IDENTITY SAFETY CUES AND COMFORT IN RACIALLY DISCORDANT MEDICAL VISITS

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ABSTRACT OF THE THESIS

Identity Safety Cues and Comfort in Racially Discordant Medical Visits

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While identity safety cues (i.e., cues that signal low contextual prejudice) have been shown to improve stigmatized group members comfort in varied potentially threatening contexts, little research has examined the influence of identity safety cues in medical contexts. Past research (Cipollina & Sanchez, in prep) suggests that Black and Latinx participants had anticipated a more positive interaction with a White medical provider when that provider's brochure displayed racially diverse clientele. The current study used an experimental design to examine if cues of minority representation increase Black and Latinx undergraduate participants' comfort and trust during a medical interaction with a White mock medical provider. Results of the present experiment (N =151) revealed no significant differences in comfort and trust with the confederate provider between participants who were exposed to a provider brochure with high or low levels of minority representation. Instead, all participants reported very high levels of comfort across experimental conditions. I suggest that identity safety cues related to representation can influence expectations of medical visits but may be overcome by other cues gathered during the medical visit. Future research should examine the influence of identity safety cues among participants with high levels of medical mistrust within more ecologically valid settings.

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Belonging to a stigmatized (i.e., socially devalued, stereotyped, and discriminated against, Goffman, 1963; Link & Phelan, 2001) group has deleterious physical and mental health consequences for Black and Latinx Americans (Dovidio, Penner, Calabrese & Pearl, 2017; Pascoe & Smart Richman, 2009; Penner, Albrecht, Coleman, & Norton, 2007; Williams & Mohammed, 2009). For instance, disproportional health risks are documented within Black (e.g., hypertension; NHCS, 2018) and Latinx populations (e.g., diabetes; CDC, 2017; and alcohol-related health problems; Greenfield, 2001), when compared to non-Hispanic Whites and Asian Americans. Many researchers suggest that racial health disparities are, in part, preventable and can be lessened by reducing prejudice and expectations of prejudice within medical settings (see Dovidio et al., 2008 for review). Indeed, those who anticipate less prejudice within medical visits are more likely to utilize health care services (Burgess, Ding, Hargreaves, Van Ryn, & Phelan, 2008; Jones et al., 2013; Lee, Ayers, & Kronenfeld, 2009) which often translates to better health outcomes (Lee et al., 2009; Piette, Bibbins-Domingo, Schillinger, 2006). Importantly, Latinx and Black Americans who anticipate encountering prejudice in the health care system often see a racially discordant medical provider, despite preferring a racially concordant provider (Chen, Fryer, Philips, Wilson & Pathman, 2005).

Specifically, over 75% of Black Americans' and 65% of Latinx Americans' medical visits were with racially discordant medical providers (for comparison, 24% of White Americans had racially discordant providers; Chen et al., 2005). These racially discordant interactions with medical providers are often shorter (Cooper et al., 2003), are commonly fraught with interracial anxiety (Hagiwara, Slatcher, Eggly, & Penner, 2017;

Levene & Ambady, 2013), and negative affect (Johnson, Roter, Powe & Cooper, 2004). Additionally, many studies have suggested that patients who see racially discordant medical providers trust their providers less and are less satisfied with the quality of their medical care, which in turn is associated with lower health care utilization rates (Cooper et al., 2003; LaVeist & Carroll, 2002; LaVeist & Nuru-jeter, 2002; Saha, Komaromy, Koepsell, & Bindman, 1999).

While much research has documented the negative outcomes associated with expectations of bias within the medical context (e.g., lower utilization, poorer health), less research has examined the influence of patients' bias expectations on factors related to communication quality during medical visits (Hausmann et al., 2011), which has important implications in the efficacy of seeking health care or the positive outcomes of associated with seeking care. In addition, recent research has begun to explore how patients' perceptions of a racially discordant medical provider's bias are formed (Cipollina & Sanchez, in prep), but has not explored the downstream effects of such perceptions. Thus, the aim of the current thesis is twofold. First, I will examine if identity safety cues (i.e., cues that signal low levels of contextual prejudice) within medical contexts improve stigmatized group members' (Latinx and Black students in this work) perceptions of, and comfort interacting with, a racially discordant, White medical provider. Then, to understand how identity safety cues in medical contexts may influence downstream health outcomes of Latinx and Black Americans, I will examine the influence of identity safety cues on participants' recall of medical information discussed during a simulated medical visit and their intent to adhere to the provider's health suggestions.

Stigma and Identity Safety

Racial minorities are often stereotyped and discriminated against in a variety of contexts (Dovidio, Gaertner, & Bachman, 2001; Markus & Moya, 2010; Pettigrew, 1975), which has negative implications on their quality of life and health (Hatzenbuehler, 2017; Hatzenbuehler, Phelan, Link, 2013; Major, Dovidio, Link & Calabrese, 2018). In addition to this, mere expectations of encountering bias can influence the health outcomes of these groups (see Major et al., 2018). Indeed, experiences of anticipating being devalued because of one's identity in a particular setting, referred to as social identity threat, can negatively affect an individual even in the absence of actual bias (Steele et al., 2002). Social identity threat can be activated by mere awareness of cultural stereotypes (Steele, 1997) or through circumstances that increase perceptions that the individual will be evaluated because of their stigmatized identity (Wout, Shih, Jackson, & Sellers, 2009).

When social identity threat is present individuals from stigmatized groups experience greater negative thoughts and anxiety (Cadinu, Maass, Rosabianca, & Kiesner, 2005; Spencer, Steele, & Quinn, 1999), become more sensitive to contextual indicators which provide information about the relevance of the anticipated threat (Murphy, Steele & Gross, 2007; Pinel, 1999), and display greater cognitive and physiological arousal (Blascovich, Spencer, Quinn, & Steele, 2001; Murphy et al., 2007; Sawyer, Major, Casad, Townsend, & Mendes, 2012; Schmader, Johns & Forbes, 2008). Indeed, the experience of social identity threat has been categorized as a stressor, as the threat threatens core human motivations like the need to belong (Baumeister & Leary, 1995) and to maintain high self-esteem (Steele, 1988; Tajfel & Turner, 1979). Further,

when social identity threat is present, individuals may have a strengthened desire to disconfirm stereotypes associated with their group (Pronin, Steele, & Ross, 2004; Steele, 1997) and may desire to avoid the threatening context entirely (Cheryan, Plaut, Davies, & Steele, 2009; Emerson & Murphy, 2014; Hall, Schmader, Aday, Inness, & Croft, 2018; Swim, Cohen, & Hyers, 1998)

Importantly, expectations of stigma and experiences of social identity threat vary by context (Crocker, Major, & Steele, 1998; Wout et al., 2009). For example, due to past experiences and contextual stereotypes, Black college students might expect to contend with stigma within a Trigonometry class but not while at a Black student caucus meeting. Within this example, Black college students may form expectations about the amount of devaluation or stereotyping they will receive by using identity-related cues (e.g., the presence of stigmatized others) present within the context.

Identity safety cues have been examined in past research as identity-related cues that signal that stigmatized group members are less likely to be treated disparately because of their stigmatized identity (Davies, Spencer, & Steele, 2005; Murphy et al., 2007; Purdie-Vaughns, Steele, Davies, Ditlmann, & Crosby, 2008). Oftentimes, these cues, like minority representation, establish a feeling of identity safety, wherein stigmatized group members are less likely to fear others applying stereotypes to them or to anticipate experiencing discrimination. Indeed, cues that increase feelings of identity safety have been linked to a host of positive outcomes for individuals with varied stigmatized identities, including greater feelings of belonging (Murphy et al., 2007; Pietri, Drawbaugh, Lewis, & Johnson, in press), greater institutional trust (Purdie-

Vaughns et al., 2008), and perseverance in academic work (Good & Inzlicht, 2006; Pietri, Johnson, & Ozgumus, 2018).

Minority Representation and Threat Expectations

Many studies have documented how cues of minority representation (i.e., the number of stigmatized group members present within a setting) shape stigmatized group members expectations of treatment and performance within potentially threatening intergroup contexts (Cohen & Swim, 1995; Good & Inzlicht, 2006; Nguyen & Ryan, 2008). For example, women's interest in attending a science, technology, engineering and mathematics (STEM) conference increased if the conference consisted of equal gender representation rather than low female representation (Murphy et al., 2007), and, in a corporate context, racial minority representation on a company brochure resulted in greater perceptions of company fairness among African American participants (Purdie-Vaughns et al., 2008). Thus, cues of minority representation have been shown to improve minority group members' trust, comfort, and willingness to engage within threatening contexts (Dasgupta, Scircle, Hunsinger, 2015; Murphy et al., 2007; Sekaquaptewa & Thompson, 2003), and likely do so by reducing the perception that individuals within them hold negative biases towards stigmatized groups (Cohen & Swim, 1995).

While the majority of research on the influence of minority representation has focused on the representation of Black Americans and women in corporate and academic contexts, research suggests that the identity safety cue of minority representation similarly facilitates identity safety for other groups like Latinx Americans (Pietri et al., in press). For instance, Latina students reported more trust in belonging in STEM after listening to a STEM panel that included Latina representation compared to a panel with

no Latina representation (Pietri et al., in press). Indeed, identity safety cues can reduce expectations of encountering bias among individuals with varied stigmatized identities (Black Americans; Pietri, et al., 2018; Purdie-Vaughns et al., 2008; Wout et al., 2009; Latinx Americans; Pietri et al., in press; women; Chaney, Sanchez, & Remedios, 2016; Chaney & Sanchez, 2018; Dasgupta et al., 2015; Murphy et al., 2007; Sekaquaptewa & Thompson, 2003; and sexual minorities; Katz, Federici, Ciovacco, & Cropsey, 2016) and can increase feelings of comfort in threatening intergroup contexts.

Past Identity Threat and Stigma in Medical Contexts

Much like STEM environments for women, research suggests that medical contexts elicit social identity threat for racial minorities (Aronson, Burgess, Phelan, & Juarez, 2013; Burgess, Warren, Phelan, Dovidio, & van Ryn, 2010; Fingerhut & Abdou, 2017) as the medical context is similarly fraught with racial bias. Indeed, research has documented disparities in White providers' quality of medical care to racial minority groups (see van Ryn, 2002; van Ryn et al., 2011), including the use of stereotypes (e.g., non-compliant; Burgess, van Ryn, Crowley-Matoka, & Malat, 2006; Moskowitz, Stone, & Childs, 2012) and the delivery of disparate treatments (Bogart, Catz, Kelly, & Benotsch, 2001; van Ryn, Burgess, Malat, & Griffin, 2006). For example, physicians who held stronger implicit associations between Black patients and non-compliance (when compared to White patients) were less likely to recommend a procedure to reduce heart attack risk, when compared to physicians who did not hold such bias (Green et al., 2007).

While the majority of research has focused on the impact of physicians' negative attitudes towards Black patients (e.g., Green et al., 2007; Moskowitz et al., 2012), a body

of literature suggests that Latinx Americans similarly face and report disparate treatment within medical contexts (Morales, Cunningham, Brown, Liu, & Hays, 1999; Trivedi & Ayanian, 2006). For example, in a large sample ($N > 400{,}000$), 6.1% of Black Americans and 5.8% of Latinx Americans reported experiencing discrimination in health care settings within the past year (Trivedi & Ayanian, 2006)[1] and in another large study ($N = 1{,}543$), 73% of Black Americans and 65% of Latinx Americans reported an race based discrimination in the medical setting at least once within their lifetime (Benjamins & Middleton, 2019).

Black and Latinx Americans' previous negative experiences within medical settings and knowledge of historical injustices have been shown increase expectations of encountering prejudice within future medical visits and to reduce trust in health providers (Brandon, Isaac, & LaVeist, 2005; Grady & Edgar, 2003; Lillie-Blanton et al., 2000; Hammond, 2010; López-Cevallos, Harvey, & Warren, 2014; Thompson, Valdimarsodottir, Jandorf, & Redd, 2004). Indeed, research has documented that patients who report feeling that they were stereotyped or treated differently because of their identity in past medical visits were more likely to delay health care services (Bird & Bogart, 2001; Burgess et al., 2008; Jones et al., 2013) and had poorer physical and mental health than those who did not report experiencing identity threats within medical contexts (Abdou, Fingerhut, Jackson, & Wheaton, 2016; Piette et al., 2006). Further, patients who evaluated their providers as biased had less productive and informative interactions with

[1] While 6% of the sampled population experiencing discrimination in the past year may seem like a small percentage, these experiences of discrimination have been shown to have significant impacts on the health outcomes of discrimination targets. For instance, experiencing discrimination in medical settings one to two times during one's lifetime was related to greater health care delays and non-adherence to the medical suggestions of future providers (Casagrande, Gary, LaVeist, Gaskin, Cooper, 2007).

their medical providers (Penner, Phelan, Earnshaw, Albrecht, & Dovidio, 2018). In addition, Black and Latinx patients who believed medical providers are racially biased were less likely to adhere to their provider's health suggestions, fill prescriptions, and go for suggested medical exams (African Americans; Casagrande, Gary, LaVeist, Gaskin, Cooper, 2007; Dale, Bogart, Wagner, Galvan, & Klein, 2016; Black and Latinx Americans; Van Houtven et al., 2005). As such, trust in medical providers can influence perceptions of the quality of their medical advice and stigmatized group members' adherence to health suggestions.

Anticipated Identity Threat and Stigma in Medical Contexts

Under social identity threat, working memory decreases (Beilock, Rydell, & McConnell, 2007; Schmader et al., 2008), which can impair patient-provider communication quality, recall of health information, and a patient's ability to adhere to medical suggestions (Aronson et al., 2013; Burgess et al., 2010). In addition, when experiencing social identity threat, stigmatized individuals may be motivated to disconfirm stereotypes related to their group (Pronin et al., 2004), to prove that they do not fit into the stereotype or that the stereotype itself is inaccurate (Shapiro & Neuberg, 2007). For instance, under social identity threat, African American students reported liking rap music and basketball less than African American students who were not under threat (Steele & Aronson, 1995). Within a medical context, stereotypes of Black and Latinx people as unintelligent, uneducated or as lower in economic status (Ghavami & Peplau, 2013; Nadal, 2011) may be salient and result in higher negative affect, anxiety, and impeded communication (Aronson et al., 2013). For instance, Black and Latinx patients may not want to discuss health behaviors, health issues or concerns that could be

related to negative stereotypes (e.g., being unhealthy; Jones et al., 2013) out of fears of being stereotyped in the medical context.

Moreover, Black and Latinx patients may be aware of stereotypes specifically related to Black and Latinx patients' health outcomes. For instance, in a survey of medical providers, physicians believed their Black patients were more susceptible to substance abuse, more likely to be non-compliant, and less likely to engage in a more active lifestyle, when compared to White patients (van Ryn & Burke, 2000). Further, stereotypes that Black people are less healthy than White people (referred to as the "Black health inferiority" stereotype; Jones et al., 2013) may also elicit social identity threat within medical visits. Thus, patients' anticipations of being stereotyped and/or of confirming stereotypes may impede the patients' communication of health behaviors and symptoms discussed during their visit.

Prior research on social identity threat in the medical context suggests that expectations of bias can indeed interfere with the quality of patients' medical visits. For instance, Black women who thought about their racial identity reported heightened anxiety when imagining interacting with a medical provider, while White women who also thought about their racial identity did not (Abdou & Fingerhut, 2014). This reported and experienced anxiety can translate to discomfort during medical visits. For example, in an observational study of clinic visits, African American patients who believed Black people were discriminated against in health care settings displayed more negative non-verbal affect when interacting with their medical provider when compared to those who did not believe that health care settings are racially biased (Hausmann et al., 2011). Similarly, patients who thought providers were biased against their racial group reported

that they had more difficulty communicating with their provider and that their medical visit was less informative than those with low perceptions of bias (Hausmann et al., 2011). Together these findings suggest that patients' expectations of bias can shape their comfort communicating with their providers and perhaps the quality of the medical visit itself by indirectly influencing the medical provider and what is discussed during the medical visit (Hausmann et al., 2011).

Past experimental research has begun to document how cues of minority representation may shape stigmatized group members expectations of medical visits (Cipollina & Sanchez, in prep). Specifically, across two studies, Black and Latinx participants (M_{age} = 19-41) expected lower levels of racial bias from a White male medical provider who had a racially diverse when compared to all White clientele. Moreover, these participants believed that they would feel more comfortable in a visit with the provider who had diverse clientele, anticipated a greater quality of care, and reported that they would trust that provider's health advice more than participants who rated a provider with all White clientele. Together, these findings suggest that minority representation cues reduced racial minority participants' expectations of devaluation from the provider and improved expectations of seeking medical care from that provider. The present study seeks to extend the findings of Cipollina and Sanchez's (in prep) research to an in-lab medical interaction simulating a medical visit with a White medical provider.

Current Study

The aim of the current study is to examine the effect of minority representation on comfort and trust reported by Latinx and Black participants while interacting with a racially discordant, White, mock medical provider. Black and Latinx patients often see

racially discordant (often White) medical providers (Chen et al., 2005). While the majority of medical providers in the U.S. are White Males (PUMS, 2017), I also sought to understand how cues of minority representation would influence expectations of bias from prototypical perpetrators of racism, White men (Inman & Baron, 1996). Thus, the current study design mirrors a common experience of Latinx and Black patients in real world settings and provides an opportunity to document how cues of minority representation may improve the experience of Black and Latinx patients when interacting with racially discordant, White male, medical providers.

I hypothesize that Black and Latinx participants exposed to a mock medical provider's brochure with high levels of minority representation (i.e., the manipulated identity safety cue) will report greater trust and comfort with a White confederate mock medical provider when compared to participants who view the control brochure with low levels of minority representation. Because the high representation brochure will contain both representation of Latinx and Black Americans, and research demonstrating the importance of representation cues for both Latinx and Black Americans (Pietri et al., in press; Purdie-Vaughns et al., 2008), I do not expect the manipulation to affect Latinx and Black participants differently. Following past research on expectations of bias shaping non-verbal indicators of comfort (Hausmann et al., 2011), I hypothesize that the confederate medical providers (who will be blind to condition) will evaluate the participants in the high minority representation condition as more comfortable during the visit when compared to participants in the low representation control condition. Further, in line with research on the cognitive impacts of social identity threat (e.g., Nguyen & Ryan, 2008), I hypothesize that those in the high minority representation condition will

have greater working memory and will be able to recall more of the mock provider's health suggestions, due to feeling more comfortable with the medical provider. I also anticipate that participants in the high representation condition will report a greater intention to follow the medical provider's advice when compared to the low representation condition, due to greater perceptions of the provider as competent and greater trust in the provider.

Methods

The current study examined the effects of minority representation in a medical office brochure on Black and Latinx participants' comfort in a medical visit, perceptions of the medical provider as competent and trustworthy, health suggestion recall, and adherence intentions. Participants enrolled in an introduction to psychology course were randomly assigned to one of two brochure conditions in a high minority representation vs. low representation design and interacted with a White male confederate, who was described as a medical student, about their health behaviors and medical symptoms.

Participants

A priori power analyses suggested a sample size of at least 128 participants for a two cell between-subjects design, with and without a covariate, to find a medium effect, $d = 0.50$ (at 80% power). As such, I planned to recruit a minimum of 150 participants to account for the need to drop some participants. In total, 174 participants who self-identified as Black/African American or Latinx/Hispanic in the university prescreen were recruited from the undergraduate research pool and were compensated with partial course credit. A total of 20 participants were dropped from data analysis due to complications during running the study (e.g., the blood pressure machine malfunctioning and

interrupting study procedures or the confederate knowing the participant from class). In addition, one participant identified as non-Hispanic White and two participants identified as East or South Asian once they came to the lab and were dropped from analyses.

The final analytic sample was 151 participants. All participants were over 18 years old and had a mean age of 18.99 (SD = 1.05, Age_{range} = 18-22). The analytic sample identified as Latinx/Hispanic (n = 88, 58.3%), Black/African/Caribbean American, (n = 62, 41.1%), and one participant identified as both Latino and Black. The majority of the sample identified as female (n = 98, 64.9%) and 35.1% identified as male (n = 53). In addition, the sample was predominately heterosexual (n = 135, 89.4%), with 13 participants identifying as bisexual (8.6%) and three participants identifying as gay or lesbian (2%). The majority of participants in this study (n = 127, 84%) reported having visited a primary care doctor within the last year and 9.3% (n = 14) of the sample reported that they have a medical condition that requires that they visit a medical doctor frequently. The analyses presented below remain consistent when controlling for experience in health care settings.

Procedure

Undergraduate research pool participants signed up for an in-lab study titled, "Medical Visit" wherein they would meet with an aspiring medical student who sought to test out his future idea for a medical practice. The participants were informed that the study's procedure involved taking some tests and talking to a medical student about their health. Participants interacted with one of four different White male medical student confederates which allowed for timely data collection.

Upon arriving to the lab, participants were greeted by one of four White female experimenters who were wearing scrubs to assume the role of nurse during the study. The female research assistant guided participants through the study procedures when the White male medical student (confederate) was not present. After consent, all participants were connected to a continuous CNAP blood pressure monitor[2]. Participants were told that the BP recordings were being collected to train other research assistants. Participants left arm and middle and index finger were connected to a blood pressure cuff that continuously measured participant's blood pressure and heart rate. Participants were instructed to avoid moving their left arm and, as such, filled out pre-medical student interaction survey questions and open-ended text online with only their right hand. BP recordings were included for realism and for physiological analyses that are not included within this thesis.

Participants were exposed to an online brochure that the medical student ostensibly created to showcase what they intended their future office brochure to look like. Participants were randomly assigned to one of two brochures wherein images of the medical student's future clients on the brochure were comprised of low racial minority representation or high minority representation (see Appendix A for brochure). After answering questions about the brochure (details described below in materials section), participants were told to wait in the room for a few minutes while the female

2 The monitor was placed on the table next to the participant and the readings were not visible to the participant throughout the study. A blood pressure arm cuff was connected to the participants left arm and was used once throughout the study to calibrate the blood pressure reading, though it remained on the participants arm throughout the first half of the study (as per machine guidelines). Once BP machine hookup and calibration were complete, participants were given a vanilla baseline task wherein they watched a changing video of ocean waves for just over three minutes. Participants were told to relax and to try to focus on the waves during this time. After completion on baseline participants viewed the mock provider's brochure.

research assistant got the medical student from another room. Participants were instructed to think about what they may be talking to the medical student about and during this time an anticipatory BP reading was recorded. After three minutes, the research assistant came back into the room and apologized as they ostensibly forgot to unhook the participant from the BP machine. At this point, the participant was unhooked from the machine and was soon greeted by the confederate medical student.

Interactions with medical student confederates were video recorded to check for consistency between confederates and to conduct additional analyses on non-verbal communication between the participant and confederate. Participants were told that the purpose of the video recording was so that the medical student's supervisors could give him feedback at a later time. During the participant-provider interaction, the confederate medical student (dressed in a lab coat) discussed the participant's health behaviors (e.g., exercise, cigarette use; 18 adapted from the Multidimensional Health Behavior Inventory; Kulbok et al., 1999) and the participant's current symptoms (e.g., headaches, stomach pains; 14 adapted from the PILL; Pennebaker, 1982) to make the interaction feel like a realistic visit with a medical provider[3]. See Appendix B for complete list of items. While talking to each participant, the confederate filled out the participant's responses on a form on their clipboard. The confederate was instructed to keep a neutral, professional, tone with the participant and to adhere to the scripted protocol.

After all health-related questions are asked, the confederate recited his most recommended health behaviors to improve college students' health (see Appendix C). Soon thereafter, the female experimenter returned to the room and directed the participant

[3] This simulated medical visit was adapted from Himmelstein and Sanchez's (2016) work which examined symptom reporting in same-sex and opposite-sex patient provider interactions.

to the end of the session survey where participants reported their impressions of the medical student and their visit experience using the measures described below.

At the end of the survey items, participants indicated how friendly they believed the female research assistant and medical student were before indicating what they believed the purpose of the study was. There were no significant differences in friendliness by research assistant, $F(1, 147) = 2.10$ $p = .10$, and no significant differences in friendliness by confederate medical student, $F(1, 147) = 1.37$, $p = .25$[4]. In a textbox, participants reported their ideas of what the research study was examining; no participants were suspicious of the study procedure or identified the manipulation. Upon completion, the female experimenter returned to the room and debriefed the participant.

Measures and Materials

Brochures. Participants were instructed to read and rate a brochure that the medical student created to display what he would like his future medical office brochure to look like (Appendix A). Each confederate research assistant had versions of the brochure created with a professional image of themselves on the cover. To create the minority representation images, images of Latinx and Black college age men and women were found via google search and were pretested to ensure accuracy in race categorization among participants. All brochure materials were pretested to ensure that the high representation grouping was perceived as more diverse than the low representation grouping. Specifically (n =15) participants reported if the grouping of people looked diverse on a 1(*Not at all*) to 7(*Extremely*) scale. Analyses revealed that the high representation group image was perceived as significantly more diverse (M = 5.40,

[4] There were no significant effects of confederate on any of the study dependent variables, $F(1, 148) = 0.01$ to 3.25, $p = .07$ to .94.

SD = 1.12) than the low representation grouping (*M* = 1.73, *SD* = 0.59), *t*(14) = 12.74, *p* < .001. The final brochure contained either high levels Black and Latinx representation in the image of office clientele (50% of clientele) or low levels of Black and Latinx representation (0% of clientele). The group representation materials were also pretested to ensure no significant differences in attractiveness, intelligence, and friendliness between conditions (paired samples *t*s = 0.38 to 1.95, *p*s .07-.71). To guise the manipulation check, participants were instructed to indicate their impressions of the brochure including their opinion on the color choice and on the readability of the font. As a manipulation check, participants had to correctly identify a grouping of four people from the brochure. If participants failed this manipulation check, they were instructed to look at the brochure again and repeat the manipulation check question among the filler items[5].

Based on items adapted from Purdie-Vaughns and colleagues (2008) and Cipollina and Sanchez (in prep) participants indicated their trust and comfort with the mock medical student (see Appendix D for all scale items). An exploratory factor analysis revealed that the items loaded onto two factors. Items that loaded onto both factors were dropped from their respective scale, which resulted in a medical student trust and comfort during visit measure described below.

Trust in medical student. Participants' trust in the mock medical student was assessed with four items on a 1(*Strongly disagree*) to 7(*Strongly agree*) Likert scale (*M* = 6.59, *SD* = 0.68). The items, "I trust that this medical student will keep my information confidential", "I trust that this medical student treated me like any other participant", "I

[5] Only one participant included in study analyses failed the manipulation check and repeated the items.

trust that this medical student took my responses seriously", and "I trust that this medical student gave me good advice", fell onto one factor and were reliable (a = .87).

Comfort during visit. Participants' comfort with the medical student was assessed with five items, i.e., "I feel that this medical student felt comfortable interacting with me", "I felt like it was easy for this medical student to talk to me", "I felt comfortable during my interaction with this medical student", "I felt relaxed during my interaction with this medical student" and "I feel that I was able to be myself during the interaction with the medical student". All items were rated on a 1(*Strongly disagree*) to 7(*Strongly agree*) Likert scale (M = 6.28, SD = 0.85). The reliability of the scale was high, a = .91.

Medical student competence. Participants' ratings of the medical student's competence were rated with six PI-created items that assessed general competence and competence working with diverse groups. The items, e.g., "This medical student will be a good provider" and "This medical student will be a good provider for a diverse group of patients", were rated on a 1(*Strongly disagree*) to 7(*Strongly agree*) Likert scale (M = 6.06, SD = 0.87). The six items loaded onto one factor and had high reliability, a = .81.

Confederate rating of participant comfort. Confederate medical students rated four items assessing participant comfort during the interaction on a 1(*Not at all)* to 7(*Extremely*) Likert scale (M = 4.74, SD = 1.43). The items included: "how comfortable did the participant seem to you?", "how anxious did the participant seem to you?" (reverse coded), "how relaxed did the participant seem to you?", and "how tense did the participant seem to you" (reverse coded). Items were coded so that high values represent greater comfort. The reliability of the scale was high, a = .96.

Recall of health suggestions. At the end of the study, participants were asked to recall the health suggestions that the medical student gave them in an open-ended question text box within the Qualtrics survey. Participants' responses were coded by two trained research assistants who were blind to condition and hypotheses. The medical student's scripted suggestions and coding scheme are presented in Appendix C. The coders indicated the presence or absence of the eight health suggestions (e.g., intake more vitamin A, never skip meals) in the recall text box, resulting recall scores that ranged from 0 to 8 (M = 4.08, SD = 1.27). Interrater reliability of the number of recalled suggestions was high ICC = .86.

Intention to follow health suggestions. Participants completed a scale assessing their intention to follow the medical student's health suggestions (M = 5.72, SD = 0.94). Each suggestion was one item of the measure and was reported on a scale of 1(*Not at all likely*) to 7(*Very likely*). Sample items include, "How likely is it that you will try to incorporate the following into your health routine?", "Get more sleep", and "Intake more Vitamin D". The reliability of the items was high, a = .82

Data Analysis Plan

As planned, initial analyses were conducted to test for participant race interactions with condition using 2(participant race) by 2(condition) between-subjects ANOVAs. Although, as expected, no participant race interactions reached statistical significance (Fs = .06 to 2.97, ps = .88 to .09), Latinx participants indicated significantly greater comfort, $F(1, 146) = 8.16$, $p = .005$, $\eta_p^2 = .053$, and trust, $F(1, 146) = 4.57$, $p = .03$, $\eta_p^2 = .03$, than Black participants. However as expected, post hoc analyses reveal these 2 x 2 analyses are underpowered (57-82% power). As follows, the main hypotheses of this thesis were

tested with a series of one-way ANCOVAs controlling for participant race to achieve greater statistical power, while still presenting the influence of participant race. The pattern of results of the following analyses remain consistent if the covariate is removed from the model and when conducted as a 2(brochure type) by 2(participant race) between-subjects ANOVA. In addition, hypothesized mediation analyses are not presented within the thesis text due to the non-significant effects of condition on proposed outcome variables.

Results

A series of one-way ANCOVAs were conducted to examine the influence of minority representation on outcome variables while controlling for participant race. Correlations between all study dependent variables are presented in Table 1 and are detailed by condition in Table 2.

Medical student trust. There was a significant effect of participant race on trust, $F(1, 147) = 7.79$, $p = .006$, $\eta_p^2 = .05$, such that Black participants reported significantly lower trust ($M = 6.47$, $SD = 0.88$) than Latinx participants ($M = 6.68$, $SD = 0.47$). When controlling for race, there was a marginal effect of minority representation on reported trust with the medical student, $F(1, 147) = 3.49$, $p = .06$, $\eta_p^2 = .023$. However, this effect is not in the hypothesized direction, such that those in the low representation condition ($M_{lowrep} = 6.70$, $SE_{lowrep} = 0.08$) reported marginally more trust than those in the high representation condition ($M_{highrep} = 6.49$, $SE_{highrep} = 0.08$).

Comfort during visit. There was a significant effect of participant race on comfort, $F(1, 147), = 7.79$, $p = .006$, $\eta_p^2 = .05$, such that Black participants reported significantly lower comfort with the mock medical provider ($M = 6.06$, $SD = 0.97$) than

Latinx participants (M = 6.43, SD = 0.72). When controlling for race, there was no significant effect of minority representation on reported comfort with the medical student *($M_{highrep}$* = 6.17, $SE_{highrep}$ = 0.10, M_{lowrep} = 6.38, SE_{lowrep} = 0.10), $F(1, 147) = 2.25$, $p = .14$, $\eta_p^2 = .015$.

Medical student competence. There was not a significant effect of participant race on perceptions of medical student competence, $F(1, 147) = 3.07$, $p = .08$, $\eta_p^2 = .02$. When controlling for participant race, there was no significant effect of minority representation on reported perceptions of the medical student's competence *($M_{highrep}$* = 6.00, $SE_{highrep}$ = 0.10, M_{lowrep} = 6.12, SE_{lowrep} = 0.10), $F(1, 147) = 0.80$, $p = .37$, $\eta_p^2 = .005$[6].

Confederate rating of participant comfort. There was no significant effect of participant race on confederate ratings of comfort, $F(1, 147) = 0.38$, $p = .54$, $\eta_p^2 = .003$. When controlling for participant race, there was no significant effect of condition on the confederates' ratings of participants' comfort *($M_{highrep}$* = 4.73, $SE_{highrep}$ = 0.17, M_{lowrep} = 4.73, SE_{lowrep} = 0.17), $F(1, 143) = 0.00$, $p = .99$, $\eta_p^2 < .001$.

Recall of health suggestions. There was no significant effect of participant race on recall, $F(1, 147) = 1.53$, $p = .22$, $\eta_p^2 = .01$. When controlling for participant race, there was no significant effect of condition on participants' recall of the medical student's health suggestions *($M_{highrep}$* = 3.92, $SE_{highrep}$ = 0.15, M_{lowrep} = 4.25, SE_{lowrep} = 0.15), $F(1, 147) = 2.64$, $p = .11$, $\eta_p^2 = .018$.

[6] A one-way ANCOVA with a shortened 2-item competence measure that solely focused on competency working with diverse patients (items 5 and 6 in appendix) was also conducted. The effect of condition remained not significant, $p = .97$.

Intention to follow health suggestions. There was no significant effect of participant race on adherence intentions, $F(1, 147) = 0.00$, $p = .99$, $\eta_p^2 < .001$. When controlling for participant race, there was a marginal effect of condition on participants' intention to follow the medical student's advice, $F(1, 147) = 3.78$, $p = .054$, $\eta_p^2 = .025$. However, this effect was not in the hypothesized direction, such that those in the low representation condition reported greater intent to adhere ($M = 5.86$, $SE = 0.11$) when compared to those in the high representation condition ($M = 5.57$, $SE = 0.11$).

General Discussion

The current project examined the influence of the identity safety cue of minority representation on Black and Latinx participants' comfort interacting with a White mock medical provider. Based on past research on identity safety cues within medical contexts, I anticipated that exposure to minority representation would facilitate greater feelings of identity safety, which would result in greater quality interaction between the mock provider and participant. Specifically, I anticipated that participants exposed to minority representation on the provider's brochure would feel more comfortable, trust the provider more, and would evaluate the provider more positively than participants who viewed the provider's brochure with low levels of minority representation. However, the study analyses revealed no significant differences between the experimental conditions on participants' evaluations of the provider and comfort during the visit. To account for participants' lack of objective awareness of their anxiety during an identity threatening situation (Bosson, Haymovitz, & Pinel, 2003), I included both measures of self-reported comfort and confederates' ratings of participants' comfort. However, both indicators were not significant. In addition, the present study found no significant difference in the

amount of the provider's health suggestions recalled by participants, and the effects that approached significance were not in the hypothesized direction. Specifically, participants in the control (low representation) condition reported marginally more trust and intent to adhere to the provider's health suggestions when compared to those in high representation brochure condition.

Within the present research, we found that Black undergraduate participants reported lower levels of comfort and trust with the mock medical provider, when compared to Latinx participants. This finding adds to past research on racially discordant medical visits (e.g., Cooper et al., 2003), by suggesting that racially discordant medical visits between Black patients and White providers may consist of greater discomfort when compared to discordant visits between Latinx patients and White providers. To our knowledge there are no studies that present a comparison of comfort during racially discordant medical interactions between these two populations. As expected, the present research did not find that Black or Latinx participants were differently affected by the presence or absence of a minority representation identity safety cue within this context.

Notably, participants in this study reported very high levels of trust with the mock medical providers ($M = 6.59$, $SD = 0.68$), which can be explained by characteristics of the confederates. The confederates were all undergraduates in their early twenties who were described as attending the same liberal and racially diverse university as the undergraduate participants for believability. Thus, they shared a common group identity (Brewer, 1979) which may have increased participants' comfort or facilitated low expectations of the provider's racial bias. In past research which found an effect of minority representation on anticipated medical visit quality, Black and Latinx

undergraduate participants reported their perceptions of a medical provider who was in their late 40s (Cipollina & Sanchez, in prep), which may suggest that Black and Latinx young adults may feel more identity safety with younger relative to older White male providers.

Importantly, the methodology of the present research expanded on past research examining identity safety cues on anticipated quality of an interaction with a medical provider by including an actual interaction with a mock medical provider. While the present study did not find that the identity safety cue of minority representation influenced levels of comfort during a mock medical visit, these null effects may be due to the complexity of identity safety cues operating within actual medical interactions compared to the complexity of anticipated evaluations based off of a brochure. Indeed, identity safety cues in medical contexts may be gleaned from brochures or websites before a medical visit, but cues gained during a medical visit may have a greater influence on patient's feelings of trust and comfort with their providers (see Cipollina & Sanchez, 2019 for review of varying identity safety cues within this context). For instance, representation on a brochure may not increase feelings of identity safety within a medical visit if a Latinx patient walks into a medical office with all White clientele and staff. Further, research suggests that identity safety can be altered by small changes to the interior décor of a setting (e.g., posters on the walls; Cheryan et al., 2009) and that identity safety cues like minority representation are viewed in conjunction with other cues present like the diversity philosophy or diversity policies of the context (e.g., Apfelbaum, Stephens, & Reagans, 2016; Purdie-Vaughns et al., 2008). Thus, other identity safety cues (e.g., the diversity philosophy of the university or psychology

department), not manipulated within the present research, may have facilitated feelings of identity safety among participants within this research.

Moreover, not all intergroup contact experiences are identity threatening, as this depends on perceptions of the probability of experiencing bias (Wout et al., 2009). Indeed, participants may have attributed the confederate's lack of Black and Latinx representation on their brochure as an outcome of ignorance and not bias (see the literature on Perceived Intentionality of Racial Discrimination; Apfelbaum, Grunberg, Halevy, & Kang, 2017). In addition, the literature suggests that social identity threats operate like a stressor in the stress and coping model (Major & Townsend, 2010; Lazarus & Folkman, 1984), such that individuals who are aware of the potential to experience bias but have the coping resources available to deal with that potential, may not experience cognitive or physiological arousal in response to the social stressor. As such, participants in this study, while aware of the potential for experiencing bias during the medical visit may have a) evaluated the provider as unlikely to be racially biased (i.e., low probability), or b) had an adequate amount of resources available to deal with that potential (e.g., National racial identity or high private regard; Neblett, & Roberts, 2013; Neblett, Shelton, & Sellers, 2004).

Lastly, research on stereotype threat (i.e., a form of social identity threat concerning confirming stereotypes) suggests that strength of identification influences the extent to which contextual stereotypes affect the individual (Abdou & Fingerhut, 2014; Marx, & Stapel, 2006; Schmader, 2002). For instance, women who were most highly identified with their gender (i.e., gender very important to their self-concept) were most affected by stereotype threat relevant to their gender identity (Schmader, 2002). Within

the current study participant's level of identification with their racial identity, or as being a healthy person, may have buffered the effect of the threat condition, resulting in nonsignificant differences between the experimental conditions.

Limitations and Future Research

Participant's age and experience with bias in the health care context may have influenced their level of trust with the mock medical provider. Indeed, some studies suggest that older Black patients report greater expectations of discrimination within the health care context (Hammond, 2011) and thus, may be more vigilant about prejudice cues in this context. The medical context may not (yet) operate as a context where social identity threats are likely for young Black and Latinx adults. Due to their age, participants within this sample may have had lower levels of experiencing stigmatization within medical contexts, which would likely result in higher levels of trust with the mock medical provider in this work. However, a measure of medical mistrust was included within the university prescreen to be used for additional analyses in this research and participants reported moderate levels of medical mistrust (M = 3.80, SD = 1.18, where 1 = no mistrust and 7 = high levels of mistrust)[7] suggesting that some participants in this research do believe providers are racially biased against their ingroup. Future research should examine the influence of medical mistrust on receipt of identity safety cues within the medical context and the influence of medical mistrust on vigilance to threat cues.

The identity safety cue of minority representation was manipulated in this research with a method similar to past research (Cipollina & Sanchez, in prep; Purdie-

[7] Prescreen levels of medical mistrust were also analyzed in a series of multiple regressions to probe for interactions with the experimental condition. No significant interactions were found. There was only a main effect of medical mistrust on comfort with the mock medical provider, such that greater mistrust was associated with lower participant reported comfort during the visit, B = -0.15, SE = 0.07.

Vaughns et al., 2008) wherein 50-80% of the individuals pictured on the mock provider's brochure belonged to the minority group in the high representation condition and no minorities were presented in the low representation condition. Other research suggests that minority representation of at least 33% can alleviate social identity threat (Biernat, Crandall, Young, Kobrynowicz, & Halpin, 1998; Dasgupta, 2011). In the present research, while 50% of the individuals on the high representation brochure were racial minorities, only 25% of the individuals pictured belonged to the participants ingroup (i.e., 25% Latinx and 25% Black), and as such, it is possible that the threshold for ingroup representation was not met within the current design, thus not facilitating greater identity safety for either racial group.

The present research utilized four White undergraduate male confederates which would help generalize the study's findings if significant, but also introduces extra sources of error due to potential differences in the confederates' personalities or bedside manner. While confederates were thoroughly trained to be neutral in their demeanor, they were not strategically matched on factors like attractiveness, which may have influenced the outcomes of this research. Participants did not report differences in the confederates' friendliness, $F(1,147) = 1.37$, $p = .25$ (Ms = 6.08-6.55, SDs = 0.78-1.23), suggesting that the mock providers' demeanors interacting with the participants were similar. However, these analyses are underpowered as there was an uneven distribution of participants ran by each confederate. In addition, research suggests that implicit racial bias can influence nonverbal indicators of comfort within patient provider-interactions (Hall et al., 2015) and a measure of confederate implicit racial bias was not included. Future research should expand on the present study design by examining the influence of identity safety

cues in conjunction with threatening cues (e.g., provider bias) to better understand when identity safety cues will improve stigmatized group members' outcomes within medical contexts.

While great attempts were made to make the in-lab context feel like a medical space, including the use of a medical poster on the wall, the inclusion of rubber gloves and cotton swabs, and health magazines displayed on the front desk, the context was not a real medical setting. The lack of ecological validity likely reduced the amount of anxiety that participants felt about interacting with the medical provider in the current study. Future research should seek to demonstrate the hypothesized effects in more ecologically valid contexts with more controlled information about the provider (e.g., lack of shared college group identity). It is also possible that being videotaped facilitated greater feelings of identity safety as participants were told that the videos would be checked by the medical student's supervisors as part of the cover story. Thus, future research should replicate the current design within a medical office context wherein participants would interact with a provider under common circumstances (e.g., delayed time between brochure viewing and visit, no extended physiological measurements or measures like videotaping) to best be able to measure how participants may be influenced by identity safety cues within medical spaces.

Conclusion

The present research found that Black and Latinx participants did not have different experiences in a mock medical provider-patient interaction after being exposed to a medical brochure with or without an identity safety cue. Specifically, both Black and Latinx undergraduate participants reported high levels of comfort and trust with a White

male mock medical provider despite learning that the provider planned to serve a racially diverse or homogenously White clientele. Future research on the influence of identity safety cues on the quality of medical interactions had within racially discordant patient-provider interactions should focus on examining communication quality and feelings of identity safety in more ecologically valid contexts to best understand how safety cues within medical contexts can influence the health outcomes of stigmatized groups.

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Table 1
Correlations Between Study Dependent Variables

		1	2	3	4	5	6
1. Trust in Medical Student	*r*		.52**	.66**	-.04	.28**	.26**
	p		.00	.00	.59	.001	.001
2. Comfort During Visit	*r*			.58**	.15	.09	.14
	p			.00	.08	.28	.08
3. Medical Student	*r*				-.17*	.20*	.27**
Competence	*p*				.05	.01	.001
4. Confederate Coded	*r*					.16	.04
Comfort	*p*					.05	.65
5. Health Suggestion Recall	*r*						-.01
	p						.91
6. Adherence Intent							

*Note. N*s ranged from 147-151. ** indicates significance at the $p < .01$ level. All *p* levels are presented to view marginal and non-significant effect sizes.

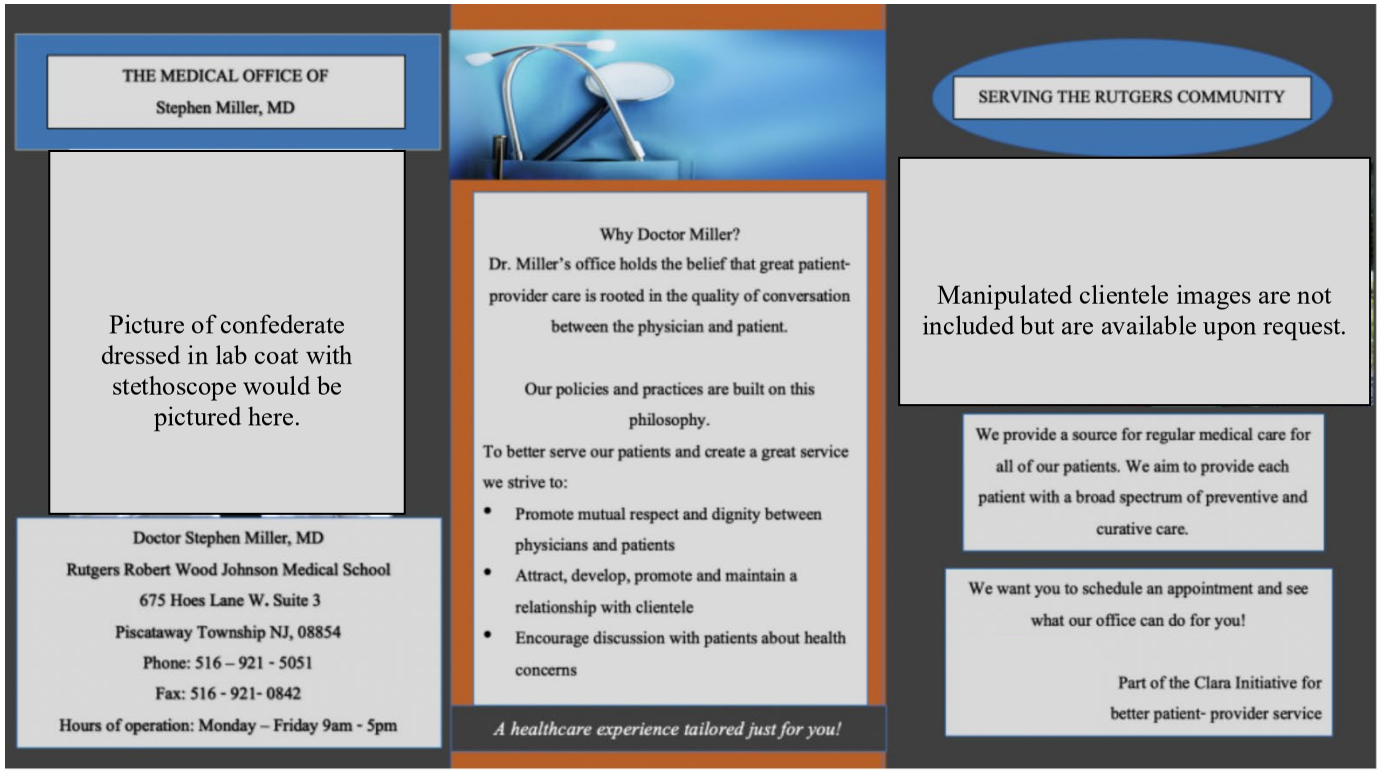
Table 2
Correlations Between Study Dependent Variables by Experimental Condition

		1	2	3	4	5	6
1. Trust in Medical Student	*r*	-	.47**	.70**	-.04	.45**	.27*
	p		.00	.00	.74	.00	.02
2. Comfort During Visit	*r*	.60**	-	.58**	.12	.17	.09
	p	.00		.00	.32	.14	.44
3. Medical Student Competence	*r*	.65**	.57**	-	-.18	.40**	.21
	p	.00	.00		.13	.00	.08
4. Confederate Coded Comfort	*r*	-.06	.18	-.15	-	-.22	.03
	p	.64	.13	.19		.07	.81
5. Health Suggestion Recall	*r*	-.02	-.03	-.01	-.11	-	.02
	p	.88	.79	.91	.36		.89
6. Adherence Intent	*r*	.20	.19	.35**	.06	-.09	-
	p	.08	.11	.002	.64	.41	

Note. Coefficients above the diagonal represent correlations within the high representation condition, while those below are correlations within the low representation condition. *N*s for the representation condition ranged from 71-74, while *N*s for the low representation condition ranged from 76-77.

Appendix A

Medical Brochure Sample



Note: Picture of confederate is not included for privacy and manipulated images are not provided because of lack of ownership.

Appendix B

Medical student confederate asked participants how often they engage in the following health behaviors followed by how often they experience each of the following symptoms from the PILL (Pennebaker, 1982) and handed participants a sheet of paper with the following scale for the participant to verbally report on.

1	2	3	4	5
Have never or almost never	**Monthly or less**	**2-4 times a month**	**2-3 times a week**	**4 or more times a week**

Health Behaviors

1) Engage in aerobic exercise like running
2) Engage in recreational exercise like going for walks or biking
3) Lift weights
4) Stretch muscles
5) Keep daily stress levels low
6) Sleep 7-8 hours a day
7) Spend time with friends
8) Ask friends for help
9) Smoke cigarettes

   9a) How many years have you been a smoker?

   9b) “Think about your cigarette use in the past month. On average how many cigarettes have you smoked daily?”
10) Smoke marijuana
11) Use drugs to get high

12) Have a drink containing alcohol

13) Drink 5 or more alcoholic drinks

14) Drink alcohol and take medications

15) Discuss your health concerns with others

16) Seek health information online

17) Check your blood pressure

18) Go for medical check ups

Health Symptoms

1) Have the feeling of a lump in throat

2) Feel out of breath

3) Have chest pains

4) Have difficulty sleeping

5) Have upset stomach

6) Have heartburn

7) Have abdominal pain

8) Have back pains

9) Have skin rashes

10) Have headaches

11) Feel head pressure

12) Feel dizzy

13) Have twitching of eyelid

14) Lack of energy

Appendix C

Provider Script for Medical Suggestions

Adapted from: https://www.onlinecolleges.net/for-students/student-health-wellness-guide/

"Thank you for sharing your medical symptoms and health behaviors with me. Before we end this visit, I would like to give you a couple of suggestions on how you can help improve your health. Research suggests that college students are more fatigued than other people of their same age cohort. College students specifically, tend to have poor eating habits, and do not sleep as much as they should. Even if you do not feel like you are too stressed, your body may experience stress if you don't sleep enough or if you have poor eating habits.

I suggest that you try to do subtle exercises every day, things like taking a walk (not just to classes), bicycling (in the gym or elsewhere), or yoga. These practices are helpful in reducing the stress that our bodies endure during our day to day activities. On top of this, napping can help revive low levels of energy that you may feel during stressful periods. Researchers suggest that you should take 30-minute naps; if you take longer naps you may wake up feeling groggier than you previously did.

Some other stressors on the body during college can be caused by low levels of nutrition. I would suggest making sure you intake Vitamin D and A daily. You can improve your intake of vitamin A by these vitamins by taking supplements, or by consuming orange and yellow colored foods like yellow squash and carrots. You can increase your Vitamin D intake by eating dark colored vegetables like eggplant and spinach.

Oh, and one more thing, college students often skip meals, but this is very unhealthy for our digestive system. I would suggest always having something for breakfast and to drink plenty of water throughout the day."

List for Coding Recall of Health Suggestions Used by Coders

1) Get more sleep
2) Eat healthier (better nutrition)
3) Subtle exercise (biking, yoga, walking)
4) Take short naps only (~30 minute)
5) Intake more Vitamin A (or mention of carrots and squash)
6) Intake more vitamin D (or mention of dark colored veggies)
7) Don't skip meals (have breakfast daily)
8) Drink plenty of water

Appendix D

Survey Items

Items in italics were not included in their respective scales due to cross loading on other factors or low factor loadings. * indicates reverse coded items.

Please rate the following items on a scale of 1(*strongly disagree*) to 7(*strongly agree*)

Trust in Medical Student

1) I trust that this medical provider will keep my information confidential
2) I trust that this medical provider treated me just as well as any other participant
3) *I trust that this medical provider had my best interests in mind*
4) I trust that this medical provider took my opinion/input seriously
5) I trust that this medical provider gave me good advice

Comfort with Medical Student

1) I feel that this medical provider accepted me for who I am
2) I feel that this medical provider felt comfortable interacting with me
3) I feel like it was easy for this medical provider to talk to me
4) I felt comfortable during my interaction with this medical provider
5) I felt relaxed during my interaction with this medical provider
6) I felt that I was able to be myself during the interaction with the medical provider
7) I felt that I was treated well by this medical provider

Medical Student Competence

1) This medical student is competent

2) This medical student is intelligent
3) This medical student does not know much about medicine*
4) This medical student will be a good medical provider
5) This medical student will be a good provider for a diverse group of patients
6) This medical student will be a good provider for racial minority patients

Intention to follow Medical Suggestions

On a scale of 1 (*Not at all likely*) to 7(*Extremely likely*) how likely do you think it is that you will try to incorporate the following suggestions from the provider into your health routine?

1) Get more sleep
2) Eat healthier (better nutrition)
3) Engage in subtle exercise (biking, yoga, walking)
4) Take short naps to reduce fatigue
5) Intake more Vitamin A (or mention of carrots and squash)
6) Intake more vitamin D (or mention of dark colored veggies)
7) Have three meals a day
8) Drink more water