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# Customer Perceptions of Diversity in Health Services: How Other Customers' Race Influences Customer Perceptions

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***Abstract*** **-** Using the Similarity Attraction perspective, this study examines racial diversity in health services. An initial review of the literature summarizes currently known findings related to the effects of Other Customers on Customer experiences in healthcare service settings. Two experimental studies, adopting Byrne and Nelson's (1965) Similarity-Attraction perspective, test the effects of Customer-Other Customer Race (Black vs. White) interaction on Revisit Intentions and Customer Perceived Anxiety. Results indicate that Perceived Anxiety is not reduced by Customer-Other Customer race match (*i.e.*, Black and Black, or White and White), though Other Customer Race (Black vs. White) drives Perceived Anxiety. Customer-Other Customer Race Match was also found to reduce Expected Satisfaction in high Service Failure cases.

***Keywords*** - Race, Other Customer, Healthcare Services, Anxiety, Service Environment

***Relevance to Marketing Educators, Researchers, and/or Practitioners*** - This study responds to the call for research investigating the racial effects of Other Customers on Customers in health care settings. Results of this study confirm that Other Customer Race has an impact on Service Experience and Expected Service Quality in healthcare settings. Therefore, it is important for healthcare providers to pay attention to the waiting rooms where customers may mingle or interact together since demographic similarity among customers (*i.e.*, ethnicity) may not always generate anticipated optimal outcomes (*e.g.*, reducing anxiety). Additionally, the findings of this study indicate that more academic research is needed to provide a complete holistic view of the racial impact and influence of Other Customers in healthcare service environments.

## Introduction

While diversity, racism, inclusion, and equity are not new issues, recent events such as the murder of George Floyd in 2020 and the killing of Asian Americans in Atlanta in 2021 have raised awareness of and caused a reassessment of these issues in many institutions. These issues also served as a catalyst for research in various fields aimed at understanding and addressing associated

problems. For example, in the health service industry, researchers note the lack of diversity in several areas, including the health profession workforce, especially for medical doctors (*e.g.*, Standford, 2020), in health service institutes' diversity policies and policy implementation (Lee *et al*., 2021), and incompetence of healthcare professionals, which may result in ethnic or racial minorities and migrant patients receiving poorer quality service (Seeleman *et al.*, 2015). Additionally, Ziegler and colleagues (2022) voice a call to "Improve Diversity Sensitivity in Healthcare" in Europe due to an increasingly diverse European population.

In marketing, researchers have sought to understand the interaction between customers and service providers and/or other customers (*e.g.*, Bone *et al.*, 2014; Houston *et al.*, 2018) since the service experience can be impacted by either type of interaction (Davies *et al*., 1999). Several studies investigate the influence of race and ethnic diversity in service settings. For instance, Bone *et al*. (2014) found race has a significant impact on service quality, including perceptions and expectations. Other studies show that the presence of diverse races and ethnicities in service settings can alter anxiety levels, leading to customers feeling unwelcome in the establishments and resulting in service dissatisfaction (Camarillo *et al.*, 2020; Johnson & Grier, 2013) and other researchers found that ethnic or racial minorities expect differential treatment (Houston *et al.*, 2018) in various of service contexts such as food services (*e.g.*, Brewster & Brauer, 2017; Houston *et al.*, 2018), retail (*e.g*., Bennett *et al.*, 2015) and financial services (*e.g.*, Bone *et al.*, 2014).

Consequently, marketing researchers have called for more research to increase the understanding of context dependent racial effects (Davidson, 2009; Grier *et al*., 2020) even before the tragic events mentioned earlier. Furthermore, researchers point out the need to investigate the racial effects that other customers have on customers in health care settings (Abboud *et al.*, 2020; Gupta & Verma, 2021). Therefore, this study aims to examine the effect other customers' race, whether Black *vs.* White, has on customers in a health care setting. By doing so, this research extends our understanding of the dynamics among customers within the healthcare settings and how Perceived Anxiety plays a role in customer outcomes such as Expected Service Quality, Expected Satisfaction with the service, and Revisit Intentions.

# Literature review

## Other Customers in Healthcare Settings

It is well established in the literature that the mere presence of other customers has an influence on the customer service experience (Grove & Fisk, 1997, Martin, 1996), and the effect of other customers may even be greater than the effect of service employees (Lehtinen & Lehtinen, 1991). In many service settings, other customers' behaviors (*e.g*., Yi *et al.*, 2013; Gursoy *et al.*, 2017), physical (observable) characteristics (*e.g*., Lui & Mattila, 2015; Joe & Choi, 2019), and emotions (*e.g*., Okan & Elmadag, 2020; Killian *et al.*, 2018) have been shown to influence customer choice and experiences. As one of the most accessible types of information, physical appearance has been studied extensively in various service settings in relation to its influence on customers.

Additionally, other customers provide important cues resulting in judgments about the service provider that impact the customer's purchase decisions (Baker *et al.*, 2002) and produce

emotional reactions (Miao & Mattila, 2013) such as anxiety. Researchers found that customers' perceptions of a store, purchase intentions, and emotional reactions (Miao & Mattila, 2013), such as anxiety, are impacted by the number of other customers, interactions with other customers, and other customers' characteristics and behaviors such as purchasing activities (*e.g*., Brocato *et al.*, 2012; Fransen *et al.*, 2011, Grewal *et al.*, 2003; Söderlund, 2011; Song *et al.*, 2019; Wang & Mattila, 2015). However, these studies focus on the impact of other customers in experience services (*i.e*., restaurant and retail environments) rather than expert services (*i.e.*, legal and healthcare).

Furthermore, Gupta and Verma (2021) conducted a systematic literature review focused on other customers between 1972 and 2020. Three themes emerged among 171 articles: (1) other customers as environmental stimuli, (2) They concluded that other customers provide a significant contribution to the literature and call for studies in unexplored areas, particularly in healthcare services. While there is limited research on other customers in healthcare settings, several marketing scholars examined the influence of other customers on customer outcomes related to value co-creation (*i.e*., Kim, 2019; McColl-Kennedy *et al*., 2017). Therefore, investigating the impact of Other Customers (Black *vs.* White) on Customer Perceived Anxiety, Expected Service Quality, Expected Satisfaction, and Revisit Intention to use services in healthcare settings will help close the literature gap on other customers and provide implications for healthcare providers and marketers.

## Diversity in Health Care Environments and Expected Service Quality: The Similarity Attraction Perspective

Bitner (1992) found that consumers experience emotional, cognitive, and physiological responses to service environments, which impacts their evaluation of the experience and their purchase behavior. Researchers found that evaluations of service environments influenced Expected Service Quality in multiple service settings (*e.g.*, Lin & Liang, 2011; Peng & Jeong, 2012; Prayag *et al.*, 2020). In addition to the service environment, service providers and other customers influence customer responses in a service environment (Patricio *et al.*, 2011; Karaosmanoglu *et al.*, 2011; Zeithaml *et al.*, 2006). For example, Lin and Liang (2011) found a relationship between employees' emotional states and customers' emotional responses. Patricio *et al.* (2011) note there is a need to consider other customers when designing multi-level service designs since they influence the co-creative nature of customer experience. Butori and Bruyn (2013) and Jiang and colleagues (2013) discovered that other customers could cause discomfort for some people, and the source of that discomfort can sometimes be race. In fact, customers use race when evaluating service providers (*e.g.*, Black *et al.*, 2003; Brewster *et al.*, 2014), and other customers' race is used as a contextual cue when evaluating services and the service environment (Baker *et al*., 2002).

By nature, healthcare services are complex, creating uncertainty when available cues and information are difficult to comprehend. Service quality can be measured in healthcare settings with objective criteria such as morbidity and mortality in medical records or subjective measures such as perceptions via questionnaires (Um & Lau, 2018). Luther and colleagues (2016) state that patient surveys are the most common method to gauge patient satisfaction and improve the quality of hospital services. However, this research tends to focus on the service quality of hospital rooms, food services, and the performance of medical doctors and nurses (Luther *et al.*, 2016), pointing

to the need for investigating the impact of other customers on healthcare service quality perceptions. Since healthcare services deal with physical and emotional well-being as well as life-or-death situations, Expected Service Quality may be somewhat different and even more complicated than in other service settings. Furthermore, some customers may view healthcare services as stressful because of unfamiliar healthcare terminology, the complexity of some procedures, and hard-to-comprehend results. From this perspective, customers may feel apprehensive, anxious, or uncomfortable, which can result in lower expectations or perceptions of service quality. In a service setting, negative emotions (*i.e.*, Anxiety) may lead customers to form lower Expected Service Quality (Wirtz & Bateson 1999).

In general, findings show that customers evaluate similarities with a service provider (Arndt *et al.*, 2016; Auh, 2005; Boshoff, 2012) and other customers using that provider (Brack & Bankenstein, 2014; Karaosmanoglu *et al.*, 2011; Kwon *et al.*, 2016) resulting in emotions, such as anxiety, attitudes, and behaviors towards the service provider that are affected by those evaluations. More specifically, previous marketing research suggests that similarity among customers results in more favorable customer perceptions toward the service environment (*e.g.*, Brack & Benkenstein, 2014; Wu, 2007). While there is an increase in research focused on other customers, there is a limited empirical study examining similarities among customers in the marketing literature (Cavusgil *et al.*, 2022). To bridge this gap, the Similarity-Attraction framework will be used in this study to further understand the influence of similarity, specifically in healthcare settings. This framework states that interactions with others who are perceived as socio-economically similar (*e.g.*, race, attitudes, age) provide positive reinforcement and elicit more positive responses (Byrne & Nelson, 1965). Since customers prefer others who are like themselves, they tend to gravitate to service providers and other customers perceived as similar in situations where they are making selective decisions (Peters & Terborg, 1975), such as selecting healthcare services.

Healthcare scholars have investigated the impact of diversity on staff performance and health outcomes (Gomez & Bernet, 2019). Some studies found that diversity increases clinical decision-making accuracy, leading to better health outcomes and higher satisfaction (*e.g.*, LaVeist & Pierre, 2014). Other studies were unsuccessful in finding significant relationships between diversity and clinical outcomes (*e.g.*, Jerant *et al.*, 2011; Schnittker & Liang, 2006). Based on the Similarity-Attraction framework, when there is a similarity between customers and other customers in a service setting, the feeling of discomfort should be reduced, Perceived Anxiety should lessen, and Expected Service Quality should be higher. Service Quality expectations are formed using cues in the service process, and in the case of health services, these cues are very complicated. Thus, service settings and the emotions (*i.e.*, anxiety) created as a result of the perceptions about the service environments play a pivotal role in forming service quality expectations. Therefore, the following hypothesis was formulated.

> **H1:** Customer Race (Black *vs.* White) will moderate the indirect effect of Other Customer Race (Black *vs.* White) on Expected Service Quality through Perceived Anxiety. In other words, there will be an interaction between Other Customer Race (Black *vs.* White) and Customer Race (Black *vs.* White) such that when both the Customer and the Other Customer are the same race, their Perceived Anxiety levels will be lower, and in turn, Expected Service Quality will be higher.

## Service Failure and Other Customer-Customer Race Match

Because of patients' health and safety, healthcare service satisfaction is vital. While limited, scholars have explored how healthcare service quality influences customer satisfaction, resulting in patients' negative responses when a healthcare service fails (Um & Lau, 2018). However, when it comes to investigating racial influence on service quality and the impact race has on a Service Failure in a healthcare setting, previous studies are more focused on situations involving specific diseases such as heart failure. For example, Rathore *et al.* (2003) found that race (Black *vs*. White) had no significant impact on the quality of hospital care for heart failure patients, even though Black patients perceived receiving lower quality care. Similar results were found for outpatients by Deswal *et al.*, 2006. Despite these results, it is a common belief that Black patients have received poorer service than White patients due to their race. Consequently, it is crucial that more studies explore the racial influence on service quality and the impact race has on Service Failure in a healthcare setting.

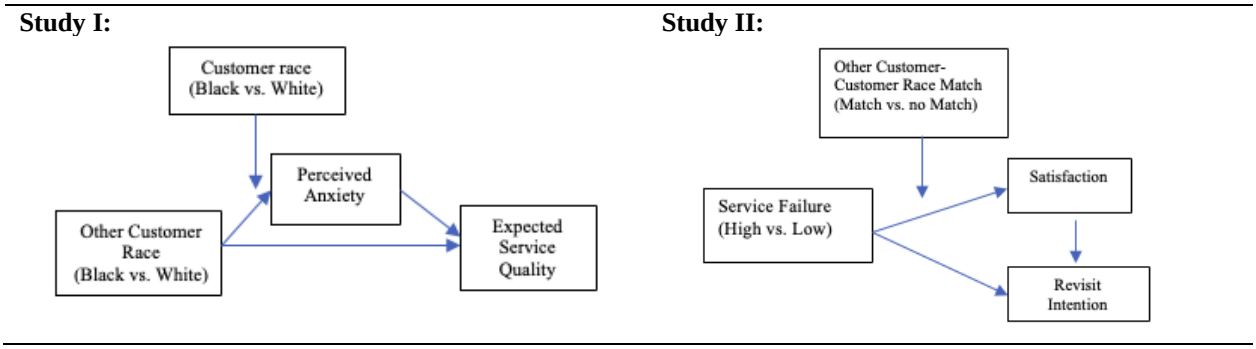
While limited, some studies focused on the impact of similarity between customers and other customers on Service Failure in service settings such as restaurants, tourism, and retail. For example, Baker *et al.* (2008) found that when a Black customer experiences a Service Failure, the failure will be evaluated more severely when no other Black customers are present. Meyer and Baker (2010) found that Black customers' anger and service recovery expectations were lower when there were other Black customers present. Perceived cultural compatibility influenced satisfaction with the service. Additionally, Min and Joreiman (2021) found that in a hospitality service setting, there was a stronger relationship between perceived discrimination and anger when Black customers experienced a Service Failure than when the Service Failure was experienced by White customers. Through the literature review, we found a few articles investigating the impact of similarity in race in healthcare services. For instance, a marketing study found a positive relationship between the perceived similarity of hospitalized patients and satisfaction in healthcare settings (Luther *et al*., 2016). According to previous literature, a match in race between a customer and other customers impacts customer satisfaction. Therefore, we posit:

> **H2:** The indirect effect of Service Failure on Revisit Intention through Expected Satisfaction will be moderated by Other Customer-Customer Race match (Black *vs.* White) (*vs.* mismatch). In other words, customers will be more forgiving when there is a high Service Failure if Other Customer-Customer Race match; therefore, Expected Satisfaction will be influenced more negatively by Service Failures when there is a race mismatch. When Service Failure is low, the effect of race match on the Service Failure-Expected Satisfaction relationship will not be significant.

# Methods and Findings

H1 and H2 were tested through 2 experimental studies in a health care environment. The first study tested the moderation of customer race (Black *vs*. White) on the indirect effect of other customer race (Black *vs.* White) and Perceived Anxiety on Expected Service Quality. The second study tested the moderation of Other Customer-Customer Race match (Black vs. White) on the indirect effect of Service Failure severity (High *vs*. Low) and Expected Satisfaction on Revisit Intention. Proposed models can be seen in Figure 1.

**Figure 1: Conceptual model of Study I and Study II**




## Study 1 - Stimuli, Procedure, and Measures

A 2 (Other Customer Race: Black *vs.* White) × 2 (Respondent Race: Black *vs*. White) between-subjects experimental study was designed to test the effect of Customer Race (Black *vs.* White) and Other Customer Race (Black *vs.* White) on Perceived Anxiety and Expected Service Quality, thus test H1. Respondents were asked if they had any experience in the doctor's office (or hospital) in the past year. Those who replied favorably were shown color photographs (sourced from stock photos) of other customers to simulate the effects of the service setting as proven effective by Bateson and Hui (1992). Similar to Baker *et al.'s* study (2008), a picture of a group of people waiting at a doctor's office was used. The photographs depicted a group (all White or all Black) consisting of 4-5 men and women, sitting on chairs side by side, some looking around, and some reading in each condition. The respondents were told they were in the doctor's office for a routine checkup visit.

The images of the doctor's office, used for other customer race manipulation, comprised four other customers waiting. In both conditions (all White and all Black), there was a mix of genders (male and female) as well as a mix of different ages (young, middle-aged, and old). In each image, while there were other customers reading while waiting, there also were others just waiting (not doing anything). After viewing the images of other customers in the service environments, respondents responded to items exploring their Perceived Anxiety and Expected Service Quality, followed by demographic questions. Three items measuring Perceived Anxiety from the Profile of Mood States (Lorr & McNair, 1971) were used ("uneasy," "anxious," and "under stress") ($\alpha$ = .924).

Expected Service Quality was measured via three items (adopted from Dagger *et al.*, 2007), which included the following statements: "I would expect that this doctor's office offers services that are superior in every way," "I anticipate that the service provided by this doctor's office is of a high standard," and "I think the quality of the service provided by this service provider will be impressive" ($\alpha$ = .958).

### *Sample and Data Collection*

Data for the study were collected through Prodege, an actively managed database (https://www.prodege.com/). Among the 325 participants who completed the experiment, 24 were excluded due to failed attention checks. The final sample consisted of 301 respondents (57% female). Table 1 displays respondent characteristics.

**Table 1: Respondent characteristics**

| | **Study I (N=301)** | **Study II (N=399)** | | **Study I (N=301)** | **Study II (N=399)** |
|---|---|---|---|---|---|
| **Gender** | | | **Educational Degree** | | |
| Male | 129 (43%) | 132 (33%) | Middle School or less | 1 (0%) | 1 (0%) |
| Female | 172 (57%) | 267 (67%) | High School | 85 (28%) | 117 (29%) |
| **Racial Identity** | | | Associate Degree | 47 (16%) | 65 (16%) |
| White | 160 (53%) | 201 (50%) | Undergraduate Degree | 99 (33%) | 127 (33%) |
| Black | 141 (47%) | 198 (50%) | Post Graduate Degree | 69 (23%) | 89 (22%) |
| **Marital Status** | | | **Age** | 44.58 (16.99) | 46.88 (18.10) |
| Married | 133 (44%) | 174 (44%) | | | |
| Single | 109 (36%) | 141 (35%) | | | |
| Other* | 59 (20%) | 84 (21%) | | | |

*Divorced, Widow, or Living with a partner

### *Findings of Study 1*

We tested the main effects and interaction of Other Customer Race (Black vs. White) and Customer Race (Black vs. White) on Perceived Anxiety and Expected Service Quality using analysis of variance and Hayes' (2018) Process Macro Model 7 (see Table 2). Results show that the interaction of Other Customer Race and Customer Race was not significant, and the moderated mediation was not supported (Index of Moderated Mediation: $\beta$=-.03, BSE=.06, LLCI/ULCI = -.15/.08). Yet the analysis of variance shows the direct effect of Other Customer Race was significant on both Perceived Anxiety ($F(3, 297)=7.84$; $p < .001$), and Expected Service Quality ($F(3, 297)=2.60$; $p=.05$). Next a simple mediation was run (Model 4). Our results indicated a significant direct effect of other customer race on Perceived Anxiety ($\beta=.53$; $t = 4.79$; $p < .000$); and an indirect effect on Expected Service Quality ($\beta=-.10$; BSE=.0451, Bootstrapped CI: -.20, -.02). There was no interaction between the Customer and Other Customer Race. Therefore, H1 was not supported. Findings show a direct effect of Other Customer Race (Black *vs.* White) on Perceived Anxiety such that all Customers (Black vs. White) were significantly more anxious when they saw White Customers waiting in the waiting room. (For White Customers: $\mu(\text{Perceived Anxiety})_{\text{Black Other Customers}}=2.74$, $\mu(\text{Perceived Anxiety})_{\text{White Other Customers}}=3.49$, $t(158)=-3.03$, $p=.003$; For Black customers $\mu(\text{Perceived Anxiety})_{\text{Black Other Customers}}=2.72$, $\mu(\text{Perceived Anxiety})_{\text{White Other Customers}}=3.69$, $t(138)=-3.03$, $p<.001$). Moreover, Perceived Anxiety fully mediates the relationship between other customer race and Expected Service Quality.

**Table 2: Study I Model coefficients**

| **Main and Moderation Effects** | | | | |
|---|---|---|---|---|
| | **Perceived Anxiety** | | **Expected Service Quality** | |
| **Predictors** | ***β* (SE)** | ***t (p)*** | ***β* (SE)** | ***t (p)*** |
| Intercept | 2.74 (.18) | 15.37 (< .001) | 5.02 (.15) | 34.53 (< .001) |
| Other Customer Race (Black *vs.* White) | .75 (.24) | 3.88 (=.002) | -.27 (.15) | -1.85 (=.066) |
| Customer Race (Black *vs.* White) | -.12 (.25) | -.06 (ns) | | |
| Interaction of Other Customer Race and Customer Race | 0.21 (.35) | .06 (ns) | | |
| Perceived Anxiety | | | -.15 (.05) | -3.21 (=.001) |
| **Moderated Mediation Analysis (PROCESS Model 7)** | | | | |
| | **Direct path** | | **Indirect path** | |
| | ***β (SE)*** | ***t (p)*** | ***β (BSE)*** | ***LLCI/ULCI*** |
| White Customer | .75 (.24) | 3.08 (=.002) | -.11 (.06) | -.25/-.02 |
| Black Customer | -.01 (.25) | -.06 (.95) | -.14 (.07) | -.29/-.03 |
| **Index of Moderated Mediation** | | | **-.03 (.06)** | **-.15/.08** |
| **Mediation Analysis (PROCESS Model 4)** | | | | |
| | **Perceived Anxiety** | | **Expected Service Quality** | |
| **Predictors** | ***β* (SE)** | ***t (p)*** | ***β* (SE)** | ***t (p)*** |
| Intercept | 2.73(.12) | 21.50 (< .001) | 5.39 (.16) | 33.11 (< .001) |
| Other Customer Race (Black *vs.* White) | .85(.18) **.53 | 4.80 (< .001) | -.27 (.14) **-.22 | -1.85 (=.07) |
| Perceived Anxiety | - | - | -.15(.05)**-.19 | -3.21 (=.002) |
| | | $R^2$=.06, *F(2,298)=9.10*(< .001) | | |

Note: 5,000 bootstrapping samples
Presented here are the unstandardized regression coefficients from the bootstrapping analysis and their associated standard errors (SE), t-statistics, and bootstrapped lower and upper levels for the confidence interval (ULCI/LLCI).
**Standardized coefficients for mediation analysis

## Study 2 - Stimuli, Procedure, and Measures

A 2 (Service Failure: low *vs*. high) x2 (Other Customer Race: Black *vs.* White) x2 (Customer Race: Black *vs.* White) between-subjects experimental study was designed to test Hypothesis 2. Procedures were similar to Study I, where respondents were shown visual stimuli to manipulate Other Customer Race. In study 2, respondents were also exposed to a Service Failure. In the low Service Failure condition, respondents were told that they waited 20 minutes in total to see the doctor, whereas, in the high Service Failure condition, this wait was 2 hours.

Following the manipulations, respondents responded to items exploring their Expected Satisfaction with the Service, Revisit Intentions, and demographic questions. Expected Satisfaction with the Service was measured using four items (*i.e*., "I would be satisfied with the customer service I receive from the doctor's office" and "Overall, I would be satisfied with this service."). (α=.931).

Revisit Intentions were measured via two items (adopted from Dagger *et al.*, 2007), which included the following questions: "How likely would you be to choose the hospital as a service provider again?" and "How likely would you be to consider the hospital as your first choice the next time you need the service?"

### *Sample and Data Collection*

Data for study 2 were also collected through Prodege, an actively managed database (https://www.prodege.com/). Among the 425 participants who completed the experiment, 26 participants were excluded due to failed attention checks. The final sample consisted of 399 respondents (67% female). Table 1 displays respondent characteristics.

### *Findings of Study 2*

Service Failure Manipulation Check was done by using a semantic differential scale. Respondents were asked if the wait at the doctor's office was as expected or a lot more than expected. Results indicated that perceived Service Failure manipulation was successful ($\mu$(P. Service Failure) $_{\text{low Service Failure}}$ = 3.80, stdev=1.84, $\mu$(P. Service Failure) $_{\text{high Service Failure}}$ = 5.54, stdev =1.78, $t(388) = -9.47$, $p < .000$)). We tested the main effects and interaction of Service Failure (Low *vs*. High) and Other Customer-Customer Race match (No match vs. Match) on Expected Satisfaction and Revisit Intentions using a Hayes' (2018) Process Macro Model 7 (see Table 3).

**Table 3: Study II model coefficients**

| **Main and Moderation Effects** | | | | |
|---|---|---|---|---|
| | **Expected Satisfaction** | | **Revisit Intention** | |
| **Predictors** | ***β* (SE)** | ***t (p)*** | ***β* (SE)** | ***t (p)*** |
| Intercept | 4.21 (.14) | 29.83 (< .001) | .46 (.17) | 2.70 (= .007) |
| Service Failure (low vs. high) | -.98 (.19) | 5.18 (< .001) | -.57 (.11) | -5.19 (< .001) |
| Other Customer-Customer Race Match | .26 (.20) | 1.33 (=.18) | | |
| Interaction (Service Failure x Race Match) | -.71 (.27) | -2.60 (< .01) | | |
| Expected Satisfaction | | | .89(.04) | 24.75(< .001) |

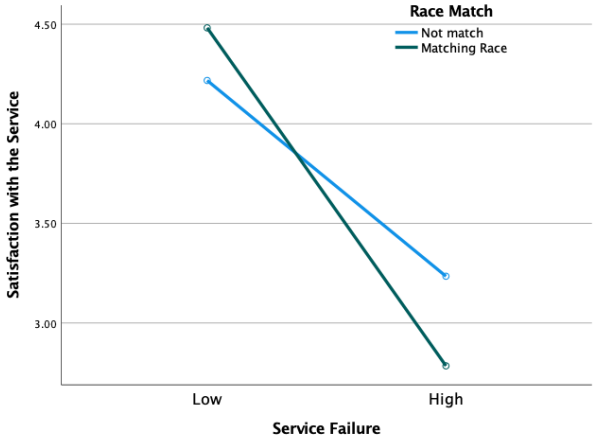
| **Moderated Mediation Analysis (PROCESS Model 7)** | | | | |
|---|---|---|---|---|
| | **Direct path** | | **Indirect path** | |
| | ***β (SE)*** | ***t (p)*** | ***β (BSE)*** | ***LLCI/ULCI*** |
| No Other Customer-Customer Race Match | -.98 (.19) | -5.18 (< .001) | -.88 (.17) | -1.22/-.56 |
| Other Customer-Customer Race Match | -1.70 (.20) | -8.58 (< .001) | -1.52 (.18) | -1.87/-1.17 |
| **Index of Moderated Mediation** | | | **-.64 (.24)** | **-1.12/-.16** |

Note: 5,000 bootstrapping samples
Presented here are the unstandardized regression coefficients from the bootstrapping analysis and their associated standard errors (SE), t-statistics, and bootstrapped lower and upper levels for the confidence interval (ULCI/LLCI).

Both Expected Satisfaction with the service ($\mu$(Expected Satisfaction) $_{\text{No Match}}$=3.24, $\mu$(Expected Satisfaction) $_{\text{Match}}$=2.79), and Revisit Intentions ($\mu$(Revisit Intention) $_{\text{No Match}}$=2.77, $\mu$(Revisit Intention) $_{\text{Match}}$=2.41) are significantly lower when there is High Service Failure compared to Low Service Failure ($\mu$(Expected Satisfaction)$N_{o\ \text{match}}$=4.22, $\mu$(Satisfaction) $_{\text{match}}$=4.48, $\mu$(Revisit Intention)$_{\text{no match}}$=4.15, $\mu$(Revisit Intention) $_{\text{Match}}$=4.55) indicating the direct effect of Service Failure. Moreover, our results show a significant interaction between Service Failure and Customer-Other Customer Race Match ($\beta$=-.71, SE=.27, $t$=-2.60, $p$< .01). That is, when there are higher levels of Service Failure, customers expect to be significantly less satisfied when the other customers in the waiting room are the same race. In other words, when there is Other Customer-Customer Race Match, customers are less forgiving of High Service Failure (See

Figure 2). Although significant, since this interaction is not in the expected direction, H2 was not supported.

**Figure 2: Race Match and Service Failure severity interaction on Expected Satisfaction with the service**




## Further Analysis

Since, contrary to our expectations, Customer and Other Customer Race match in Study I did not reduce Perceived Anxiety and did not increase Expected Satisfaction in cases of High Service Failure in study II, we conducted further analysis and included covariates that may possibly explain the results. In our analyses, we included respondents' Age, Perceptions of Other Customers' Socioeconomic Status, Gender, Perceived Service Criticality, and Social Desirability as covariates. Although few were significant (Perceptions of Other Customers' Socioeconomic Status $p<.00$ for both study I on Perceived Anxiety and Study II on Expected Satisfaction; and Social Desirability $p<.05$ for Study I on Perceived Anxiety), the results did not change.

# Discussion

This study is one of the first attempts to explore the influence of other customer ethnicity in healthcare service settings. Our results show that other customers' race influenced customers' expectations of service quality. Furthermore, this relationship can be explained by customers' perceived Anxiety. Results revealed that Black customers were more anxious when they were in the presence of White customers, and, in turn, higher levels of perceived anxiety negatively influenced their expectations of service quality. This finding was expected and is consistent with previous research findings (Johnson & Grier, 2013). On the other hand, White customers were also more anxious in the presence of other White customers, which was contrary to our expectations. Johnson and Grier (2013) also found that White respondents were as anxious as Black respondents when they were with all White Other Customers (higher levels of cross-group contact condition).

Consequently, when other customers are White, perceived anxiety increases, which decreases expected service quality, regardless of the customer's own race. Attempts to identify similar findings in Other Customer literature were unsuccessful. Previous research investigated other customers in non-health related situations, with significant results. Although Meyer and Baker (2010) and Johnson and Grier (2013) found race interaction significant for emotions (anger and anxiety), the current study does not fully support those findings. Perhaps there is something distinct in healthcare settings which might partially explain the findings in the current study.

Supporting previous research, we found that service failure negatively influenced expected satisfaction and revisit intention. For lower levels of service failure, race match between customers and other customers produced higher levels of expected satisfaction. Contrary to our expectations, when there was a race match, higher levels of service failure caused lower levels of expected satisfaction with the service compared to when there was a race mismatch. When there are higher levels of service failure, customers expected to be significantly less satisfied when the other customers in the waiting room were the same race.

This finding was surprising and did not fit within the Similarity-Attraction framework. In attempting to understand and rationalize this result, we looked for literature with similar findings but found none. Without support, we can only speculate why these relationships were found. Perhaps White respondents are attempting to alleviate feeling blamed as being racist. Seeing Black other customers reduces their perceived anxiety because it makes them feel less likely to be perceived as racist if they choose situations with Race Mismatch interactions.

A different explanation for the finding that Blacks are more anxious when other customers are also Black can be found in the theory of racially linked fate (Dawson, 1994). Dawson (1994) stated that Blacks share a sense of linked fate with other Blacks regarding discrimination. If this is the case, then perhaps Black customers seeing only Black other customers might assume that they all share a similar fate of discrimination.

We discovered some interesting and unanticipated findings. This study demonstrates that demographic similarity among customers (*i.e.*, ethnicity) may not always generate optimal outcomes for the healthcare provider. Although more evidence is needed, this study shows that in healthcare settings, service experience and expectations about service quality are influenced by other customers. Our results also indicate that a mismatch of demographic characteristics among customers may lead to more satisfactory service experiences, providing support for diverse healthcare service settings.

## Limitations and Future Research Directions

Although prior studies show the influence of other customers' race (Black *vs.* White) in various service settings (*e.g.*, retail, tourism, food, and banking), there is a need to further explore this influence in healthcare settings (Abboud *et al.*, 2020; Gupta & Verma, 2021). While this study attempts to do just that, there were some limitations. First, this study focused on two races/ethnicities (Black *vs.* White). Future studies may explore the effects of other ethnicities and

multicultural setting (more than one ethnicity/race). Second, the current study drew upon samples in the United States only. As such, generalizability will be limited and should be made with caution. Therefore, future research should expand to international samples and include cultural differences as covariates. Lastly, this study used photographs of the waiting rooms as manipulations in the experimental scenario. However, the photographs may not truly present health service waiting rooms. Additionally, participants may have reacted to something besides race in the photographs. Consequently, future research should consider using videos to enhance realism or replicate this investigation with different photographs. This would include using photographs with a mixture of races rather than only one race to more closely replicate what customers are likely to experience in the service encounter.

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