**Implicit Biases Towards Healthcare Providers Based on Age and Gender Demographics** 

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When patients are seeking a healthcare provider, factors such as experience and expertise of the healthcare provider come into play. However, implicit biases do occur in potential patients looking to access healthcare in the beginning of the process. Insurance coverage, race, and accessibility add additional barriers of access. In this study, we are focusing on the impacts that race and gender have on both patients and healthcare providers. As mentioned in the source by Wheeler et al. (2019), patients in the last 5 years have demeaned 59% of physicians, which shows how prevalent patient bias is in the healthcare field. Our study focuses on patient bias and how the personality of a medical provider may influence whom a patient chooses for their healthcare needs. Additionally, the article states that social characteristics of physicians shape how patients view healthcare providers in a more disrespectful manner (Wheeler et al., 2019). These factors could impact who a patient chooses based on past experiences due to the social aspects involved.

However, there are a variety of services/platforms designed to help people find healthcare providers. ZocDoc is one example of a platform which is used for finding healthcare providers. On ZocDoc, as described by Sehgal et. al (2024), "patients have easy access to a wealth of information about their health care providers, as well as a relatively straightforward means to express their satisfaction." Although younger physicians are regarded to provide greater levels of comfort to patients, older physicians are viewed as more experienced in their fields. The social characteristics a healthcare provider has affects how a patient might rate them, and age and gender are among those characteristics (Sehgal et al., 2024). That may influence who a patient is likely to choose. The question here is: do patients showcase implicit bias based on age and gender when deciding on a healthcare provider?

## **Implicit Bias**

For years, the concept of an unconscious mental process has been a highly contentious subject in psychology research (Greenwald and Kreiger, 2006). Implicit bias is defined as a negative attitude that is not consciously held by a person that affects relationships and social interactions. Implicit bias can also be referred to as unconscious bias, as it has been understood that many people are unaware of their bias and do not realize they are expressing bias (Suveren, 2022). It is understood that implicit bias is more likely to have effect when individuals do not have the mental capacity to make an informed and thoughtful decision (Saha and van Ryn, 2011). This idea of an "unconscious bias" has also been studied in a variety of environments, such as in politics, education, and in the medical field (Kinder and Ryan, 2015; Quereshi & Okonofua, 2024; Van Ryn & Saha, 2011). While this bias is not always violent or hateful, it has still been found to affect interpersonal relationships and how individuals interact with the world.

The patient-doctor relationship in healthcare is incredibly important for both the patient seeking care and the doctor providing care. This relationship is defined generally as the combination of communication and interpersonal skills but has more complex factors that also have a substantial impact (Ridd et al, 2009). This relationship can define outcomes of care and determine whether a patient will continue their care with that doctor. Similarly to other relationships, this relation can also be affected by implicit bias from both perspectives. Should a doctor be unconsciously biased toward a demographic, this may affect the quality of care the patient receives (Saha and van Ryn, 2011). Implicit bias has been widely studied from the perspective of the doctor, but not much research has been done from the view of the patient. This study aims to understand whether patient implicit bias plays a role in choice of medical provider for healthcare, and its implications for the patient-doctor relationship.

# **Implicit Bias Towards Gender in Healthcare**

Gender has a big influence on the treatment of patients and healthcare providers.

Recently, healthcare has made significant efforts to understand the disparities between genders, along with race, age, etc., to try and increase diversity along with a better patient satisfaction approach (Marcelin J., et al. 2019). As of recently, there has been efforts to include transgender and better accommodate cisgender women in clinical care in terms of reproduction as a means of providing better care to patients (Moseson, H., et al. 2020). However, disparities are still seen between the genders, even between physicians.

Medical providers specifically may exhibit attitudes that further increase these disparities. In general, healthcare providers are taught to be neutral in their assessments and may be subject to the Gender Role and Expectations of Pain Questionnaire (GREP), used to account for gender stereotypes in reporting pain, but they still exhibit these behaviors of discrimination and internal prejudices. As an example, female patients have been found to be discriminated against for "exaggerating" pain by their physicians and trainees alike (Wesolowicz D. 2018). These actions and attitudes that may not be made known to either the individual or those around them, known as implicit biases, may further reinforce stereotypes around gender but also bring awareness of how they occur and build interactions between patients and physicians alike (Marcelin J., et al. 2019).

Patient and healthcare physicians may also create more discrepancies and biases through the eyes of the patient. Patient-centered communication, the process of physicians understanding patients through other perspectives and taking responsibility for their actions and treatment, is used in medical training and applied in real life, resulting in helpful and positive effects for patients. However, patients are susceptible to certain levels of competence based on their gender and stereotypes surrounding them. For instance, patients may expect women to be more

compassionate of them (Blanch-Hartigan D., et al., 2010). A study relevant to this topic by Schmid Mast M., et al, (2007) had 167 students, 80 male and 87 females, interacting online with a virtually generated physician with varying genders to test patient contentment (also with varying genders). They found that male patients were not as affected by physician communication styles, for both male and female physicians. In contrast, female patients were more content with a compassionate and caring communication style for female physicians as opposed to non-caring and exhibited higher discontent with male physicians that exhibited a non-caring communication style (with neutral feelings towards a caring communication style). This shows that patients, particularly female, prefer a patient-centered communication style that emphasizes compassion and kindness towards them, further enabling these biases. Therefore, it is important to examine healthcare's gender inequalities to address deeper underlying issues such as biases and discriminations in order to improve patient treatment and physician valued competence.

## **Implicit Bias Towards Age in Healthcare**

Patients often perceive younger doctors as more comfortable and knowledgeable with current technology, whereas the older physicians are considered more competent due to their medical experience and expertise. This might occur to us as just a preference, but when we analyze each patient's decision in depth, we can see the impact of implicit bias in the medical field, not only on the patients but on the physicians as well. Implicit biases operate beneath unconscious awareness, impacting decision-making processes in a manner that traditional self-report measures often fail to capture (FitzGerald and Hurst, 2017). This would demonstrate that in the context of age, patients may unconsciously make a decision based on previous beliefs or preferences regarding age and ability. This is very likely since it is very natural to assume that older doctors would be more experienced because their time in the medical field may have

increased their skill set compared to a younger physicians, as evidenced by the results of a study by Dr. Jena in which surgeons improve with age (Jena, A. B., & Worsham, C., 2023). This does not, however, imply that an older doctor is more capable than a younger physician since the conclusion relies unconscious prejudice, when in reality it depends solely on the physician's ability and competence.

A study by McKinstry and Yang revealed that "respondents considered older physicians to be kinder, more attentive and more willing to listen" (Couto & Barreto, 2024). The same study also mentions that younger physicians were more up to date, compared to older ones who were considered wiser. In recent years, patients use online platforms to look for well-rated doctor profiles to have excellent care, which helps us directly keep track of their preference in doctors according to the physician's individual characteristics, one of them including age. As discussed earlier, patient reviews on web-based platforms often reflect implicit age-related biases.

Additionally, in the article by Couto & Barreto (2024), the Kruskal-Wallis test results revealed that physicians between the ages of 30-40 were rated the highest in openness to doubts and that clinical knowledge was higher in the ages 40-50 and above. This indicates that beyond the competence and performance of the physician, there are unconscious perceptions coming from the patients that are related to a physician's age, which impact the patient's choice.

# **Hypotheses**

Although various studies have touched on the topics of gender and racial biases in healthcare, they tend to focus on the attitudes of medical professionals towards their patients. However, there is not sufficient research in terms of implicit bias regarding patient selection of physicians.

This study aims to explore whether implicit bias influences the selection of a primary

care physician by assessing how both age and gender impact the likelihood of patients choosing a particular doctor, comfortability levels, and perceived medical competence. Through manipulation of these demographic variables, our study seeks to understand how these factors shape individuals' decision-making when selecting a healthcare provider.

In line with earlier studies, we inferred that older doctors will be rated higher in perceived medical competence compared to younger ones due to knowledge and skills. This will further answer any questions regarding perception and age bias amongst participants.

We also hypothesize that younger doctors will be rated higher in patient comfortability compared to older practitioners. This might be due to generational differences or simply preference. Our next hypothesis mentions how participants will feel more comfortable with female healthcare providers regardless of their age. Lastly, we inferred that female healthcare providers are overall more likely of being chosen for care compared to males, despite it being a woman dominated field.

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