

Discussion

The findings from the linear regression analysis indicated that microaggression may be an important mediator for future research on the effects of such interactions because of its relationship to racial incongruence in patient-provider interaction. It is being suggested that cross-racial interactions relate directly to microaggressions. This can be interpreted that cross-racial interactions are necessary in order for microaggressions to occur, and in this vein, should be considered whenever examining these types of social interactions as they relate to health outcomes. The literature reviewed earlier suggests that racial incongruence between physician and patient may set the stage for discrimination. The findings from this exploratory study support such a notion, specifically for microaggressions which might pose, or mediate negative health consequences. The next step for research on this topic would be to relate scores on the RMMPS to mental and physical health outcomes. As mentioned earlier, experimental manipulation used in concert with this scale might offer a more objective measure of microaggression. Given the relationship that microaggression scores have with racial incongruence, a prospective experimental manipulation might consist of manipulating the race of an individual (confederate) in a social interaction (e.g., Wang et. al., 2011).

The psychometric properties of the RMMPS were excellent. The one factor structure serves as evidence of the latent construct of microaggression being captured with the ten items it features. There are even further extensions that the present research could make so as to assert that the scale's psychometric properties are ideal. Future directions would include invariance testing between gender, or recruiting a close to equal amount of ethnic minority groups to conduct invariance testing across race.

It is also useful to point out that generalizability theory differs from classical test theory, which is typically used to calculate Cronbach's alpha, or a numerical representation of reliability. Classical Test Theory (CTT) recommends the omission of items that are not positively related to one another. That is to say that microaggressions needed to be replicated across all items in order to be reliable or else assessment error will occur in the form of a low reliability estimate. For example, highly endorsing one item, but not the other can be deemed as unreliable according to CTT assumptions. In the case of items that measure race-related events, such as experiences of microaggression, the equal endorsement across all items is neither necessary nor expected in order to remain salient. Calculations of the alpha coefficient are capable of measuring only one type of error, however, generalizability can look at multiple sources of error and their interactions to better distinguish signal from noise. Future research could use generalizability theory to look at differences based on where individuals were recruited from (internet, college campus, community, health centers, etc.).

What can be taken from the qualitative data that the experience of microaggresssion in racially incongruent patient-provider relationships is a concept with inherent value in terms of predicting health behaviors. The open-ended responses offer evidence that microaggression can be experienced in medical practice and that it is capable of deterring individuals from visiting their physician. These experiences communicate themes such as

over-identifying with patients of color, the assignment of a unique status, idealization, patronization, and the use of stereotypic assumptions in medical treatment. The experience of microaggression has been found to generate levels of distress similar to betrayal, sexual abuse, and physical abuse (Schoulte, Schultz, & Atmaier, 2011). Unique to these types of experiences, perpetrators of microaggression (i.e., physicians) are not close to the victim (i.e., romantic partners), such as would be the case for the aforementioned transgressions with similar distress and behavioral outcomes. Previous qualitative research suggests that those who have experienced microaggression demonstrate revenge and avoidance. Because of the subtle and unintentional nature of microaggressions, particularly form physicians, individuals may question the intentions of their physician, which was echoed in the open-ended responses of participants in the present study. In the work of Schoulte and colleagues, this made avoidance a viable option for dealing with microaggression, and forgiveness unlikely.

Of particular interest was the use of stereotypic assumptions, which evidently may have something to do with individuals avoiding the doctor's office. Microaggression and stereotyping were found to be uniquely related in the present study. Many of the microaggressions elaborated upon had to do with a physician using race diagnostically. Recent research has explored stereotype threat and its relationship to health service delays (Jones, et al., 2013), however, microaggressions from physicians *as* a form of stereotype threat remains in need of further investigation. Considering the role of stereotype threat when predicating health behaviors has been revealed as improving predictions for health behaviors including routine check-ups and cholesterol screening (Jones, et al., 2013).

The qualitative findings offer additional support to the notion that people of color are aware of the stereotype of health inferiority. Microaggressions are, in part, a form of communicating this stereotype of health inferiority. Jones et al.'s measurement of stereotype

threat echoes that racial differences in terms of health and physician bias are measureable and related to health behaviors. The qualitative data presented here suggest that microaggression is one of the ways in which such a bias is communicated in a manner that is subtle and automatic. In the future, physicians and health organizations should strive for communicating with individuals/patients about health behaviors in a manner in which they show an awareness of the inevitability of microaggressions so as to avoid using race diagnostically and evoking stereotype threat. Future directions on this topic include the exploration of microaggression and stereotype measures in order to better understand their relationship. Potential connectedness between the two concepts include one predicting the other, the two working in concert to predict health behaviors, areas of convergence and divergence, and the experimental manipulation of microaggression or stereotype threat and their relationship when predicting health behaviors.

Limitations

There will always be limitations to any piece of research that utilizes cross-sectional data. Longitudinal data would have added additional ways in which reliability could be assessed. The sample size was also rather small, which could detract from the otherwise robust reliability coefficient. It would have been better to have obtained more participants within the short, allotted time period. The length of the recruitment period was established so as to avoid repeat participants, but also contributed to the low number of participants. The second part of the present study consisted of qualitative data that was not intended to be analyzed simultaneous to the present study. The researcher did not intend to relate qualitative findings to any of the quantitatively measured items given the nature of the information anticipated to be generated. Albeit intentional, it is a limitation that it will not be made available within this presentation of the research. Future recommendations would be

to gather qualitative data that might be coded using in-tact themes or categories that might be related to the participant's age or gender. The qualitative piece of the present research was optional to participants and was intended to serve as a separate body of information for the development of future experimental conditions.

Conclusions

The present study might serve those in the field of psychology and offer an example of a scale, with good psychometric properties, that is capable of measuring microaggression between a physician and patient. Given the absence of empirical data on the topic of cross-racial communication and its effects on the individual, the scale developed in the present study seems promising. Because microaggressions are so commonplace for Blacks in the United States, the Racial Microaggression in Medical Practice Scale (RMMPS) might be useful for health psychologists. The scale is specific to the dyad of patient and provider. Given the idea that cross-racial interactions may be a proxy for microaggression, this scale would be especially useful if it were used in an experimental research design and health outcomes were being explored. Whereas the usefulness of other microaggression scales relate to identifying different types of microaggression or count recent experiences, the RMMPS can be applied to health research. Such a scale is more pragmatic for researchers interested in racial health disparities or health outcomes of racial minorities. Specifically, the best next step would be to look at the relationship between RMMPS scores and mental and physical health outcomes of minority patients.

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Appendix

(Revised- Racial Microaggression in Counseling Scale)

The statements below are intended to represent some of the situations or events that may have transpired over the course of your doctor's visits[10]. Using the scale below, please rate your physician[11] with regard to the following situations or events during your visit.[12] Please note that the term "cultural" used in each of the statement refers specifically to racial or ethnic issues.

0	1	2
This never happened	*This happened but it did not bother me*	*This happened and I was bothered by it*

1. My physician avoided discussing or addressing cultural issues in our visit(s)[13]

2. My physician sometimes was insensitive about my cultural group when trying to understand or treat my concerns/issues

3. My physician seemed to deny having any cultural biases or stereotypes

4. My physician may have thought at times that I was overly sensitive about cultural issues

5. My physician at times seemed to over-identify with my experiences related to my race or culture

6. My physician at times seemed to have stereotypes about my cultural group, even if he or she did not express them directly

7. My physician sometimes seemed unaware of the realities of race or racism

8. My physician at times may have overestimated or underestimated my capabilities or strengths based on my cultural group membership

9. My physician sometimes minimized the importance of cultural issues in our visit[14]

10. My physician[15] may have offered medical[16] assistance that was inappropriate or unneeded based on my cultural group membership

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[10] Revised from original "counseling sessions" to "doctor's visits"
[11] Revised from "counselor" to "physician"
[12] Revised from "counseling" to "visit"
[13] Revised from "counselor/session" to "physician/visit"
[14] Revised from "session" to "visit"
[15] For all items, the term "physician" replaced the original "counselor"
[16] Revised from "therapeutic" to medical

Chapter 4

Taking race out of the picture:

Communicating stroke prevention to Black Americans

Amanda Almond, PhD[17], and Lisa Harlow, PhD[18]

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[17] August, 2014, Department of Psychology, University of Rhode Island, Kingston, RI 02881, Email: amandaalmond@my.uri.edu

[18] Professor, Department of Psychology, University of Rhode Island, Kingston, RI 02881, Email: lharlow@uri.edu

Abstract

Designed to tap into the subtleties of the well-researched discrimination-health model in behavioral science, the present study is an effort to identify some of the potential causes for racial health disparities in the United States. Through experimental manipulation, relationships between health and skin color, microaggression between Black patients and their health professionals, and public service efforts that communicate race as a health risk (i.e., identifying Blacks as a target for stroke, American Heart Association) are explored. Patient-provider interactions occur within the modern paradigm of risk management; a context where race is communicated as a health risk. This research emphasizes the subtle, but potentially powerful nature of such interactions on one's decisional balance towards engagement in health promoting behaviors, given salient psychological theory. Communication of race as risk by health authorities may yield undesirable results observable in this experimental, cross-sectional study.

Introduction

Statement of the Problem

The present study aims to identify that the well-being and decisional balance for healthful behavior adoption among Blacks in the United States is partially determined by the communication from experts that race is a health risk. It is hypothesized that communicating race as a health risk via print public service announcements from the American Heart Association might predict preventative behavior antecedents above and beyond, or in concert, with previous experiences of microaggression from physicians, previous recommendations to change health behaviors and individual characteristics (skin color, age, gender, education and BMI). The goal is to understand this relationship so that social scientists can best advocate for Black patients' health promotion efforts.

While public health organizations such as the American Heart Association have the best of intentions, when it comes to reducing health disparities conceptualizing race as disease risk carries the potential for activating stereotype threat, impacting cognitive structuring, and reducing perceived control over health risks. The present research is designed to reframe Black health advocacy. Implications from this research include advising medical professionals and professional organizations that health risk communication should be more focused on modifiable characteristics and behaviors that are sociocultural, interpersonal, and behavioral in nature. The findings presented stand in opposition to the communication of race as a disease risk, and may help to initiate preventative behaviors more effectively. It is within this capacity that behavioral scientists can best contribute to the reduction of racial health disparities in the United States.

Justification for and Significance of Study

Health disparities among Blacks in the United States consist of predominately preventable illnesses including hypertension, asthma, obesity, high cholesterol, stroke, and influenza (CDC, 2012). Hypertension and stroke, specifically involve modifiable risky behaviors such as tobacco use, physical inactivity, and being overweight (CDC, 2012). In more recent years, race and ethnicity have been conceptualized as a risk for stroke because of the staggering differences in prevalence rates compared to those of Whites. This conceptualization of race as disease risk occurred within a modern risk epidemic; that is, medical journals having more than a tripled increase in the focus on risk between 1965 and 1995, made evident by the term's appearance in article titles (Skolbekken, 1995). It is suspected that this trend has continued to rise, even if only by virtue of an increase in the number of diseases in the United States. Since then, an emphasis has been placed on broadening the number of risks and hence public service efforts; these risks and efforts, however, have not been evaluated in terms of either cognitive and/or behavioral impacts. The conceptualization of race as a disease risk is less than ideal because such a determinate is non-modifiable. It may raise issues of futility on the part of the patient and physician, while ignoring more salient predictors of health and important antecedents to preventative behaviors.

Risk assessment has become central to medicine. Simply estimating and communicating risk factors as a strategy to promote behavioral engagement, however, is naïve. Disease prevalence among racial groups has been communicated widely without understanding the responses that ensue for those to whom this risk is communicated. It can be acknowledged, however, that there are aspects of the aforementioned risk epidemic that have been beneficial. Primarily, these are abilities to relate (with varying degrees of accuracy) unwanted illness or death to multiple, interrelated factors. This success leaves scientists

overconfident in the idea that risk estimation is the most rational way to gain control over illness and disease. This has spread to an organizational level (e.g., the American Heart Association, the American Stroke Association) and taken precedence over the importance of examining the sociocultural, interpersonal, and behavioral nature of risk communication. Furthermore, a lack of this type of understanding deters health promotion and obstructs the reduction of health disparities in the United States.

Theoretical Underpinnings

The goal of risk communication in the medical world has been to generate behavior change as a form of prevention and health promotion. Behaviors include those such as exercise, smoking, weight management (all specific to stroke) as well as frequency of physician visits, cancer screening, and mental health care utilization identified as such. Theoretically, this is a sound principle and has been a tenet to behavioral science theories including Fishbein and Ajzen's theory of planned behavior (1975) and Prochaska and DiClemente's transtheoretical model for behavior change (1983). The first of these theories has been elaborated upon by Griffin and colleagues (1999) to include a relationship to risk information processing. Within this model are salient antecedents to preventative behavior engagement that the present research draws upon. These include behavioral intention, perceived behavioral control, cognitive structure, perceived risk, and individual characteristics.

The transtheoretical model includes predictors of the engagement in numerous health behaviors, such as, decisional balance (i.e., ratio of pros and cons to behavior change) and self-efficacy. The present study draws on both conceptual frameworks to understand the effects of risk perceptions via experimental manipulation, on self-efficacy, cognitive structure (i.e., beliefs about one's well-being) and decisional balance, while taking into

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account individual and sociocultural characteristics. The concepts of decisional balance and behavioral intention are being thought of as similar in this research, as they represent the most immediate predictor of behavior engagement in both of the aforementioned models. The individual characteristics that are being explored include age, gender, geographical region, years of education (as a proxy for socioeconomic status), and skin color.

Socioculturally, interpersonal and organization factors salient to Blacks in the United States have been added to these well understood models for the present study. In particular are the experience of microaggression from professionals in medical practice (interpersonal), and the communication of race as a disease risk, or a form of stereotype threat, from the American Heart and Stroke Associations (organizational). These constructs are representative of the most recent research aimed at understanding the role that physicians and public health educators play in perpetuating racial health disparities via unintentional biases and health risk communication efforts identifying race as a disease risk. See Figure 1.
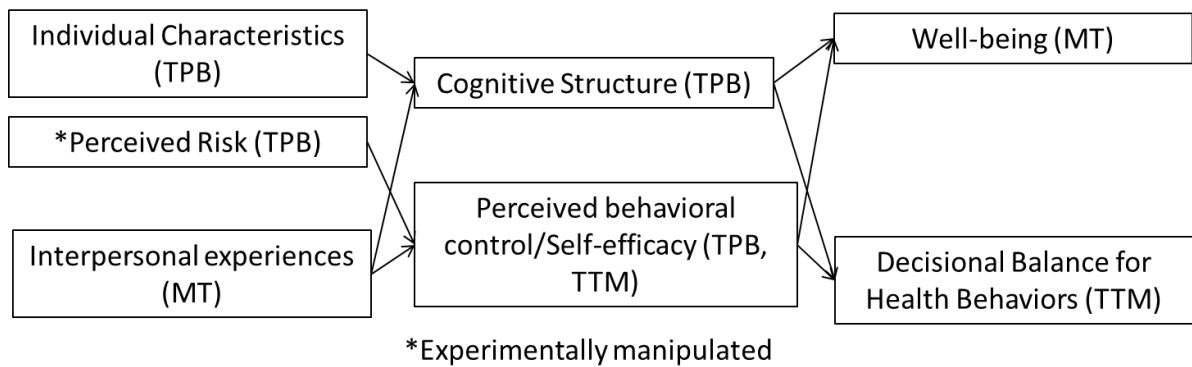
Empirical Background

Race, Risk, and Medical Practices

When individuals become informed that they are at-risk for an illness whether from a health professional or public service announcement, a change in identity that evokes mistrust influences other aspects of their life and this has been empirically established (Gillespie, 2011; Satterfield, Mertz, & Slovic, 2004). More recently race was described as only masking the health disparities in the United States (Jaffe, 2012) rather than informing ways to reduce them; hence countering the goals of this type of risk communication. Jaffe further explained how statistically identical Blacks and Whites (i.e., when education and SES are controlled for) share the same health risks and that health disparities are not present at birth or infancy.

He added that such knowledge is the 'smoking gun' that racial health disparities are the result of social, not biological forces and supports that race itself is socially constructed.

The relationship between the risk and disease prevalence among Blacks in the United States is an interesting one to consider. While the relationship between the two cannot be simply explained, acknowledging our society's preoccupation with risk management (e.g., via risk communication campaigns) might serve as a useful tool to understanding it better. Skolbekken (1995) noted that the general public often perceives health risks different from professional's good intentions to promote the use of medical resources. Instead of promoting health, risk communication to the general public can be interpreted as an illness, such as stroke, being imminent. Such a notion can discourage behavior change and brings into question the usefulness of applying risk communication efforts to health promotion via behavior engagement.

Figure 1: Theoretical Model

Individual Characteristics (TPB)		Cognitive Structure (TPB)		Well-being (MT)
*Perceived Risk (TPB)				
Interpersonal experiences (MT)		Perceived behavioral control/Self-efficacy (TPB, TTM)		Decisional Balance for Health Behaviors (TTM)

*Experimentally manipulated

Theory of Planned Behavior (TPB), Microaggression Theory (MT) Transtheoretical Model (TTM)

In the research of Barr (2005), the use of a patient's race as beneficial to the practitioner was explored. Using race as a determinant of treatment and anticipated outcomes was challenged. Historically, race has been thought of as a proxy for genetic composition, ignoring ancestry and other salient factors related to health. Barr asserted that in order to provide more effective treatment and improve outcomes, race needed to be overlooked. A greater emphasis should be placed on socioeconomic, behavioral, and sociocultural circumstances in order to serve patients; avoiding the use of race as a proxy for genetics to determine treatment, outcomes, and expectancies should be avoided at all costs.

What was been presented by Barr, specifically for health practitioners, is being made into a case for health risk communication from organizations such as the American Heart Association in the present study. The abandonment of race in this context, i.e., taking race out of the picture, is necessary when communicating disease risk. By doing this, the communication of risk might become more capable of initiating preventative behavior engagement. An emphasis on behaviors related to stroke prevention, such as smoking, exercise, and weight maintenance are ignored when an emphasis is placed solely on race. As presented here, these desired behavioral outcomes may be hindered when race is communicated as a risk for disease. The sociocultural context of disease prevalence, risk information, and recommendations for behavior change are becoming better understood within social science. More specifically, the roles played by microaggression, stereotyping, and discrimination in Black health have generated a body of research that risk communicators have somehow ignored. The good intentions of stroke risk communications, such as the American Heart Association's initiatives targeting Black Americans, are thwarted when race is conceptualized as a risk.

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Stereotype Threat, Microaggression, and Well-Being

As mentioned earlier, in the writings of Jafffe (2012), the lack of racial health disparities between statistically identical Blacks and Whites at birth is 'smoking gun' that the causes of such differences are result of social, not biological forces and supports that race, and health themselves are socially constructed. An extension of one theory is that communicating race as a disease risk to may activate stereotype threat. Stereotype threat theory has been identified as limiting one's ability to perform behaviors as well as they would have otherwise been performed (e.g., decision making) when a stereotype is triggered, their group membership is made salient, and the risk of upholding the negative stereotype is presented (Steele & Aronson, 1995). Adding to this is the aspect that risk-based health messages are less accepted when aspects of the self (e.g., racial group membership) are threatened (Sherman, Nelson, & Steele, 2000). Race being identified as a risk for stroke has undesirable consequences for the identity of those who identify as Black.

The role played by stereotype threat in the lives of Black Americans has been researched in two domains: academic performance and high blood pressure. The first has gained a large amount of empirical support. In a seminal article on the topic, Steele and Aronson (1995) elaborated upon the effects of stereotype threat on the academic performance of Black Americans. In their experimental studies, the researchers established that tasks of intellectual ability, when taken by Black participants to whom the stereotype of the academic inferiority of Blacks was made salient, caused a sense of threat and fear that they would be judged under the stereotypic assumption. This sense included the cognition of the stereotype of inferiority and perceived abilities. Following up this multiple-study research, it became revealed that the threat of such a stereotype was upsetting enough so

that intellectual performance on the task was impaired. Vulnerability to stereotypic assumptions in turn depressed their ability to perform under such a circumstance.

The second domain, high blood pressure and stereotype threat, has been explored by researchers Blascovich, Spencer, Quinn and Steele (2001). Comparing White and Black Americans, the study sought to understand the effects of stereotype threat on blood pressure reactivity. The changes in blood pressure were recorded simultaneous to performance on an academic test in a stereotype threat condition. What is interesting here is that this was the first study that sought to explain physical, or health, outcomes related to stereotyping. It was found that Black participants expressed a greater increase in arterial blood pressure while performing an academic test under the experimental condition as compared to White participants. At baseline, both Black and White participants were found to have similar blood pressure readings, and in the experimental conditions, only Black participants showed an effect for stereotype threat. Lastly, it was noted that this increase in blood pressure remained 5 to 20 minutes after the test and for the duration of a second task. The authors posited since Black Americans were found to be in more stereotype threat situations outside of laboratory that their findings may begin to explain the higher incidence of hypertension among the population at large.

Communicating race as disease risk can be thought of activating the stereotype of health inferiority. This may occur during interactions with medical professionals or via public service announcements, but has yet to be explored experimentally or even at all for that matter. Such an occurrence is also shaped, or influenced by sociocultural experiences in which interpersonal communications may perpetuate microaggressions. Detailed in the previous chapter, microaggressions are all too commonplace indignities that are verbal, behavioral, or environmental and occur unintentionally and automatically to Black

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Americans (Sue, et. al., 2009). Microaggressions have empirically been identified as having effects related to health and well-being. Blume and colleagues (2012) showed that experience of microaggression among Black college students at a historically White university related to alcohol use and anxiety. In therapeutic relationships, microaggressions were related to weaker alliances, less satisfaction, and a lower rating of provider cultural competence (Constantine, 2007). Microaggression specific to physician-patient interactions were examined in the present study's pilot (Almond, Harlow, & Richmond, 2014).

Experiences in which an expert (physician/health professional) had communicated race as a health risk was both measurable and related to the frequency of doctor's visits. The study consisted of two parts: one sought to validate and examine the psychometric properties of a scale revised to measure microaggressions between physicians and minority patients; and the other qualitatively examined racially-charged interactions in medical practice. The study shed light on the phenomena of microaggression occurring in medical setting. Such a finding begins to establish that interactions in medical scenarios might be related to and/or influenced by microaggression.

Qualitative findings from the pilot study revealed nearly half of participants (all of whom self-identified as a racial minority) had been told that the condition or symptom(s) (e.g., asthma, high blood pressure) they were experiencing at the time of their doctor's visit was common among their racial group. Less than half of those who reported having been told this described the message as being useful. In some cases, individuals were left utterly confused, offended, and dissatisfied with the visit. This is to say that there are aspects of these unique interpersonal exchanges that contribute to microaggressions. For the present study, previous experiences of microaggression from a physician were used to better understand decisional balance for several health behaviors among Black Americans.

Present Study

The predictive nature of communicating race as a risk for stroke to Blacks in the United States was examined. Previous experiences of microaggression from a physician, self-rated health, well-being and self-efficacy were included. Characteristics about the individual (skin color, age, gender, education, and region) were taken into consideration. It was being hypothesized that, in concert, these factors determined decisional for engaging in health promoting behaviors specific to stroke prevention (smoking, exercise, and weight maintenance).

The attribution of race to stroke was presented in some of the American Heart Association's print public service announcements targeting Black Americans. This research sought to understand how such a message has the potential to impact decisional balance for engaging in health promoting behaviors and also an individual's overall well-being. The relationship between decisional balance and behavior change has been empirically validated as a strong one, capable of predicting an individual's stage of change for numerous health behaviors (Blaney, et al, 2012; Nigg, Rossi, Norman, & Benisovich, 1998; Velicer, DiClemente, Prochaska, & Brandenberg 1985).

Stating that race is a disease risk generates and activates stereotypes and can affect reports of inferior well-being and disease prevention decisional balance as a result. The widespread notion of race as a fixed, personal, even a biological characteristic as well as a social construction enhances the saliency of such a threat to an individual's identity. In this vein, the American Heart Association's print public service announcement is capable of activating stereotype threat by suggesting that all Blacks have inferior health compared to their White counterpart. A predicted outcome was that the threat may contribute to

upholding this negative stereotype via the lack of intention to prevent the illness being targeted (i.e., negative decisional balance for stroke prevention behaviors).

As featured in the previous chapter, a relationship between microaggression and well-being and health behavior engagement was deemed plausible. Stereotype threat was examined through experimental manipulation. The most recent writings on the topic of stereotype threat and health examined perceived health inferiority and the role of physicians (Burgess, Warren, Phelan, Dovido & van Ryn, 2010). The transtheoretical model of behavior change, offered well established constructs that have gained excellent support for predicting stages of change as well as being related to self-efficacy and well-being. These constructs of decisional balance for smoking, losing/maintaining weight, and exercise were of great importance as these behavioral antecedents are, in essence, some of the best ways to prevent a stroke (other than being White- an insensitive, undesirable and unfeasible approach, and hence, the motivation for the present study).

The goal of the present research was to generate increasing support for an emphasis on individual health characteristics and behaviors over group membership in an effort to eliminate the prevalence of stroke among Blacks, and furthermore; to suggest that assigning the label of risk to a non-modifiable factor, such as race, is capable of harm in and of itself.

Health risk communication begs to be understood as a social determinant of health. There is potential for its effects to be more prevalent than what are currently well-understood predictors of health. The main hypothesis that was tested was the effect that stereotype threat, manipulated by featuring various public service announcements, has on decisional balance for health behaviors and well-being. Potential mediators examined were self-efficacy and self-rated health. These variables were deemed capable of working together to show that when Blacks were led to believe that stroke was a problem attributable to race,

their decisional balance towards exercise adoption and weight control may consist of more cons than pros; decisional balance for smoking may consist of more pros than cons; and reports of well-being would be lower than those in the other conditions tested. Such a finding would be interpretable as counter indicative of engaging in health promoting behaviors (Blaney, et al, 2012; Nigg, Rossi, Norman, & Benisovich, 1998; Velicer, DiClemente, Prochaska, & Brandenberg 1985), and thereby serve as evidence for a potential contributor to racial health disparities. In sum individual, interpersonal and organizational factors are being explored as predictive of health and well-being.

Research Design and Methods

Participants

Participants for the present study were limited to self-identified Black Americans, over the age of 18 years old who expressed a willingness to participate. Because the effects of microaggression and stereotype threat on an individual are specific to Black Americans, the study featured only Black participants for whom the likelihood of experiencing stereotype threat was anticipated. The exclusion of other racial groups was also justified in that the study did not seek to make cross-racial comparisons. Furthermore, Steele (1997) expressed that in order to generate an impact for stereotype threat in social psychological research, individuals must identify with the aspect of their identity (i.e., race) being threatened.

The study consisted of 388 self-identified Black Americans who were randomly assigned to one of the three experimental conditions. The average participant age was 43 years old, and ranged from 18 to 83 years (SD=15.6 years). The majority of participants were men (60.7%), one individual identified as intersexed, and the remaining 39.1% were women. Participants were well represented in terms of geographical region in the United

States. The majority were from the Southeast (31.2%), and Mid-Atlantic (20.9%), followed by the Southwest (11.6%), Appalachia (8.3%), Pacific Coast (8.2%), Heartland/Midwest (7.5%), Mountain (6.2%), Non-contingent (5.4%) and New England (<1%) regions. On average, participants reported having 'some college' in terms of education (42.5%). Remaining participants had completed college (24.3%) followed by high school/GED (20.4%), graduate school/degree (7%), some high school (2.8%) and less than an 8th grade education (<1%). The majority of participants, more than one-third, were found to fall under the category of obese (38.4%), which was calculated using weight and height measurements. A body mass index representative of a normal weight was second (31.4%), followed by overweight (27.6%) and underweight (1.8%).
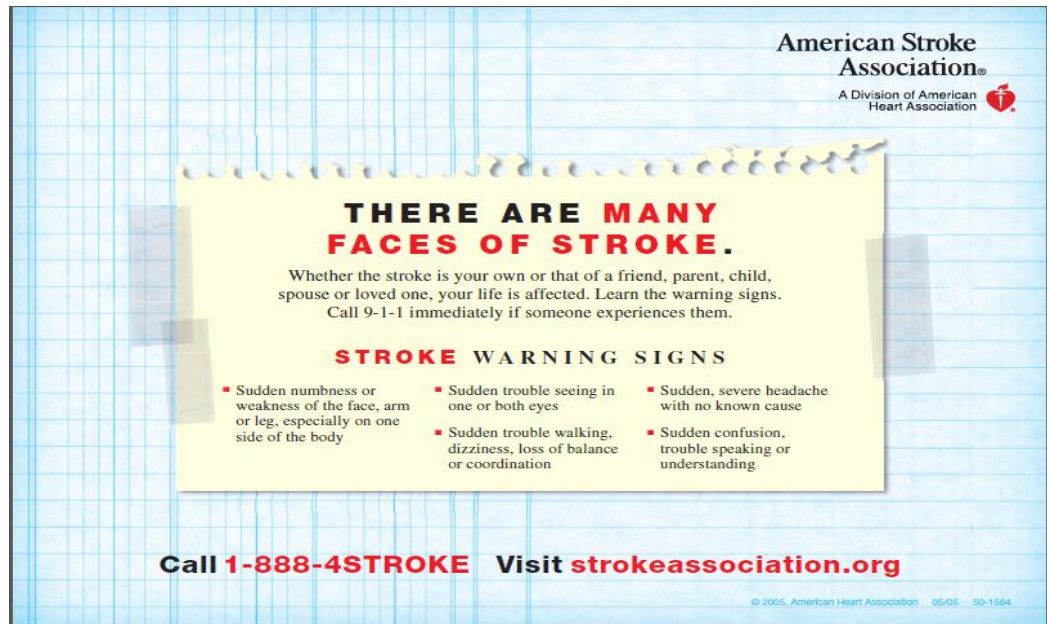
Procedure

Participants were located using Survey Sampling International (SSI). This company offers a service in which the researcher paid $5.99 per participant in exchange for the recruitment of participants and dissemination of an electronic survey to the consenting individuals for the purpose of the research. SSI utilizes third-party databases for recruiting individuals through which participation is incentivized. Funds for the recruitment were allocated from a research and travel budget that was part of a Diversity Pre-doctoral Fellowship at the University of Connecticut's Institute of African American Studies in which the main researcher was appointed. The electronic survey was generated using Survey Monkey. For each experimental condition a separate URL address was generated. The items on the survey were presented identically across all experimental conditions.

Experimental Manipulation

The experimental manipulation, the stereotype threat of health inferiority, was manipulated by featuring various American Heart Association Public Service

Announcements on stroke. The saliency of race ranged from no mention of race at all to the inclusion of many races, and lastly the targeting of Black Americans (experimental condition). The first two announcements served as control conditions for the present study. It was decided by the main researcher that rather than having only one control condition, it would be more ideal if three were operationalized to represent a continuum from which an emphasis of race had been placed. The first public service announcement presents the risk of stroke using only text to explain that it is an illness capable of striking anyone at any time. The second uses the image of a face comprised of many faces, like a mosaic, including both men and women of varying skin tones and ethnic features. The text reads "this is the face of a stroke." The last announcement provides the viewer with an image of a Black woman walking in the rain with an umbrella and a large raindrop cascading around her in the shape of a target, or bull's-eye. It features the text "Stroke targets by race" and "the odds are African Americans are twice as likely to suffer a stroke as white Americans." See Figures 2-4.

Figure 2: Experimental Condition One

Figure 3*: Experimental Condition Two*

Figure 4*: Experimental Condition Three*

Measures

Demographics, skin color, recommendations for change, and manipulation check

Demographic variables that were measured included age, education, gender, height and weight (used to calculate BMI), U.S. region, and perceived skin color. All of the demographics were collected via self-report. For the measurement of skin color, the perceived skin color subscale of Bond and Cash's (1992) Skin Color measure was used. The average skin color was a reported 4.95 (SD=1.78) out of a possible 9; 1 represented much lighter than the average skin color of a racial group, 5 represented the same as others, and 9 represented much darker. It was not much of a surprise that participants, overall, rated their skin color as average, as individuals tend to regress towards the mean. The participant's state of residence was measured so as to describe and assure a nationally representative sample.

Individuals were asked to what degree their physician has recommended that they engage in three types of behavior change; smoking (cessation), exercise, and weight loss. Participants responded on a five-item Likert scale ranging from 0 (never), 1 (I do not recall), 2 (it may have come up in conversation), 3 (Yes, my doctor has told me that), to 4 (Yes, my doctor has told me that more than once).

In order to assure that the experimental conditions were intact, a question regarding the illness featured in the print announcement was asked at the end of the survey as a manipulation check. All participants reported that the image was present and that the message was about stroke. This check allowed for verification that the manipulations were intact. Following these measures were indicator variables measuring experiences of microaggression, well-being, self-efficacy, perceived general health, and decisional balance for health behaviors engagement.

Racial microaggression in medical practice scale (RMMPS)

The racial microaggression measure used was validated and designed specifically for the present study (Almond, Harlow, & Richmond, 2014). Intended to assess the experiences of microaggression in medical situations stemming from a physician or health professional, scores range from 0-2 and are averaged to represent the experience of microaggressions in a medical practice. The 10-item measure has a one-dimensional structure and possesses predictive validity related to the health behavior (i.e., visiting a physician). Participants report the perceived racial sensitivity of their physicians and the extent to which they were bothered by these interactions. Detailed accounts of racially-charged interactions were explored qualitatively in the pilot study which suggests it to be an important factor to consider when exploring race-related health communications (Almond, Harlow, & Richmond, 2014).

Flourishing scale (Well-being measure)

The Flourishing scale was developed by Diener and colleagues (2010) and is an 8-item self-report measure assessing participant's perceived success in relationships, self-esteem, purpose in life and optimism. The scale is one-dimensional. Convergent validity has been reported as very high, the scale strongly correlating to the summed scores of other psychological well-being scales (0.78 to SPANE-P [Scale of Positive and Negative Experiences-Positive]; 0.73 to SPANE-N [Scale of Positive and Negative Experiences-Negative]). For the present study, the measure is being conceptualized as a broad, all-encompassing construct representative of one's general well-being across domains, such as aforementioned purpose and optimism.

General self-efficacy

General self-efficacy is a construct defined as one's perceived ability to cope and manage a wide range of stressful life demands (Luszcxynska, Scholz, & Schwarzer, 2005). It

is different from behavior-specific self-efficacy in that its aim is to measure a person's perceived capability in a broad range of situations. It has been validated cross-culturally and been found to be related to well-being, health behaviors, and coping strategies. The stronger an individual's self-efficacy is, the more likely they are to engage in healthful behaviors as well as to be optimistic about the engagement. The scale consists of 10 items and is scored on a four-point Likert scale from 1 (hardly true) to 4 (exactly true). The item scores are summed and scores range from 10 to 40. A sample item would be "Thanks to my resourcefulness, I can handle unforeseen situations." The construct's theoretical orientation is social cognitive theory as it relates to motivation and intention. The variable has also been widely used in transtheoretical model research as it relates to decisional balance for exercise and fat-intake (Boudreaux, Wood, Mehan, Scarini, Taylor, & Brantley, 2003). Their research looked at predominately Black Americans in Louisiana and found that self-efficacy and decisional balance for health behaviors were congruent, in that as one increased so did the other.

Health related quality of life scale (Self-rated health)

The Health Days measure was made collaboratively by the Centers for Disease Control's Disability Prevention Program, Women's Health Program, and National Center for Health Statistics Questionnaire Development Research Lab and Epidemiology Program Office as a way to measure an individual's health related quality of health (HRQOL). The measure consists of four items intended to measure recent perceived health status and physical activity limitations (Andersen, et al., 2003). HRQOL is defined as an individual's perceived mental and physical health over time. An example of an item would be "Now thinking about your physical health, which includes physical illness or injury, for how many days during the past 30 days was your physical health not good?" Overall health was

assessed on a 5-point Likert scale in which the participant is asked to rate their overall physical health. A high composite score represented positive health, while lower scores represented poorer health. This item on the HRQOL is labelled as Self-Rated-Health.

Decisional balance measures

Smoking (Short-form). The decisional balance measure for smoking consists of two three-item scales that have been developed to assess the pros and cons to smoking (Velicer, Prochaska, DiClemente, & Brandenburg, 1985). The scale was found to predict future smoking status at 6-month follow-up, as well as discriminate between the stages of change for the cessation process in previous research. The measure had also been previously validated across a sub-group of Blacks (adolescent girls), and thereby was thought to be an appropriate measure for the sample of the present study (Hoeppener, Redding, Rossi, Pallonen, Prochaska & Velicer, 2012).

As it has been done in previous studies, a composite difference score consisting of pros and cons (representative of the balance between the two) was used so that decisional balance might be operationalized as a one-item indicator (Herrick, Stone, & Mettler, 1997; Share, McCrady, & Epstein, 2004). The scale has been slightly modified for its present use. Items have been reworded so that non-smokers might answer questions in reference as to why they have *not* engaged in cigarette smoking. A score of 1 represents an equal balance of pros and cons to smoking, while scores greater than one represent positive balance (i.e., more pros than cons), and scores less than one represent a negative balance (i.e., more cons than pros).

Exercise. As with the smoking measure, a composite difference score was used in the present study, representing the decisional balance between the pros and cons of exercise adoption. This scale was created by Nigg and colleagues (1998), consisting of ten-items (five

pros, five cons) and has since been validated on a Black sample (Blaney, et. al., 2012). The scale was found to have good internal and external validity when replicated with the Black sample, with the exception of the cons scale. The cons scale was inconsistent in terms of the stages of change model's predictive properties; that is, among the minority sample, cons of regular exercise did not decrease across stage progression. Despite this inconsistency, the scale was used in the present study, with the rationale that its role in the model is that of an outcome variable, and will not be conceptualized as a predictor for stages of change. Further investigation into the cons of exercise for when measured in an all-Black sample, however, is strongly implied and much needed (Blaney, et. al., 2012).

Weight control. Similar to the other decisional balance measures, a composite difference score was used to represent the decisional balance between the pros and cons of controlling one's weight. The measure consisted of twenty items (ten pros, ten cons) and was developed by O'Connel & Velicer (1988). As with the other measures of change, the construct of decisional balance has been validated with longitudinal data as an indicator of both decision making and stage of change over time (Prochaska, 1985; Prochaska, Velicer, et al., 1991). It has not, however, been validated among Black individuals. Its use in the present study might offer insight into the weighing of pros and cons for controlling ones weight in a Black population.

Materials

The survey containing all measures, as well as consent and debriefing forms, was made available online. The link to the survey document as well as the respective public service announcement for each treatment condition was provided to Survey Sampling International to disperse. An all-Black sample was recruited, and participants were randomly assigned to a condition.

The experimental manipulations, that is, the three public service announcements from the American Heart Association shown in Figures 2 to 4, appeared on the screen of the online survey throughout the duration of the study. The prints ranged on a continuum of racial saliency, or inclusion of race in the message. The first print is a graphic instructing the reader on the four steps to take when you think someone is having a stroke (control condition). The second print is a mosaic of men's and women's faces of multiple ethnic backgrounds and states that it is the face of a stroke and that the disease does *not* target by race or gender (midpoint on continuum of conditions). The third print states that stroke is a disease that targets African Americans and shows an older African American woman walking in the rain. It was this condition that would serve as the stereotype threat message (experimental condition).

Statistical Power

Statistical power is a concept that represents the probability that a statistical test will correctly reject the null hypothesis at a level of statistical significance (usually $p=0.05$), assuming that there is an effect to be measured (Rossi, 2013). Researchers need to be concerned with power for at least two reasons. One is its influence on the statistical test's ability to 'pick up' or detect desired or specified effects at a level of statistical significance. The second concern is related to ethics. When conducting research on human subjects, the risks and benefits to participation are described to each individual. These risks and benefits need to be well-balanced in order to conduct research that is ethical. It is typically described, in non-intervention research on cross-sectional data, that there are no direct benefits to the participant (Rossi, 2013). The justification to participation is often expressed as the research having benefitted the field and advancement of current knowledge (Halpern, 2002), as was the case in the present study. A-priori power analysis is a way to ensure the validity of that

statement, and therefore makes the research ethical in terms of informing the participant: otherwise statements such as these may not be true if underpowered, or unable to accurately reject the null hypothesis. For these reasons, a priori power analysis for the present study was conducted so that participants can have some assurance that their involvement would contribute to the field of social science.

Based on two power analyses, there were varied recommendations for sample size. These estimates ranged from a sample size of n=86 to n=256 (Soper, 2012). These estimates guided the decision made for the desired sample size to be n=270 (n=90 per condition). Analyses suggested that for each experimental condition, n=90 would be large enough for the model structure as well as large enough to detect the desired effect size, if there is in fact an effect to be detected.

Data Analysis

Structural Path Analysis Model

Personal characteristics (age, education, and BMI) about each participant are conceptualized in the structural model as individual factors, and being treated as independent variables. Interpersonal experiences, or microaggressions and the degree to which they were viewed as bothersome, are serving as independent variables as well. Mediator variables in the model were anticipated to predict the outcome variables, and included self-rated-health (i.e., cognitive structure) and general-self-efficacy (perceived behavioral control). Within the model, these two mediating variables are represented as being predicted by individual and interpersonal factors, and predictive of the outcome variables of well-being (flourishing) and decisional balance. The dependent variables are decisional balance to smoke, exercise, and lose/maintain a healthy weight; as well as flourishing (a measure of well-being). Hypotheses are being tested in a full mediational model that allows for links from independent variables

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to both mediators and outcomes, as well as links between mediators and outcomes. Individual (age, BMI, education) and interpersonal (racial microaggression) variables were hypothesized to relate to decisional balance and well-being, and these relationships are both direct and mediational, with cognitive structure (self-rated health) and perceived behavioral control (general self-efficacy) as potential mediators. The main hypothesis being tested is that communicating race as a health risk, along with individual factors and interpersonal variables might predict decisional balance for engagement in health behaviors and well-being via cognitive structure and perceived behavioral control.

Statistical analyses were conducted to test the effects of the experiment in order to understand whether or not communicating race as a health risk predicted the outcome variables directly or if this relationship was mediated. Structural equation modeling, specifically path analysis that was used in the current study, is based on the analysis of covariance structures and can illuminate potential relationships among the variables of interest. Previous recommendations for health behavior change, as well as gender, region, and skin color are being examined as background information, but are not part of the structural model being tested. Path analysis is a confirmatory approach to data analysis that required the model structure to be corroborated by both theory and empirical research. The present model is theoretically grounded in critical race theory (Smedley & Smedley, 2005), microaggression theory (Sue, Capodilupo, & Holder, 2007), stereotype threat (Steele & Aronson, 1995), theory of planned behavior (Fishbein & Ajzen, 1975), social cognitive theory (Dweck, 1988), and the transtheoretical model of behavior change (Prochaska & Diclemente, 1983).

The appropriateness of the model for the data was determined by examining fit indices (both model and approximation), testing the significance of Chi-squared (Kline,

2005), and examining the significance of parameter estimates. Goodness of fit was determined by Chi-squared (χ^2) using Maximum Likelihood estimates which assess the relationship between the predicted and observed variance-covariance matrices. Other indicators of goodness of fit were examined and will be reported, including the root mean square error of approximation (RMSEA), the Bentler Comparative Fit Index (CFI), and their respective 90% confidence intervals (Bentler, 1990; Steiger & Lind, 1980). In order to determine the statistical significance of the model, conventional cut-off scores recommended by Hu and Bentler (1999) were utilized. These cut-off scores are ≤ 0.10 for RMSEA and ≥ 0.95 for CFI. The model's parsimony in not including all predictive paths also is capable of generating support for the study's hypothesis.

Results

Demographic variables

The sample consisted of 235 men (60%), 152 women (39%) and 1 individual who identified themselves as intersexed (1%). The age of participants ranged from 18 to 83, with a mean age of 43. The majority of individuals had received some college (45%) in terms of education, followed by those who completed college (24%), high school/GED (20%), graduate school (7%), some high school (3%), and less than 8th grade education (1%). The majority were from the Southeast (31.2%), and Mid-Atlantic (20.9%), followed by the Southwest (11.6%), Appalachia (8.3%), Pacific Coast (8.2%), Heartland/Midwest (7.5%), Mountain (6.2%), Non-contingent (5.4%) and New England (<1%) regions. With this distribution of individuals from varying United States' regions, the sample was nearly nationally representative. Most were reported to have a Body Mass Index that categorized them as obese (39%), followed by normal weight (31%), overweight (28%) and underweight (2%).

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Averages were calculated for the variables of interest. The mean microaggression score was 0.3, with scores ranging from 0 to 2 (SD=0.5). Self-rated health (HRQOL) scores ranged from 1 to 5, and the mean score was 3.2 (SD=0.9). General self-efficacy scores ranged from 10 to 40, with an average score of 31.4 (SD=7.2). As for the dependent variables, the flourishing scale (well-being measure) ranged from 0 to 56 and the mean score was 44.8 (SD=10.0). Decisional balance scores are interpreted as 1 being an equal ratio of pros to cons, scores greater than 1 as positive decisional balance, and scores less than 1 representing negative decisional balance. For weight maintenance, scores ranged from 0 to 2, with a mean score of 1.0 (SD=0.3). Smoking decisional balance scores ranged from 0 to 2.2 and the mean score was 0.8 (SD=0.3). The average exercise decisional balance score was 1.4 (SD=0.5) with a range from 0 to 2.2.

Table 2: Participants by U.S. Region

	Data Set	Cumulative	National Average/ Black Population by Region
New England	<1%	21%	Northeast: 18.3%
Mid-Atlantic	20.9%		
Appalachian	8.3%	15.9%	Midwest: 18.2%
Heartland/Midwest	7.5%		
Southeast	31.2%	42.8%	South: 54.3%
Southwest	11.6%		
Mountain	6.2%	14.4%	West: 9.1%
Pacific Coast	8.2%		
Non-contingent U.S.	5.4%	5.4%	n/a

All variables were assessed for normality and skewness and kurtosis was examined. Nearly all variables were normally distributed with the exception of the decisional balance measures. A square root transformation was performed and reduced the skewness and kurtosis to a normal level for data analysis. R-student leverage plots were also examined to identify any influential outliers that may have contributed to a non-normal distribution of these scores. No participants were identified as being problematic either before or following the transformation.

Correlations

Simple correlations among the variables within the model were calculated and evaluated (see Table 3). Covariances among independent and dependent variables were hypothesized in the subsequent path analysis. These relationships were anticipated by theory and supported when computing correlations. Several variables were identified as not related to either the mediational or dependent variables, and as a result of this were left out of the model. These variables include skin color (M=4.95, SD=1.78) and previous recommendations for behavior engagement, which were rated on a Likert scale from 1 to 4 representing the strength of the recommendation from the physician: smoking cessation (M=1.68, SD=0.94), exercise (M=2.41, SD=0.88), and weight management (M=2.19, SD=0.95).

Previous recommendations for specific health behavior engagement were related to individual characteristics. For weight management, increased age(r=0.11), body mass index (r=0.30), and poor self-rated health (r=-0.24) were significantly correlated at the α=0.05 level. Recommendations for smoking cessation were significantly correlated to older age (r=0.14, being male (r=-0.17), education (r=-0.17), microaggression (r=0.23), and self-rated

health (r=-0.11). Exercise recommendations were found to be correlated to older age

(r=0.20), body mass index (r=0.25) and self-rated health (r=-0.25).

Increased body mass was significantly related to being older (r=0.15) and less

educated (r=-0.14). Experiences of microaggression were significantly correlated with being

younger (r=-0.24), decreased self-efficacy (r=-0.20) and lower scores for flourishing (r=-

0.20). General self-efficacy increased with age (r=0.17) and education (r=0.19). Self-rated

health status related to being younger (r=-0.15), more educated (r=0.08), lower BMI (r=-

0.30), greater self-efficacy (r=0.21), increased levels of flourishing (r=0.29), and fewer

experiences of microaggression (r=-0.11). (See Table 3).
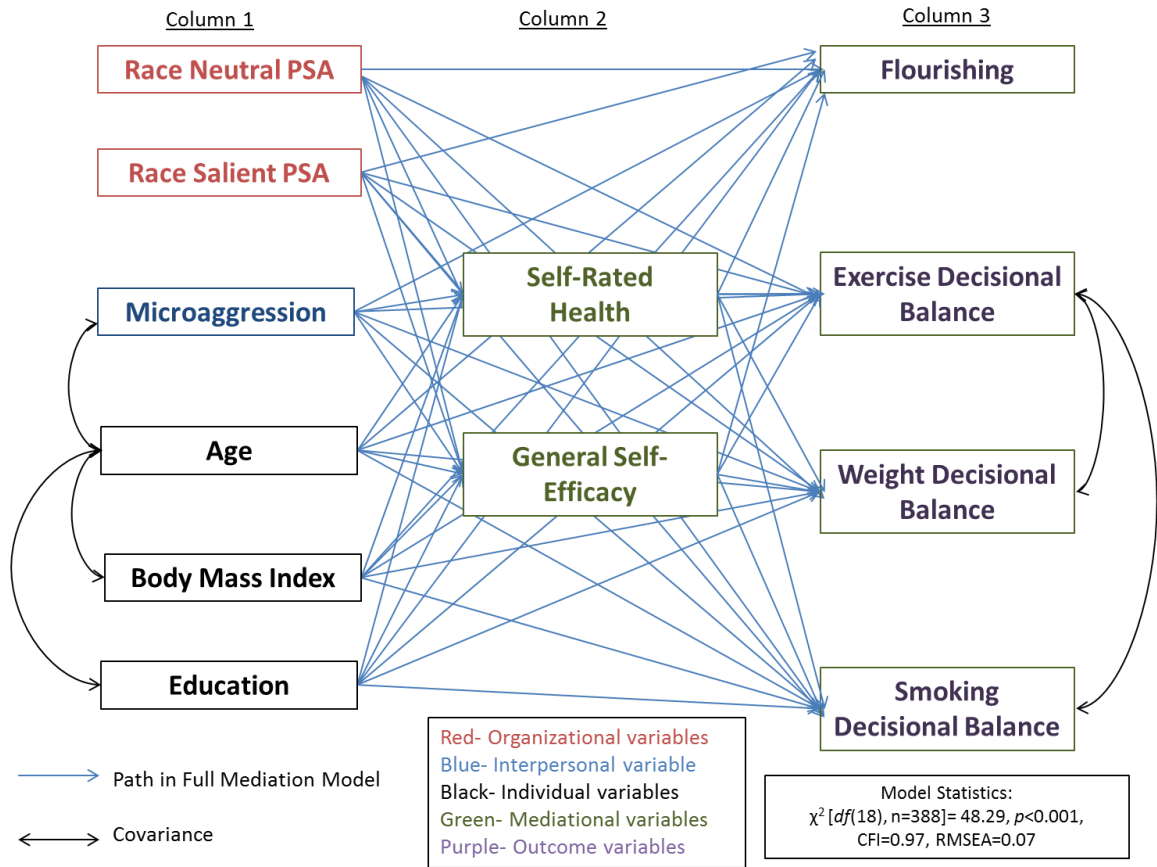
Table 3: Correlations, Means, and S.D. by Variable

Variable Names N=388	Mean	S.D.	Range (min-max)	Age	Education	BMI	General Self Efficacy (GSE)	Flourishing (FLR)	Microaggressions (MA)	Weight Decisional Balance (WDB)	Exercise Decisional Balance (EDB)	Smoking Decisional Balance (SDB)	Self-Rated Health (SRH)
Age	42.6	15.6	18-83	1.0	0.08*	0.15**	0.17**	0.15**	-0.24***	0.02	0.15**	-0.18**	-0.15**
Education	4.1 (some college)	0.9	1 (< 8th grade) to 6 (Graduate School)		1.0	-0.14**	0.19***	0.14**	0.06	0.13*	0.10*	-0.02	0.08*
BMI	29.4	8.0	14.5-59.3			1.0	-0.02	-0.03	-0.03	0.03	-0.02	0.00	-0.30***
General Self Efficacy (GSE)	31.4	7.2	0-40				1.0	0.74***	-0.20***	0.48***	0.43***	0.21***	0.21***
Flourishing (FLR)	44.8	10.0	0-56					1.0	-0.20***	0.35***	0.34***	0.07	0.29***
Microaggressions (MA)	0.3	0.5	0-2						1.0	-0.04	-0.21***	0.20***	-0.11**
Weight Decisional Balance (WDB)	1.0	0.3	0-2							1.0	0.64***	0.27***	0.08
Exercise Decisional Balance (EDB)	1.4	0.5	0-2.2								1.0	0.10*	0.06
Smoking Decisional Balance (SDB)	0.8	0.3	0-2.2									1.0	-0.00
Self-Rated Health (SRH)	3.2	0.9	1-5										1.0

Path analysis

The model tested on the data was selected based on the aforementioned theoretical models and parsimony. The following variables were included: individual characteristics (age, education, BMI), interpersonal experiences (previous microaggressions from health professionals), cognitive structure (self-rated health), perceived behavioral control (general self-efficacy), well-being (flourishing) and health behavior antecedents (decisional balance for smoking, exercise, and weight maintenance). A full mediational model was tested, meaning that both independent and mediational variables were anticipated to relate to the dependent variables. See Figure 5. Variables in column 1 were tested as predicting mediator and outcome variables listed in columns 2 and 3, respectively. Variables listed under column 2 were mediators and also were hypothesized as predicting outcome variables listed in column 3; considering both direct and indirect paths creates a full-mediation path analysis model. Covariance among individual characteristics and the decisional balance measures were also included.

Figure 5: Full-Mediational Path Analysis Model

Column 1 Column 2 Column 3

Race Neutral PSA

Race Salient PSA

Microaggression

Age

Body Mass Index

Education

Self-Rated Health

General Self-Efficacy

Flourishing

Exercise Decisional Balance

Weight Decisional Balance

Smoking Decisional Balance

→ Path in Full Mediation Model

↔ Covariance

Red- Organizational variables
Blue- Interpersonal variable
Black- Individual variables
Green- Mediational variables
Purple- Outcome variables

Model Statistics:
χ^2 [df(18), n=388]= 48.29, p<0.001, CFI=0.97, RMSEA=0.07

The model fit indices were examined. The model had a $\chi^2(18)=48.29$, $p<.001$. The CFI was 0.97 and the RSMEA was 0.07, 90% CI [0.044, 0.089]. By convention, these statistics support that the model was a good fit for the data. Parameter estimates that were statistically significant (with standardized beta coefficients given in parentheses) included a main effect showing that exposure to the racially salient public service announcement (experimental condition) predicted a negative decisional balance for exercise ($\beta=-0.13$, $p=0.05$). Indirect effects for individual and interpersonal variables were mediated by general self-efficacy to decisional balance for the three health behaviors; while the paths to flourishing (well-being) from individual and interpersonal variables were mediated by both general self-efficacy and self-rated health.

Statistically significant paths to self-efficacy were age ($\beta=0.05$), education ($\beta=0.23$) and experiences of microaggression ($\beta=-0.17$). General self-efficacy mediated these variables' relationships with smoking decisional balance ($\beta=-0.30$), weight maintenance decisional balance ($\beta=0.47$), exercise decisional balance ($\beta=0.39$) and flourishing ($\beta=0.69$). The second mediational variable, self-rated health, had statistically significant paths from the independent variables of age ($\beta=-0.12$), body mass index ($\beta=-0.21$), education ($\beta=0.23$), and microaggression ($\beta=-0.15$). Self-rated health mediated these variables relationship to flourishing ($\beta=0.19$), and this path was statistically significant.

Covariances among predictor and outcome variables were also found to be statistically significant at the $\alpha=0.05$ level; age and microaggression ($\beta=-0.25$), age and education ($\beta=0.11$) and age and body mass index ($\beta=0.18$). Exercise and weight maintenance decisional balance covaried ($\beta=0.57$) as well as exercise and smoking decisional balance ($\beta==0.20$). See Figure 6.

Figure 6: **Path Analysis Model with Standardized Estimates**
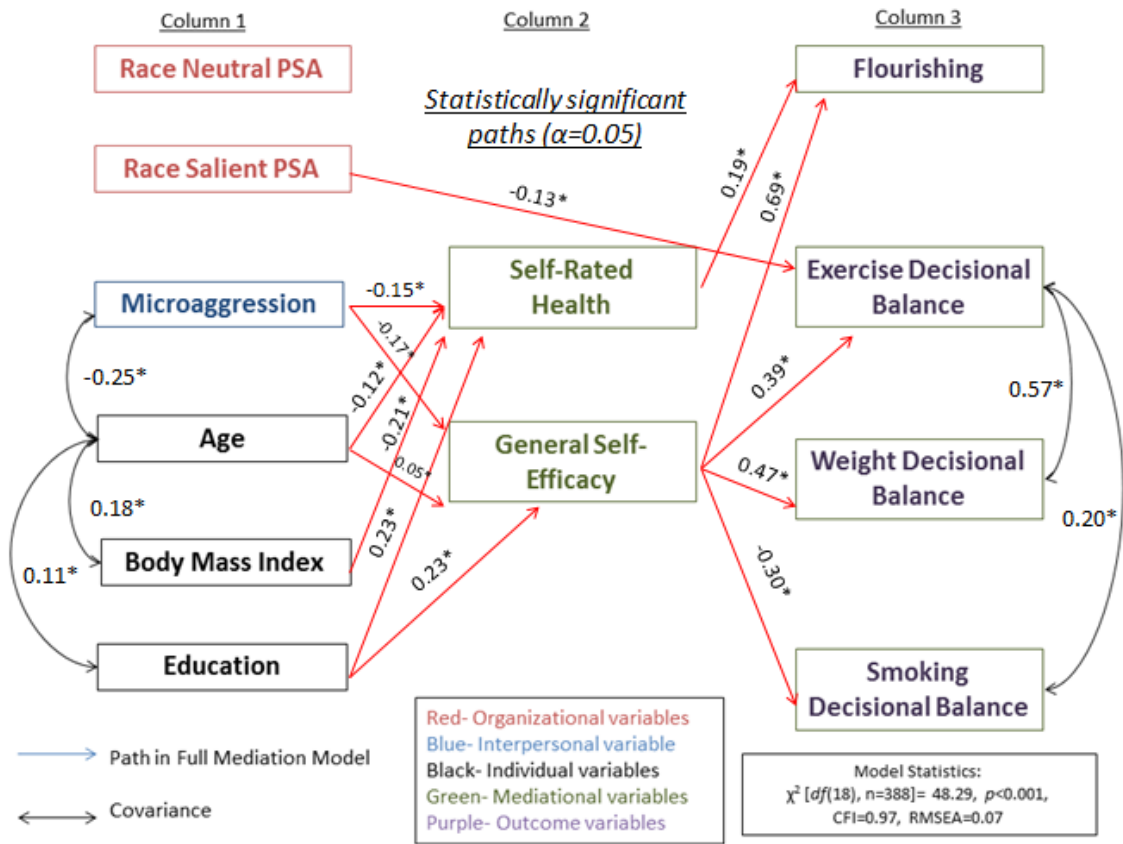
Discussion

The study elaborates upon well-understood models of health behavior adoption, adding to it important sociocultural factors of stereotype threat and microaggression from health professionals. The study is novel for a number of reasons, beginning with an all-Black nationally representative sample from which the constructs featured in the model have not been well-studied. Another important feature of the research is the conceptualization and manipulation of stereotype threat. Race as a disease risk has not been researched as a stereotype, nor has stereotype threat been understood in terms of its relationship to health behavior antecedents. The ideas that Blacks are at a greater risk for stroke as compared to their White counterparts may be representative of statistical risk calculations, but in communication, depicts a stereotype in the context of Blacks being inferior and that they are unwilling or unable to change. It is also important to add that population estimates do not speak to the individual, meaning that not *all* Blacks are at triple the risk for stroke compared to Whites.

Social psychology theories of stereotype threat and microaggression are important additions to health behavior models seeking to understand the health of Black Americans. Results suggest that this is a new and promising approach to understanding racial health disparities in the United States, among other related social factors. There were multiple theoretical constructs examined simultaneously as predictors of decision making and well-being, including self-efficacy and self-rated health. These relationships have been understood empirically in the past, such as individual characteristics and cognitive structures or self-efficacy and decisional balance. Education, age and body mass index relate to well-being as do self-efficacy and self-rated health. These are all malleable predictors of behavior engagement that place the responsibility of health prevention solely on the individual. The

present study draws into the picture the role of health professionals and health organizations as being capable of hindering such processes via interactions and health risk communication efforts. The intentions of professional may be for the better, but historically for Blacks in the United States, and philosophically for scientists in this country, implicit and unintentional biases are unavoidable, carry certain risks, and need to become systematically understood. For Black Americans, interpersonal experiences with physicians and organizations need to 'fill out' a model of preventative behavior engagement. This would begin to explain to social scientists improved sources of advocacy for health and well-being within this population.

Stereotype threat effects

The effect of stereotype threat was found to predict negative decisional balance of exercise engagement. That is to say, when individuals were exposed to the public service announcement that featured race as a disease risk, the ratio of cons to pros for exercising was greater than those exposed to the other PSAs. The predictive nature of communicating race as a disease risk was manipulated by the researcher and conclusions about its relationship to the study's variables are novel: this study was one of the first to look at stereotype threat in a health domain. The public service announcement's effect on exercise decisional balance suggests that when Blacks are told that they are going to experience a stroke by virtue of their race, a preventative behavior, such as exercise, may consist of more cons than pros. What can be made evident is that media sources play a role in decision making, which is widely known, but what is less known is that attaching a salient aspect of one's identity to risk, especially one that is non-modifiable, can have negative effects for the individual. The relationship discovered here can speak to the futility experienced when a non-modifiable risk factor is made salient over preventative behaviors that are modifiable. Stating that one's race poses a threat to one's health can generate feelings of helplessness,

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especially when considering that the context in which someone receives this message is also filled with subtler forms of discrimination, and hints of inferiority.

Microaggression effects

The present research has pinned two social psychological theories (i.e., stereotype threat and racial microaggression) together that are related to the social experiences of Blacks and examined its relationship to well-being and antecedents to preventative behavior engagement. While the source of the stereotype was organizational (i.e., communicated by the American Heart Association via print announcements), the previous experience of microaggression from a health professional was interpersonal. Both of the facets are features related to health that are modifiable by professionals, and it is important to acknowledge what can be done by both patients and providers in an effort to reduce racial health disparities. A failure to do so may perpetuate the stereotype of inferior health not only by individual action, but by larger social structures (i.e., scientific research, risk communication) as well.

The individual level factors that related to the experience of microaggression were age, education, and body mass index. Those who were younger, more educated, and had a greater body mass index, reported being more bothered by the microaggressions from their physician. This was an unexpected finding in that microaggression theory does not elaborate on individual characteristics that may be predictive of the interpretation of a situation as a microaggression. Perhaps individuals who were younger have had less experience with discrimination over time, and therefore were found to be more bothered by their physician's lack of racial sensitivity. Stigma surrounding obesity is well-understood, and perhaps those with a larger BMI reported may be more bothered by microaggression as a result of a pile-up effect of discrimination. In regards to the relationship between education and

microaggression, it may be possible that those who were more educated were also more aware of the subtle nature of discrimination and perhaps more attuned to the automatic slights generated by their health professionals.

The effects of microaggression on dependent variables were more pronounced than the effects of the experimental manipulation alone. The relationship between microaggression, well-being and decisional balance was mediated by self-rated health and general self-efficacy. The more that a participant was bothered by the microaggressions of their physicians, the lower the reports of general self-efficacy and self-rated health were, which in turn, related to decisional balance and flourishing General self-efficacy is an excellent correlate of both flourishing and decisional balance for smoking, exercise, and weight management. Previous microaggression from health professionals relates to a decrease in self-efficacy that may not directly cause a negative decisional balance, however, lower self-efficacy, over time, may have undesirable effects. This was a similar case for self-rated health. Those who had experienced microaggressions rated their health as poorer, and their health status was strongly related to their sense of flourishing in their lives. While it was not made evident in the present model, longitudinal data might speak to the effects of deteriorating self-rated health status as the result of microaggression in order to understand its behavioral effects overtime.

Limitations

One of the foremost limitations of this study was the use of cross-sectional data. Whereas predictive effects were able to be explored among variables that were experimentally manipulated, other relationships that were significant could only be spoken of in terms of the variance accounted for. The use of longitudinal data would better show how and if microaggressions' relationship to self-efficacy and self-rated health held over time and

negatively affected well-being and decision making. All that can be said as a result of using cross-sectional data is that these factors appear related and are worth including in such a model. Secondly, as with all model analyses, the relationships presented are only a snapshot as to what may be happening within the larger population. Whereas the sample was nationally representative, it would need to be larger, re-tested, and even explored via invariance testing to generate a theory of interactions between individual, interpersonal, and organizational effects among Black Americans. This is to say, this model may not necessarily hold up on another sample of Black U.S. adults, although it can be stated, that there is a decent chance. Also, other salient factors may be missing from the model. The exclusion of other possibly related factors would certainly be a limitation to the study. These factors may include perceived susceptibility to illness, family history, and diet, as all of these may relate to one's preventative efforts in avoiding a stroke. Finally, it is important to acknowledge that the latent structures of the variables measured were not examined. Adding to the path analysis, a full structural model would generate even more clues as to how these relationships work.

Future directions

The first suggestion for future directions would be replicating the study in order to build empirical evidence that professional and health organizations play a direct role in the well-being and decision making of Black Americans, as it pertains to health and stroke prevention. Generating this evidence would be supportive of increased advocacy of Black health by all parties invested (i.e., individuals, physicians, organizational structures). The present research is capable of reaching the American Heart Association as one of the first attempts to bring forth an evaluative component to their disease risk campaigns targeting Black Americans. The public service announcement used in the present study activated

stereotype threat, in that it was associated with a negative decisional balance for exercise adoption. It is assumed that this is not the intention of such ads. This research has the potential to help communicate to the American Heart Association that risk prevention needs to be focused on modifiable variables. Communicating statistical risk as something as salient and meaningful to one's identity such as race, will not generate ideal responses. If the goal of such a campaign is to reduce the risk of stroke among Black Americans, it should take race out of the picture. The ads reach proves to be effective enough in terms of relating to behavioral antecedents; however, the emphasis placed on race is unnecessary and even counter-productive. Similarly, physicians who communicate statistical risk similarly to their patients may be perpetuating microaggressions that have adverse effects on cognitive structures pertaining to behavior engagement. These social components are undeniable, and if larger communities continue to ignore them, racial health disparities are sure to perpetuate. It is hoped that an emphasis on improving self-efficacy, perceived well-being, and strategies for health behavior engagement replaces the current emphasis on race in health messages aimed at Black Americans by professionals and organizations. Reducing the stereotype of inferior health among Blacks may after all work towards eliminating health disparities.

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Epilogue

This section will briefly summarize and reflect on the preceding chapters in an attempt to identify the conclusions that can be drawn by its readers.   In sum, a view of science as bias free, as opposed to a truer definition of objective, has long been depicted to members of society. This type of objectivity had been used politically to substantiate policies related to the human condition. Historically, Blacks were deemed as naturally inferior, or different, so as to justify slavery and it continues still today (e.g., to validate ill health disparities). After the abolishment of slavery, the science used to perpetuate such differences remained intact. The ways in which race is currently researched inevitably echoes the agenda of early scientists to dominate and control groups of people. This notion, however, is not reason enough to abandon the idea of objectivity all together. With the inclusion of minorities in scholarly research and knowledge development, alongside a critical reflection on the material-discursive, objectivity can be strengthened. From this scientific standpoint, the agency of science can be shifted from one of dominance to one of social justice. This paradigmatic shift is essential to the amelioration of racial health disparities in the United States.

The construction of race has remained inextricably linked to the ways in which science goes about understanding the health of Black Americans. In the medical world, a preoccupation with risk has created the 'perfect storm' for an over-identification of factors related to disease. The prevalence of illness within a particular racial group is now communicated in terms of being a risk. As a technology, however, this form of risk communication has been under examined. Inherent to race as a disease risk are matters of futility on the part of the message recipient. When a risk for disease is one that is unmodifiable (e.g., one's race), the goals of communicating the risk are undermined, as there

are no ascribed rational actions that follow. By this, it is necessary for social scientist to investigate the consequences of this type of risk communication.

Interpersonal communication between patients and their providers has been explored in the medical literature as a factor related to health outcomes. This area of research was important to incorporate into this dissertation because it identifies a source of information as well as discrimination for Black patients. The discrimination experienced in this domain is far more subtle than overt racism, and is called microaggression. Microaggressions are understood as being related to behaviors and well-being. Specific to health professionals, however, interactions with patients as being microaggressive have not been well understood. In concert with the communication of race as a risk, Black patients are being threatened with the stereotype of health inferiority. Qualitative research from the pilot study in Chapter 3 depicts instances when a health professional's notions about race and expectation about behaviors and outcomes were expressed. Such instances left patients of color feeling offended, and perhaps more important in terms of behavior, less likely to return for a visit.

The final chapter brings together the structural, interpersonal, and individual predictors of health behavior decision-making and well-being. The public service announcements of the American Heart Association, microaggressions experienced from health professionals, and individual characteristics are explored as sources that contribute to decisional balance for healthful behavior adoption. These concepts were added to a well-justified model of prediction that included mediators such as general self-efficacy and self-rated health. The experiment presented sought to incorporate the role played by experts in the perpetuation of behavioral antecedents (decision making and cognitive structures) related to stroke prevention and well-being while taking into account individual factors. Well-being

and decisional balance for smoking, exercise, and healthy weight maintenance were found to be related to these multi-level predictors. This research found that the communication of race as a risk was associated with a negative decisional balance for exercise adoption. It also identified the relationships between microaggression, well-being and decision-making as being negative, and as being mediated by the cognitive structures of self-rated health and self-efficacy, both of which were positively related to decisional balance. The study generates evidence revealing that interactions with health professionals, as well as the messages from professional organizations need to be more carefully constructed so as to encourage and promote well-being, and healthful decision-making. Simply put: race needs to be taken out of the picture, in both media and interpersonal exchanges. More importantly it places emphasis on the use of race in health promotion as being skewed: race as a disease risk and the unintentional biases of medical professionals are both capable of negatively influencing the choices and thoughts of patients.

In sum, the chapters argue for science to reflect upon and modify the way in which it has dealt with race. Largely, as a result of weak objectivity, the conceptualization and utilization of race as diagnostic has led to faulty applications in health promotion efforts that seek to reduce health disparities. When racial differences in disease prevalence had first been identified, the next steps of actions, in both research and application, needed to be carefully managed. Race is still widely viewed as natural or biological, which it is not. It is also a feature of an individual that is non-malleable. When racial health disparities arise, we therefore must focus on what is modifiable. The way in which race is treated is an important place to start given its historical context in the United States and the role science has played in its validation as a construct. The elimination of race from a list of disease risks is in order: prevalence of a disease among Blacks has not been established with enough objectivity so as

to calculate and communicate it as odds. The elimination of this form of risk communication would be an excellent place to start the reduction of health disparities.

Applications of this type of knowledge, using race as a risk, leave Black patients to feel put down, and bothered by this unique form of microaggression. When race is 'to blame' for ill health, then persons from racialized groups may experience futility, or more specifically, a negative decisional balance towards healthy behavior adoption. The lack of critical reflection of what race truly represents and its application in health promotion has resulted in scientists being over confident in how race should be viewed. The American Heart Association's decision to publically campaign that the "odds are stacked against Blacks" needs desperately to be reconsidered. Utilizing race in such a way does little for generating effective applications in practice.

In order to eliminate racial health disparities, social scientists must carefully consider the implications made when including race in their research, practice, measurement, philosophies and applications; especially when conceptualized as a predictor of health and behavior. Race in this vein is a faulty concept for which there are more differences between group members than are differences between groups. As a construct, it lacks validity, despite its use as a proxy for genetics or ancestry. Instead, what social science should focus on is the space that has been created when individuals are racialized. This, again, requires a critical reflection on biases and histories. In the present work, we see an exploration of how race is used by health organizations and health professionals, both of whom shape the realities of Black health (in addition to the individual) and how doing this changes cognitive structures. Individuals who have experienced microaggression from their physicians reported poorer self-rated health and self-efficacy. Placed in a context where race is

communicated as a disease risk, individual efforts to adopt health promoting behaviors began to erode.

The next step for this type of research and philosophy about race and health is to continue to recruit minority scholars into fields of health and science. Their research questions may be capable of strengthening objectivity. Another crucial step would be to teach more philosophy of science courses to those who design research related to health. The use of mixed methods is appropriate when trying to understand the health of those who have been grouped together by scientists and society and share little in common. It is the job of the expert to realize that the only thing shared by Blacks is the views held by others about them, and optimistically speaking, is capable of being changed. The health status of Black Americans is individually molded in a paradigm in which they are being told that their health is inherently inferior by those who are believed to be objective generators of knowledge. We must turn to a critical examination of expert's use of faulty heuristics when it comes to understanding race and health disparities in the United States.

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