

How Racism Correlates with Perceptions and Attributions of Healthcare Disparities

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Introduction

There is much documented on the difference among the health profiles of different demographics in the United States. Many explanations circulate to explain these differences, as they often cannot be attributed to one definite cause. For example, it is commonly known that women on average live longer than men, although the reasoning behind this varies. It has been proposed that this variance could be caused by anything ranging from biological differences to lifestyle differences. While these variances seem to be inherent, certain variances seemed to be a result of differential treatment. For example, while men and women both suffer from cardiac disease at the same rate, women are referred for cardiac bypass surgery at a much lower rate than men even though women are in need of it at the same rate (Howerton et. al). This then results in a disparity in healthcare quality between men and women.

Despite the lack of perceptual research, many healthcare disparities are documented in the American health care system due to unequal treatment. Most notably is the health care disparity between African Americans and White Americans. There is much evidence amassed documenting different aspects of this disparity. In 2002, it was found that mortality from cardiovascular disease in African American men was 22% higher than their white counterparts (Taylor et. al). While some argue that disparities like these are due to genetic or lifestyle differences, there is much evidence to counter this point. One study found that much of the health care disparity that exists currently between African Americans and White Americans is due to racial residential segregation, a result of white flight. This segregation then leads to differences in access to education and employment as well as differences in the physical and social environments, leading to disparities in health (Williams et. al, 2001). Thus, while at the

surface these health care disparities seem to be uncontrollable, they are more likely to be a result of inequality in our society.

While many studies have documented health care disparities, very few studies have been done to show the awareness of these disparities by society. One study has shown that multicultural patients perceive physicians of different cultures than their own as being unable to culturally relate with them, thus making their visits less comfortable (Fiscella et. al, 2002). Furthermore, evidence shows that racial healthcare disparities are more likely to be noticed than disparities between poor and the wealthy (Booske et. al, 2011). While these studies exist to show that healthcare disparities exist, no studies clearly document the perception of these disparities. The perceptions of attributional causes for healthcare disparities among minorities in the United States has not been well documented. Perceptions of disparities can vary greatly; for example, a person might believe that a population suffers from a poorer health profile due to lack of access to care or unequal treatment by the healthcare system. While we have somewhat documented that there is an awareness of these disparities, we have yet to show what people think are the underlying causes of these societal problems.

There are three main types of attributions for healthcare disparities explored in this study. The first is the biological attribution, which consists of genetics and physiological factors. An example of a biological disparity can be observed in Ashkenazi Jews, who suffer from a higher prevalence of Tay-Sachs disease. This is theorized to be due the isolation and marginalization of Jewish populations, resulting in a less diverse gene pool with the allele for the disease present, causing the higher incidence rate. It is important to note that Tay-Sachs does not only affect Jewish populations, but rather at a higher rate due to the previously mentioned reason. The next type of attribution for disparities is the internal attribution. This involves placing the blame for a

poorer health profile on the individual and his or her choices. For example, one may believe that blacks suffer from poorer health because they are not proactive or do not follow the doctor's medical advice. The last type of attribution for healthcare disparities is the external attribution, aimed at placing blame on factors out of the control of the patient for their poorer health profile. These factors range from lack of access to proper medical care to unequal treatment by medical professionals in comparison to majority groups.

The cause for disparities between minority Americans and White Americans, mainly African Americans, is due to external factors such as less access to care, life stressors not incurred by the majority population, and unequal treatment when receiving care. Unequal access to care often stems from a difference in average socioeconomic status between whites and blacks, but also manifests in segregation of even equal socioeconomic blacks and whites. Black Americans with the same socioeconomic status as whites live in poorer neighborhoods on average. This results in less access to the same healthcare facilities that whites would have (Williams et. al, 2001). Black Americans also have more life stressors than white Americans. These stressors are due to a variety of reasons, from having greater difficulty to finding jobs to having to worry about being stereotyped by the police. These stressors incrementally add up, leading to higher rates of diseases such as cardiac disease (Carlson et. al, 2004). Therefore, what most people perceive as a "biological" or "genetic" difference between black Americans and white Americans is due to controllable social factors. Lastly, unequal treatment by the healthcare force is another underlying influence of healthcare disparities. Implicit bias in healthcare professionals often unconsciously influences how they diagnose and treat black Americans. For example, when assessing the best medication for a black patient, a physician may incorrectly "recall" that the patient cannot afford a more intense regimen or medication, thus changing how

he treats the patient (Blair et. al, 2011). This leads to the patient not taking the medication they need and resulting in the worsening of their condition. All these reasons in tangent negatively affect the black health profile.

One can then see where prejudice plays a role in how we perceive these healthcare disparities. The purpose of this study is to not only document the public's awareness of these healthcare disparities, but to also discern which causes they believe are most commonly associated with disparity. Since prejudiced attitudes influence how one attributes behavior, we have theorized that individuals who possess greater prejudiced attitudes towards blacks will be less likely to acknowledge healthcare disparities, and if they do acknowledge them, be more likely to make behavioral or biological attributions consistent with common negative stereotypes. Conversely, individuals who are less prejudiced are hypothesized to be more aware of healthcare disparities and the social causes that create them.

Methods

Attitudes and attributions of healthcare disparities towards both individual and communities were measured. Two vignettes were made (see Appendix). In the first one, an individual was described; the second vignette parallels the first one very closely except it describes people of a community. The community condition was created to see if race is more salient in a group versus an individual. Both vignettes described socioeconomic statuses that afforded good health insurance as to eliminate cost of care as a possibility of disparity. Individuals in both vignettes were described as slightly overweight, but overall leading relatively healthy lifestyles. The individuals suffered from cardiac issues, which were not getting better despite help from a physician. With each vignette, a picture of a black or white male was placed depending on the condition.

Before being faced with the vignette, automatic racial attitudes were measured using a priming measure (Fazio et. al 1995). In this component, a participant attempts to pair words of a positive or negative connotations with black or white faces. The latency in pairing a white face with positive words and a black face with negative words is then subtracted from the latency of pairing a white face with negative words and a black face with positive words. This number, measured in milliseconds, then gives a score of automatic prejudice for each participant.

After the presentation of the vignette, participants were presented with questions about why the person or community was still sick despite receiving healthcare (see Appendix). Questions asked whether this was due to biological attributions, personal attributions, or physician attributions. There was a total of nine questions asked with three per category. Afterwards, participants were asked general questions about healthcare disparities in the United States.

For this study, participants were recruited through Intro to Psychology classes at the University of Tennessee, Knoxville. Participants were randomly assigned to one of the 4 conditions of a 2 (Patient race: Black vs. White) X 2 (Target: Individual vs. Group) design. Four White and 4 Black faces were used for the faces, and participants were randomly assigned to this condition as well, which, in producing no effects, is not discussed further. Before the study began, a study consent form was signed and after the study was concluded, a debriefing document was given to the participants as well as a post-study consent form to use data collected. A total of 122 students participated in the study. Two students' data were excluded from the analysis due to extreme prejudice scores (>3.4 standard deviations from the mean) and one student was excluded due to excessive errors in the priming measure.

Results

The mean automatic prejudice score of the participants was found to be 21.14 milliseconds ($SD = 99.01$, T-Test against zero $t(120) = 2.24$, $p < .05$). This provides evidence of an average automatic racial prejudice in the population examined.

Means of attribution were computed for the three attribution types in the post-vignette questions, with alphas of .61, .58, and .92 found for biological attributions, internal attributions, and external attributions respectively. This shows that our questions showed relative strength at measuring what we designed them to measure, with external attribution questions showing the highest reliability of measurement.

2 (Patient race: Black vs. White) X 2 (Target: Individual vs. Group) ANOVA was calculated on the 3 attribution measures, using prejudice as a continuous covariate, specifying all 2-way and the 3-way interactions in the model. In general, it was found that participants were more likely to make biological and internal than external attributions for all conditions (all t 's > 2 and p 's $< .03$) (Table 1). An effect of patient race on biological attributions was found ($F(1, 110) = 6.51$, $p = .01$) with biological attributions being higher for black conditions ($M = 2.39$, $SD = .79$) than white individuals ($M = 2.06$, $SD = .80$). No effect of patient race, group or individual, or automatic prejudice was found on internal attributions. For external attributions, an effect of group vs. individual was found ($F(1, 110) = 6.09$, $p = .02$) with more external attributions found in group conditions ($M = 1.28$, $SD = 1.48$) than individual cases ($M = .68$, $SD = 1.20$).

For external attributions, a patient race X automatic prejudice interaction ($F(1, 110) = 5.43$, $p = .02$) was found, indicating that attributions to external factors varied as a function of patient race and automatic prejudice. Post-hoc analyses indicated that for those who judged a white patient, automatic prejudice correlated positively with external attributions ($r = .21$, $p =$

.13), whereas for those who judged a black patient, automatic prejudice correlated negatively with external attributions ($r = -.13$, $p = .30$). In other words, more prejudiced individuals made more system-level attributions for a white patient, but fewer system-level attributions for a black patient.

Discussion

The purpose of this study was to explore how patient race and prejudice affect how one perceives healthcare disparities and attributes causes to this inequality. Our data unveil slight bias in those who scored higher on the automatic prejudice measure and how they perceive and attribute healthcare disparities.

To begin, results of the priming measure show that the population studied as a whole displayed a racial bias. Although individual attitudes ranged from being biased against whites to being biased against blacks, on average students had a harder time associating black people with positives and white people with negatives. This finding is important because it allows us to then study how this biased population reacted to the vignettes and questions about equality in the healthcare system.

Although there were no correlations between automatic prejudice and the tendency to make internal attributions about health, an effect on patient race and biological attributions was found. Participants were more likely to blame poor health of the black patients on their genetics than the poor health of the white patients. This point is interesting as the medical field used to believe that biological differences between black people and white people existed and that they were to be treated separately. This resulted in different treatments and medications marketed to the black community, such as the pill Bidil. Although biological differences exist in individual cases, this kind of attribution is not the cause for the large disparity between black Americans

and white Americans observed in the United States. As mentioned previously, this disparity is due to mistreatment by the medical system and different life stressors incurred by black Americans. Thus, this observation from the study supports the notion that the general population is not aware of the external factors that have shaped the health disparity between blacks and whites, rather attributing it to a difference of biology.

The relationship between automatic prejudice and patient race and how it correlates to external attributions is another point of interest. Essentially, the more racist attitude an individual possessed, the more likely they were to blame external factors for the cause of poor health in the white individual and less likely they were to do the same for the black individual. This shows us that people are more likely to attribute the misfortune of bad health in the white individual on the “system” whereas for the black individual they are less likely to do so, rather attributing cause to internal or biological factors. This attitude can be interpreted as a type of fundamental attribution error. Since the vast majority of participants were white (no black individuals participated) it can almost be seen that attributions for the white case were made in his defense and attributions for the black individual made to put him at fault. Therefore, this evidence supports the belief that racial bias motivates individuals to attribute disparities to be the fault of the victims when they are of different race than themselves.

Across all conditions, people were very reluctant to attribute poor health in the patients to the doctor. This evidence suggests a very strong trust placed in our healthcare system to be just and unbiased. Generally, medical professions are revered highly, with racism often believed to be unheard of in the field. However, the medical system is often the cause of poorer health in minorities, as they are often treated differently than the majority population. One reason some disparities are so pervasive is due to the lack of the healthcare system internally recognizing that

racism could exist in its employees. Therefore, it is believed that one step towards reducing disparities overall is for the healthcare system to introspect on how it can better culturally relate to minority patients.

Overall, this study has provided some evidence for relationships between racial prejudice and perceptions and attributions for healthcare disparities. Points of interest for future directions of studies include doing a similar experiment with employees of the healthcare system to better understand how the system itself perceives and attributes inequalities in the health profile of minorities versus the majority. Another study should focus more on minorities' perceptions and attributions, since previous studies have already shown variance in that aspect. In order to better our healthcare system and reduce disparity, we should continue to look into how society internalizes and interprets these issues in order to come up with viable solution for equal treatment.

Appendix

Stimulus materials for judgment task

Individual case:

Bill is in his early 40s. Bill works a middle class job and lives a middle class life. He exercises a few times a week, but despite that, he is still overweight. Bill recently started have heart issues, and decided to see a cardiologist to seek treatment. The doctor diagnosed him with high blood pressure, and prescribe a pill to lower blood pressure. Bill has good health insurance, making the cost of visiting the doctor and treatment affordable.

After a few months, Bill's blood pressure issues came back.

Community case:

Overview is a suburb of a big city. The adults there tend to work middle class jobs and live middle class lives. The adults in the community generally exercise a few times a week, but despite that, most are still overweight. Adults in Overview often suffer from heart issues, so many of them see a cardiologist to seek treatment. The doctor usually diagnoses them with high blood pressure, and prescribes them a pill to control for blood pressure. Residents in the community have good health insurance, making the cost of visiting the doctor and treatment affordable.

After a few months, for many members of the community the blood pressure issues come back.

Black target: White target:

Attribution questions (portions in brackets are alterations for those participants assigned to the community condition; all questions will be answered on a 0 (not at all) to 5 (very much) scale):

To what extent do you think the condition is worsening due to family history of heart disease?

To what extent do you think the condition is worsening due to defects of his [their] heart[s]?

To what extent do you think the condition is worsening due to his [their] body's [bodies'] inability to use the pill?

To what extent do you think the condition is worsening due to not listening to the doctor's orders?

To what extent do you think the condition is worsening due to inconsistent use of medicine?

To what extent do you think the condition is worsening due to not caring about the blood pressure problem?

To what extent do you think the condition is worsening due to the doctor's inattentiveness?

To what extent do you think the condition is worsening due to doctors not caring about Bill [the Overview community]?

To what extent do you think the condition is worsening due to doctors not liking Bill [the Overview community]?

Follow-up questions:

To what extent do you think our healthcare system treats individuals fairly based on socioeconomic status?

To what extent do you think our healthcare system treats individuals fairly based on race/ethnicity?

To what extent do you think two individuals of the same socioeconomic status and insurance coverage will receive the same treatment regardless of their race or ethnicity?

Minority groups in America do, on average, have poorer health than white Americans. In your opinion, to what extent is this disparity based on:

- a) Lower socioeconomic status on average?
- b) Biological differences between groups?
- c) Lack of proper health education?
- d) Lack of being proactive about health?
- e) Lack of equal treatment by the healthcare system?

Tables

Attribution Type	Black (Mean, SD)	White (Mean, SD)
Biological	2.39 (.79)	2.06 (.80)
Internal	1.90 (.91)	2.17 (.83)
External	.99 (1.39)	.86 (1.3)

Table 1. The averages (on scale of 0-4) across all conditions of attributions for each attribution with standard deviations.

References

- Blair, I.V., Steiner, J. F., & Havranek, E. P. (2011). Unconscious (implicit) bias and health disparities: where do we go from here? *The Permanente Journal*, 15(2), 71-78.
<http://www.thepermanentejournal.org/files/Spring2011/HealthDisparities.pdf>
- Booske, B. C., Robert, S. A., & Rohan, A. M. K. (2011). Awareness of racial and socioeconomic health disparities in the United States: the national opinion survey on health and health disparities, 2008-2009. *Preventing Chronic Disease*, 8(4), A73.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3136972/>.
- Carlson, E. D., & Chamberlain, R. M. (2004). The black-white perception gap and health disparities research. *Public Health Nursing*, 21(4), 1525-1446. 10.1111/j.0737-1209.2004.21411.x
- Fiscella, K., Franks, P., Doescher, M. P., & Saver, B. G. (2002). Disparities in health care by race, ethnicity, and language among the insured. *Medical Care*, 40(1), 52-59.
<http://www.jstor.org/stable/3767958>
- Taylor, H. A., Wilson, J. G., Jones, D. W., Sarpong, D. F., Srinivasan, A., Garrison, R. J., Nelson, C., & Wyatt, S. B. (2005). Toward resolution of cardiovascular health disparities in African Americans: design and methods of the Jackson heart study. *Ethnicity & Disease*, 15(6), 4-17. <http://www.ishib.orgwww.ishib.org/ED/journal/15-4s6/ethn-15-4s6-4.pdf>
- Williams, D.R., & Collins, C. (2001). Racial residential segregation: a fundamental cause of racial disparities in health. *Public Health Reports*, 116(5), 404-416.
10.1093/phr/116.5.404

Williams, D.R., & Jackson, P. B. (2005). Social sources of racial disparities in health. *Health Affairs*, 24(2), 325-334. 10.1377/hlthaff.24.2.325