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IDENTITY SAFETY CUES FOR LGBQ+ PEOPLE IN MEDICAL SETTINGS

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ABSTRACT

Identity safety cues are aspects of the environment that communicate one is at a low risk for identity-based discrimination. While a substantial body of literature has established effective gender and race-based safety cues, a dearth of attention has been given to sexual orientation-based safety cues. Through three studies, I investigate if the rainbow flag functions as a safety cue (i.e., leads to more identity safety) for lesbian, gay, bisexual, and queer (LGBQ+) individuals. In Study 1 (*N* = 76), I qualitatively examined LGBQ+ people's responses to the rainbow flag, concluding that rainbow flags function as effective safety cues for LGBQ+ people, inducing feelings of pride, safety, warmth, and indicating who is an ally. Participants also identified medical spaces as threatening environments in which the rainbow flag is particularly desired. In Study 2 (*N* = 231), I tested the rainbow flag as a safety cue in a medical doctor's office. In an online experiment, LGBQ+ participants encountered a doctor who wore (or did not wear) a rainbow flag sticker. This safety cue led to led to more belonging, more comfort, and less fear among LGBQ+ participants, and this effect was explained by perception of the doctor as high in internal motivation to avoid prejudice. In Study 3 (*N* = 234), I examined how a rainbow flag sticker interacted with doctor behavior on LGBQ+ people's identity safety through a 2 (safety cue: present or absent) x 2 (doctor behavior: affirming or threatening) experiment. I found main effects of safety cue and supportive doctor behavior, such that both led to more identity safety. However, when paired with a threatening doctor, the safety cue *led to more* identity safety (i.e., greater trust, belonging, comfort, inclusivity, and reduced fear) compared to a threatening doctor with no safety cue. Overall, this dissertation yields evidence for tangible ways to increase identity safety for LGBQ+ people, provides insight into the interaction between safety cues and behavior on perceptions of safety, and addresses the translation of safety cues into real-world settings.

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Chapter 1: General Introduction

Safety cues are aspects of the environment or social setting that communicate one's identity is welcome and the threat of discrimination is limited (Chaney & Sanchez, 2018; Cipollina & Sanchez, 2020; Davies et al., 2005; Emerson & Murphy, 2014; Johnson et al., 2019; Kruk & Matsick, 2021; Murphy et al., 2007; Pietri et al., 2018; Purdie-Vaughns et al., 2008; Wout et al., 2014). Safety cues can take several forms, from objects in the environment (e.g., a rainbow flag) to people in a room (e.g., the number of minority employees at a company). With cultural movements such as #MeToo, Black Lives Matter, and the ongoing battle for transgender rights, everyday usage of safety cues has become increasingly common as individuals, institutions, and corporations wish to signal their commitment to diversity and inclusion. For example, some cities have painted Black Lives Matter murals on their sidewalks and streets (e.g., Washington, D.C.) and many companies don a rainbow logo during LGBQ+ Pride month (e.g., Netflix) to signal their values toward diversity and inclusion.

Though gender- and race-targeted safety cues are plentiful, sexuality-targeted safety cues are underdeveloped and understudied in the psychological literature (Kruk & Matsick, 2021). In this dissertation, I test the efficacy and determine the boundary conditions of arguably the most common sexual orientation-based safety cue – the rainbow pride flag. Given lesbian, gay, bisexual, transgender, and queer (LGBTQ+) people's continued stigmatization in the U.S., it is important to identify easy-to-implement and effective interventions for increasing their well-being (Matsick, Wardecker, et al., 2020). I present a mixed-methods package of studies where I test the effect of a sexual orientation-based cue on LGBQ+ people's identity safety.

In this dissertation, I put forward four aims: (a) to examine if rainbow flags serve as environmental safety cues for LGBQ+ people (Studies 1-3); (b) to determine if said safety cue reduces threat and induces safety in a threatening environment (Studies 2-3); (c) to test the extent to which perceived internal and external motivations explains the relationship between

safety cue and identity safety (Studies 2-3) and (d) To understand how an identity safety cue interacts with other threatening or affirming situational information (Study 3).

Threat and Safety Cues

Research on identity safety cues has theoretical origins in theories of social identity. In particular, social identity threat is a relevant phenomenon for explaining why safety cues matter. Social identity threat emerges in situations in which people are aware their social identities can be ascribed undesirable characteristics (Branscombe et al., 1999; Ellemers et al., 2002; Major & Schmader, 2018). Several classes of identity threat exist, such as categorization threat, distinctiveness threat, value threat, acceptance threat, and legitimacy threat (Branscombe et al., 1999; Maass et al., 2003). These categories of threats apply to various contexts, influence individuals differently, and trigger different coping strategies (Aronson & McGlone, 2009; Branscombe et al., 1999; Ellemers et al., 2002; Major & Schmader, 2018; Steele et al., 2002). In particular, value-based threats undermine the group and implies the group is inferior. Value-based threats operate across a range of social identities, including gender (e.g., Townsend et al., 2011), race (e.g., Emerson & Murphy, 2014), sexual orientation (e.g., Fingerhut & Abdou, 2017), religious identity (e.g., Mackey et al., 2020), social class (e.g., Sandstrom et al., 2019), and weight and body size (e.g., Hunger et al., 2015).

To glean information about how their social identities will be valued within a context (i.e., whether a value-based threat exists), people often rely on situational cues, or features of a setting or situation that signal the likelihood of how one will be treated (i.e., by conveying the possibility of stigma; Murphy & Taylor, 2012; Murphy et al., 2007). For example, stereotype threat – a type of social identity threat – describes when one is at risk of confirming negative stereotypes about their ingroup (Steele & Aronson, 1995), and situational cues are a critical element for inducing the threat. In formative stereotype threat studies, researchers reminded Black students of racial stereotypes about academic achievement and found that threatened Black students then underperformed on an exam (Steele & Aronson, 1995). The reminder of

racial stereotypes served as a *threatening cue* which triggered negative outcomes (i.e., underperforming on a test). Research on threat cues has primarily focused on gender- and race-based threats (e.g., threats to race-unspecified women and gender-unspecified people of color; Aronson & McGlone, 2009; Murphy et al., 2007; Pennington et al., 2016; Spencer et al., 1999, 2016; Steele, 1997; Steele et al., 2002). The social psychological literature on stereotype-based threat cues is vast, but among the primary findings is that stereotype threat is in the air and readily detected by marginalized groups, who are vigilant to potential discrimination (Bergsieker et al., 2010; Mendoza-Denton et al., 2002; Pinel, 1999; Steele, 1997, 2010; Vorauer, 2006; Walton & Cohen, 2007). Although people are more likely to attend to threatening cues than neutral stimuli, they also display attentional bias to safety cues (Schmidt et al., 2017).

Individuals are vigilant to both threat and safety information, suggesting that identity safety cues would be a promising path toward lessening identity threat and enhancing psychological well-being for stigmatized groups. Safety cues are aspects of the environment or social setting that communicate support for stigmatized identities and enhance outcomes among stigmatized groups, such as heightened belonging, performance, trust, and engagement (see Cipollina & Sanchez, 2019). In other words, safety cues communicate *identity safety,* a freedom from identity-based threat of stigma and discrimination. Safety cues emerged as a logical flip of or opposition to threat cues and comprise a relatively new literature. Significantly, safety cues are a potential solution to the problem of threat cues. For example, when negative stereotypes about women are activated, Davies and colleagues (2005) found that providing information that there is no gender-based difference in ability restored women's leadership aspirations. Identity safety cues can also elicit belonging (e.g., Johnson et al., 2019; Murphy et al., 2007), even in social media spaces (Matsick, Kim, et al., 2020). Identity safety cues can be initiated by organizations and individuals (e.g., Albuja et al., 2019; Howansky et al., 2021), naturally occurring (e.g., demographic ratios of workplaces; Murphy et al., 2007; Purdie-Vaughns et al., 2008), explicit (e.g., information countering gender stereotypes; Davies et al.,

2005; McIntyre et al., 2003), or subtle (e.g., a poster on a wall; Cheryan et al., 2009). Identity safety cues thus encompass a wide range of situational cues. If individuals or organizations aim to make environments welcoming, affirming, and non-threatening, they need to understand which identity safety cues exist and which strategies work most effectively. Through a comprehensive review of the safety cue literature, Kruk and Matsick (2021) created a taxonomy of safety cues, identifying four types of cues: *Minority Representation, Diversity Philosophies and Programming, Environmental Cues,* and *Identity-Safe Information.*

Minority Representation describes manipulating the presence of a stigmatized group to evoke feelings of safety in other members of marginalized groups. Common settings for this cue include job advertisements, where researchers often manipulate the number of minoritized individuals in a company brochure (e.g., employees of color; Purdie-Vaughns et al., 2008), and classrooms, where researchers often manipulate the presence of a stigmatized group member (e.g., Pietri, Hennes, et al., 2019). Beyond exposure to stigmatized people's representation, stigmatized people's position of power can also influence identity safety. For example, Black students performed better on a diagnostic test with a Black evaluator (Wout et al., 2009), and Black women students anticipated greater belonging and trust when paired with a Black (as compared to non-Black) woman professor (Johnson et al., 2019). In sum, Kruk and Matsick's (2021) review concluded the representation of minoritized others is an effective cue of identity safety for members of stigmatized groups.

Diversity Philosophies and Programming describes using an individual's or organization's claims of diversity values to invoke identity safety in marginalized groups. On the one hand, diversity philosophies can be effective: African American participants trusted a company more when its mission statement emphasized diversity instead of a colorblind ideology (Purdie-Vaughns et al., 2008) and women engineers felt greater acceptance and less social identity threat when their workplace had gender-inclusive policies (Hall et al., 2018). On the other hand, diversity philosophies are known to have null or diluted effects: Cipollina and

Sanchez (2020) found a physician's diversity statement did not influence Black and Latinx participants' anticipated quality of their first visit, and Purdie-Vaughns et al. (2008) found that when minorities were represented at a (fictional) company, the company's diversity statement had little-to-no effect on African American people's trust in the company. Overall, Kruk and Matsick (2021) recognized that the evidence for this cue's efficacy is mixed, with some indication that they are effective cues of safety (i.e., in the absence of having *Minority Representation*) and some indication that other cues are more effective.

Identity-Safe Information involves providing stigmatized group members with explicitly non-threatening and affirming information to induce identity safety. This often occurs before a test, mimicking procedures followed in stereotype threat research. For example, Black students perform better on a test when it is described as non-diagnostic of intellectual ability because they run no risk of confirming negative stereotypes about their group's intelligence (Wout et al., 2009). Women also perform better on math tests when reminded of other women's accomplishments prior to the test (McIntyre et al., 2003). Beyond testing, groups also benefit from lessening harmful stereotypes, such as the stereotype that STEM is hyper-masculine and anti-feminine. When female participants read an article claiming computer science is no longer dominated by "geeks," their interest in science increased (Cheryan et al., 2013). Together, Kruk and Matsick (2021) concluded that telling groups non-threatening and affirming information about their group alleviates threat and induces safety, especially prior to threat-inducing tasks (e.g., tests).

The last category of identity safety cues – *Environmental Cues* – are defined by manipulating non-human objects of an environment to communicate identity safety. This may include changing posters on a STEM classroom wall to be gender-neutral (Cheryan et al., 2009), designing a STEM classroom to be non-masculine (e.g., plants instead of video games; Cheryan, Meltzoff, et al., 2011), having gender-neutral bathrooms (Chaney & Sanchez, 2018) or displaying posters of influential women leaders (Latu et al., 2013). *Environmental Cues* function

by communicating the norms of a setting, and often work to communicate an environment is *not* reproducing or upholding negative stereotypes. For example, a STEM classroom may use environmental cues to communicate the space is not hyper-masculine and is welcoming to women (Cheryan et al., 2009). Environmental cues are arguably some of the most externally valid cues, demonstrated by everyday examples such as flags, stickers, and pins.

Much like threat cues, most of the literature on safety cues focuses on gender- and race-based safety (see Kruk & Matsick, 2021). However, there is preliminary evidence to suggest that LGBQ+ individuals will also psychologically benefit from safety cues. Due to routine threat of violence and discrimination, LGBQ+ people (much like other minoritized groups) tend to be vigilant to their environments to protect themselves from potential harm (e.g., Bauerband et al., 2019; Gonzalez et al., 2018; McGregor et al., 2019; Meyer, 2003). In other words, LGBQ+ individuals are aware of their environments and looking for potentially threatening situations (i.e., threat cues). Because sexual minorities are already chronically aware of their surroundings, I propose that features in the environment that signal belonging (i.e., safety cues) may be easily detected.

In addition, an emerging body of research finds that LGBQ+ people detect safety cues *and* benefit psychologically from them. Matsick, Kim, et al. (2020) found that LGBQ+ individuals feel greater online and societal belonging when viewing a Facebook profile that displays a rainbow flag filter (i.e., an online cue used to signal solidarity with LGBQ+ people); Johnson et al. (2021) found LGBTQ+ people have more positive organizational attitudes when viewing employee biographies that include pronouns; Cipollina and Sanchez (2021) found that sexual minorities perceived a doctor as lower in bias and higher in cultural competency when former clients were also sexual minorities (i.e., *Minority Representation*) with limited effects of a doctor's diversity statement (i.e., *Diversity Philosophies*); and Matsick, Kruk, et al. (2022) found that lesbian and gay people perceive those who use the outdated descriptor "homosexual" to be less culturally competent, less accepting, less tolerant, and more uninformed than people who

use the preferred descriptor “lesbian and gay” (i.e., *Identity-Safe Information*). Together, initial evidence exists to suggest that LGBQ+ individuals would benefit from safety cues of *Minority Representation, Identity-Safe Information*, and (to an extent) *Diversity Philosophies and Programming*. I thus put forward the following:

Aim 1: To examine if a rainbow flag (a commonly used safety cue) serves as an *Environmental Cue* for enhancing LGBQ+ people’s safety.

Factors Influencing the Efficacy of Safety Cues

There are boundaries and conditions under which identity safety cues most effectively operate. The environment, the individual, group membership, perceptions of the cue user, and situational information all affect to what extent identity safety cues work (Kaiser et al., 2006; Kruk & Matsick, 2021). While developed through research targeting gender- and race-based discrimination, I have integrated these boundaries and conditions into a conceptual model detailing the efficacy of sexual orientation-based safety cues (See Figure 1). Figure 1 contains many pathways that I intend to pursue in future research; however, this dissertation will only test the gray highlighted pathways concerning the cue’s environment, situational information, and perception of the cue user. Below, I highlight these factors and their influence on cues’ efficacy.

Individual Differences and Group Membership

Certain individual differences regarding attention to stigma may influence how *specific* an identity safety cue must be. In particular, those with high stigma consciousness – one’s expectations for encountering stereotypes (Pinel, 1999) – may require safety cues specific to their identity. For example, Black women students with high stigma consciousness only felt increased safety from the presence of Black women professors (not Black men professors; Johnson et al., 2019). In other words, Black women with high stigma consciousness required minority representation that matched their race and gender to psychologically benefit. Those with high stigma solidarity—an individual’s belief that oppressed people should work together to pursue equality—may benefit from cues not necessarily aimed at their identity: White women

with high stigma solidarity perceived a Black man as less sexist than a White man due to their beliefs that marginalized groups should stick together (Chaney et al., 2018). Similarly, those who endorse monolithic prejudice (i.e., believing an individual's prejudice toward one group implies their prejudice toward all groups) can benefit from a safety cue aimed at entirely different group. For example, cisgender women with beliefs in monolithic prejudice felt increased safety by the presence of a gender-inclusive restroom (Chaney & Sanchez, 2018).

However, one's membership to a dominant group may prevent them from being affected by safety cues altogether. Although cues sometimes cause positive or negative reactions among dominant groups, the most common dominant group reaction to identity safety cues appears to be no reaction at all (e.g., Ballinger & Crocker, 2021; Chaney et al., 2016, 2018; Cheryan et al., 2009, 2013; Hall et al., 2018). This may be due to dominant groups' standpoint due to their privileged social identities. Standpoint Theory (Harding, 2004) suggests that marginalized groups have access to knowledge that dominant groups do not; they attend to stigma that is invisible to dominant groups. Therefore, dominant groups may not notice or be affected by safety cues because they are not attending to environmental stigma or prejudice to begin with or do not have the lived experience and knowledge of how a situation may or may not be threatening to others. Taken together, individuals' stigma consciousness, stigma solidarity, monolithic theory of prejudice, and group membership influences cue efficacy. While this dissertation does not examine individual differences or group membership (all participants will be LGBQ+-identified), it is an exciting avenue for future research (see General Discussion).

Situational Information and the Environment

Real-world situations likely contain multiple cues, some of which may support or contradict each other. The literature is mixed on which cues boost each other versus cancel each other. For example, for Black individuals, minority representation appears to matter more than diversity statements (Cipollina & Sanchez, 2020; Purdie-Vaughns et al., 2008; Wilton et al., 2020); however, there is evidence that for (race-unspecified) women, diversity statements

matter more than gender representation (Hall et al., 2018). There is also evidence that the cue user's behavior (e.g., the extent to which the cue user behaves in a way consistent with the values of the safety cue) may influence the effectiveness of a safety cue (see "Evaluating Cue Authenticity" and Aim 4).

How threatening an environment is can also influence how efficacious a cue may be. Put simply, individuals in prejudiced environments notice more cues than those in nonprejudiced environments (Emerson & Murphy, 2014; Kaiser et al., 2006; Murphy et al., 2018). An individual determines an environment is threatening when stereotypes associated with their group membership apply to both the immediate setting and broader societal context; therefore, they expect to encounter prejudice and bias (Wout et al., 2009). For example, a woman may perceive a classroom as threatening if she determines that negative stereotypes about women's intelligence are applicable to the immediate setting (i.e., the classroom) and the broader social context (e.g., subject matter). In this case, identity safety cues that combat negative stereotypes about women's intelligence (e.g., *Identity-Safe Information*) or communicate intentions to treat women fairly (e.g., *Diversity Philosophies*) should alleviate threat. However, if an environment is not determined to be threatening, identity safety cues may hold less power because stigmatized groups would not be vigilant for discrimination. In other words, if an environment is already deemed to be safe and non-threatening, safety cues may be less efficacious because marginalized groups are not looking for cues at all. I thus formulated the following aim in this research:

> Aim 2: To determine if a sexual orientation-based safety cue leads to less threat and more safety in a threatening situation (e.g., a doctor's office, which is a historically threatening context for LGBQ+ patients).

LGBQ+ People and Medical Spaces

Aim 2 is to test the efficacy of safety cues in particularly threatening environment for LGBQ+ people: A doctor's office (Studies 2-3). As described above, threatening situations are

necessary for identity safety cues to work as intended, as those in a non-threatening environment may not be as vigilant for cues to assure their safety. For example, it is unlikely that an LGBQ+ person who enters a gay bar would be actively looking for cues that communicate whether their sexual orientation is respected and valued there, but that same person may be hypervigilant to sexual orientation-based situational cues when entering a different venue known to be threatening.

The doctor's office is a specific site of discomfort for LGBQ+ people due to legacies of medical homophobia. In brief, having a non-heterosexual identity or engaging in same-sex sexual behavior was classified as a medical disorder until 1973, and "treatments" for "homosexuality" included electroshock therapy, hormone replacement therapy, and castration. The history of "homosexuality" as a medical disorder is so stigmatizing that the American Psychological Association recommends retiring the terminology of "homosexual/homosexuality" because it triggers a medicalized and criminalized past of homosexuality in the U.S. (APA, 2019).

Though "homosexuality" is no longer considered a medical disorder, instances of medical homophobia persist (Dean et al., 2016). Some instances of medical homophobia are gendered. Queer women's experiences often center on an assumption of fertility concerns and a misunderstanding of queer women's sexual health; for example, queer women often report their doctor is solely focused on pregnancy and contraception even when those concerns are not relevant or of interest to them (due to having a same-sex partner; Baldwin et al., 2017; Jahn et al., 2019). Out queer women are also often denied conversations about STIs, cervical cancer screenings, and gynecological exams because of doctors' assumptions that queer women are not at risk of any sexual diseases (Jahn et al., 2019; Meads et al., 2019). In contrast, queer men are often stereotyped as hypersexual, sexually deviant, and at high risk of STIs, and thus report being lectured about safe sex practices, during which doctors rely on scare tactics and assume queer men are not having safe sex at all (Beehler, 2001). In addition, queer men report that they

are demeaned by doctors, who make comments about their sex obsession, deviant sex life, or assume they have an STI (Baldwin et al., 2017; Moon et al., 2002; Rossman et al., 2017). The negative relationship between LGBQ+ people and the medical institution is not only one of historical import, but a persistent feature of LGBQ+ life in contemporary society when they attempt to seek health care.

Other categories of medical homophobia do not differ based upon gender. Medical professionals often assume patients of any gender are heterosexual, asking about their wife/girlfriend (for male patients) or husband/boyfriend (for female patients; Jahn et al., 2019). Additionally, LGBQ+ patients report that the medical professionals with whom they interact often become uncomfortable when they reveal their non-heterosexual identity. This discomfort, on behalf of healthcare providers, can range from general awkwardness and avoidance (Dean et al., 2016), to shock and surprise (Dean et al., 2016), to doubtfulness and interrogation (e.g., Are you sure? Have you thought about everything?; Fuzzell et al., 2016), to a confusion regarding why one would be gay if they have everything going for them (Meads et al., 2019). In severe cases of medical homophobia, patients report their provider scolding them about their sexual identity, bringing up religion, lecturing about the necessity of a child having a mother and father, or exhibiting physical repulsion (Dean et al., 2016; Meads et al., 2019). Overall, non-gendered experiences of medical homophobia center on an assumption of heterosexuality and discomfort with LGBQ+ people.

It is no surprise that experiences of mistreatment in medical settings thus contribute to disparities in medical care and health between LGBQ+ and heterosexual people. LGBQ+ people experience psychological threat and anticipated stigma when pursuing medical care (Fingerhut & Abdou, 2017), which can contribute to less engagement and more negative affect, concealment, avoidance, and cognitive load during medical visits (Cipollina & Sanchez, 2019). On average, LGBQ+ people are more likely to delay, avoid, or disengage from seeking healthcare than heterosexual people (Fingerhut & Abdou, 2017). Indeed, 63% of gay adults and

75% of lesbian adults report delaying healthcare as compared to 54% of heterosexual people; Of those LGB adults who delayed, 16% said it was due to discrimination while only 3% of heterosexual people reported previous discrimination as a reason (Fingerhut & Abdou, 2017; Harris Interactive Poll, 2005). Men who have sex with men, for example, are approximately two times less likely to have seen a doctor in the recent past than heterosexual men (Alvy et al., 2011; Fingerhut & Abdou, 2017). Delaying healthcare (accompanied with medical homophobia within visits) leads to less routine screenings, which generally promote health maintenance and play a critical role in early detection of health problems. Lesbian women, for example, are less likely than heterosexual women to have had pelvic exams, mammograms, and routine annual Pap tests – all of which can lead to early detection of breast and cervical cancers (Cochran et al., 2001; Fingerhut & Abdou, 2017).

Low quality medical treatment and low rates of medical visits (among other factors) predictably contributes to vast health disparities between LGBQ+ people and heterosexual people (Institute of Medicine, 2011). Generally, LGB people have higher rates of mental health conditions, physical health problems, and substance abuse disorders than heterosexual people (Fingerhut & Abdou, 2017; King et al., 2008; Lick et al., 2013; McCabe et al., 2009; Williams & Mann, 2017). More specific examples include queer women's higher risk of cardiovascular disease and obesity than heterosexual women, and LGB people's higher use of tobacco than heterosexual people (Fredriksen-Goldsen, 2011; Lee et al., 2009). As put forward by Matsick, Wardecker, et al. (2020), sexual orientation does not cause health disparities, but rather homophobic societies and environments do. Thus, my dissertation, while not directly assessing health disparities, is nevertheless action-focused for lessening them. Consistent with Makadon's (2011) best practices for ensuring health equity, researchers and clinicians can alleviate the problem of LGBQ+ health disparities by way of improving LGBQ+ people's experiences in medical settings. I do this by implementing safety cues to reduce threat and induce safety.

Evaluating Cue Users' Motivation and Behavior

For safety cues to effectively induce safety and belonging, I propose that they need to be perceived as authentic and honest. That is, cues must be positively perceived by the target group for them to be impactful. It is thus important to determine what target groups perceive as a genuine display of solidarity (e.g., allyship) and what is perceived as performativity, an especially relevant topic in LGBQ+ activism.

Allyship is defined as "advantaged group activists who are committed participants in action to improve the treatment of a disadvantaged group" (Droogendyk et al., 2016; p. 316). Some indicators of effective allies from minority groups' perspectives include acknowledgement of the injustices minorities face, acting to end those injustices, explicitly engaging in conversations around identity (e.g., race, gender), acceptance that minority groups' experiences are unique from dominant groups', and endorsement from an ingroup member (Ashburn-Nardo, 2018; Brown & Ostrove, 2013; Domingue, 2015; Droogendyk et al., 2016; Johnson & Pietri, 2020; Ostrove & Brown, 2018; Wright et al., 1997). Discussions of performative allyship, however, have been plentiful in popular culture (e.g., when discussing corporate support of #BlackLivesMatter following the murder of George Floyd; Morris, 2020). Performative allyship describes when an individual or corporation appears to be acting as an ally, but the gesture is superficial and does not reflect any actual action on behalf of a stigmatized group (e.g., Kalina, 2020). In other words, performative allyship is just for show. Examples of performative allyship include companies celebrating Pride month yet donating to anti-LGBQ+ politicians (e.g., Helmore, 2021) and cities painting #BlackLivesMatter murals while increasing their police budget (e.g., Schultz, 2020). Indeed, pro-LGBQ+ activism has been a ripe area for discussions of performative allyship and rainbow capitalism, in which companies display pro-LGBQ+ messages for the primary purpose of accruing customers and capital. Also called rainbow washing, these displays are not accompanied with actual material improvements for LGBQ+ people or employees (e.g., Desjardins et al., 2020). Indeed, such gestures often benefit the signaler (cue user) rather than the minoritized group targeted by the cue.

Cue Users' Motivation. One way to determine if safety cues are genuine is by deciding if the cue user's behavior is internally or externally motivated. Originally developed to test racial prejudice, internal motivation to avoid prejudice is defined by acting nonprejudiced because of "personally important egalitarian beliefs," while external motivation to avoid prejudice is "to avoid social repercussions of being labeled a racist" (Major et al., 2013; p. 402). Performative allyship, for example, is externally motivated – it is *performed* to appease an outside force (e.g., public perception). Determining minority groups' perceptions of others' internal and external motivations for acting non-prejudiced are vital in developing anti-bias interventions, as these variables can explain why some seemingly positive behavior toward minority groups may be received negatively (Major et al., 2013). For example, Major et al. (2016) found that minorities suspecting White people of being *externally* motivated to appear non-racist viewed White people's positive feedback as disingenuous and experienced negative psychological and physiological reactions (e.g., threat, stress, decreased self-esteem). Similarly, racial minorities suspicious of White people's motivation for non-prejudice reacted negatively to White people's smiles (Kunstman et al., 2016). If minority groups perceive allies as acting from a place of internal motivation, however, they may be more likely to perceive those actions as genuine and, in turn, receive positive benefits.

I propose that perceptions of people's internal or external motivations for using a safety cue may explain the relationship between cues and induced identity safety, depending on the cue user's actual behavior. That is, when an individual or organization uses a safety cue and acts in ways that are consistent with the cue, they should be perceived as having strong internal motivations for appearing non-prejudiced and, in turn, psychological safety among stigmatized groups should occur. However, when the safety cue is met with negative behavior that violates people's expectations, the cue user should be perceived as having strong external motivations for appearing non-prejudiced and, in turn, psychological safety is lessened. I put forward Aim 3 to address this process:

Aim 3: To test the extent to which perceived internal and external motivations explains the relationship between safety cue and identity safety.

Cue Users' Behavior and Expectation Violation Predictions*.* Another way that people determine if safety cues are genuine is to evaluate whether reality matches what is being suggested by the cue. *Diversity dishonesty* and *counterfeit diversity* describe when organizations lie to marginalized groups by purporting to have more diversity than they really do. For example, organizations may display a diverse workforce in company ads yet having a male-dominated or racially homogeneous workforce in reality (Kroeper et al., 2022; Wilton et al., 2020). Both diversity dishonesty and counterfeit diversity result in harm to minority populations (e.g., increased concerns about fitting in and heightened identity threat; Kroeper et al., 2022; Wilton et al., 2020). While these concepts describe organizations being deceitful to marginalized groups, I am interested in personal deceits by those claiming to be allies and marginalized group members' resulting expectancy violations (i.e., when someone behaves in a way different than one anticipated; Afifi & Metts, 1998; Bevan et al., 2014).

Encountering expectancy-consistent and expectancy-violating stimuli influence people's affect, especially when negative violations occur (Bartholow et al., 2001; Bettencourt et al., 1997). That is, when a person has positive expectations for a setting because of a safety cue *and* they encounter information in reality that confirms those expectations, they should experience that situation very positively. In contrast, if a person has positive expectations for a setting because of a safety cue *but* they encounter information in reality that violates those expectations in a negative way, they should experience that situation very negatively. I study this phenomenon by having a cue signaler behave in an LGBQ+ affirming or threatening way after they display an LGBQ+-focused safety cue. I thus propose:

Aim 4: To understand how an identity safety cue interacts with other situational information, such as affirming or threatening behaviors of a safety cue user.

The Current Research

This dissertation is mixed-methods project that makes use of both qualitative approaches and experimental methods. The current studies have four aims: To determine if rainbow flags are effective LGBQ+ safety cues, to examine if LGBQ+ safety cues reduce threat in a threatening environment (a medical office), to examine the role of perceived internal and external motivation for using safety cues, and to determine how LGBQ+ safety cues interact with affirming or threatening behavior. In Study 1, I begin by conducting qualitative research with LGBQ+ people, asking their perceptions of rainbow flags. Because there is a dearth of research on LGBQ+ safety cues – especially from LGBQ+ people themselves – I conducted a qualitative study that approaches my research from the ground up. That is, my approach frames people who are affected by heterosexism as having the expertise and experience to address the extent to which rainbow flags are indeed safety cues. I then built on the results of Study 1 to develop experimental materials for Studies 2 and 3, in which I tested the efficacy of sexuality-based cues in a threatening setting (a medical office) in conjunction with mediators for the relationship between cues and felt safety. Together, this package of studies provides valuable information about strategies to increase psychological and physical well-being of LGBQ+ people. I have received IRB approval for this research at the Pennsylvania State University.

Chapter 2: A Qualitative Analysis of Responses to Safety Cues (Study 1)

The primary purpose of Study 1 was to determine how LGBQ+ people perceive a common safety cue: rainbow flags. The secondary purpose was to inform research questions and experimental materials for use in subsequent experimental studies. I examined four primary research questions using qualitative data:

1) Are rainbow flags effective safety cues for LGBQ+ people?

2) In which context would rainbow flag safety cues be desirable?

3) How does one determine the authenticity of rainbow flag safety cues?

4) What are LGBQ+ threat cues?

I collected data in 2021. I used an online survey format, which is recognized as a qualitative tool for researchers who are working with a large, diverse population that may be geographically dispersed (Braun et al., 2020). Online qualitative surveys provide a range of benefits. For example, online qualitative surveys provide more expansive sampling practices that are not regionally restricted (e.g., nationwide), accommodate the participant (e.g., partaking in research from the comfort of one's own home), foster disclosure of sensitive information (e.g., emotionally difficult anecdotes), and provide a sense of heightened anonymity for participants than when communicating directly with an interviewer (see Braun et al., 2020).

Method

Participants

I chose to recruit a mid-range sample size (i.e., 60-99; Braun et al., 2020) for qualitative research to ensure the data contain a rich variety of responses even after exclusions (e.g., low quality data) and to ensure the data do not reach the point of saturation due to oversampling (i.e., no new information is given or participants giving the same responses). I recruited participants across the U.S. through Qualtrics Paneling Services (a paid survey platform). I identified eligible participants by using a demographic screener and excluded participants who did not fit criteria (i.e., heterosexual and/or under 18 years old) or who generated low quality

data (e.g., completed the survey in under 2 minutes; *n* = 4). The final sample included 76 people, consisting of 43 women, 25 men, 7 nonbinary people, and 1 gender non-specified gay person. See Table 1 for full demographic information.

Design and Procedure

Participants reported demographic information on page 1 of the survey. People who identified as sexual minorities (e.g., lesbian, queer, bisexual) and who were over the age of 18 were allowed to proceed. On the second page of the survey, participants were given the following definition of LGBQ+ safety cues and rainbow flags. Giving proper and thorough definitions is important in qualitative research, as it helps avoid assumptions participants have about concepts (Braun et al., 2020). Based on recent conceptualizations of identity safety cues (Kruk & Matsick, 2021), participants were provided with the following definition:

> LGBQ+ safety cues are aspects of a place that communicate you are not going to be discriminated against because of your LGBQ+ identity. The rainbow flag is a common LGBQ+ safety cue because it is meant to communicate that LGBQ+ people are welcome and will not be discriminated against.

Next, participants were shown photos of the rainbow pride symbol on a flag, on a sticker, and on a pin as some examples. See Appendix for photos. Participants then responded to five open-ended questions about rainbow flag safety cues. Using the timing feature on Qualtrics, participants could not advance during each question for at least 30 seconds; however, they could take as much time as needed to answer each question. After the writing portion, participants responded to other demographic questions (e.g., assessing education level, political orientation) before being debriefed and exited from the survey.

Materials and Measures

Qualitative Prompts

I developed five original open-ended survey prompts. To begin drafting prompts, I brainstormed what the unknowns of LGBQ+ safety cues were. This led to the creation of Study 1's four guiding research questions: *Are rainbow flags effective safety cues for LGBQ+ people?*

In which contexts are rainbow flag safety cues desired? How do LGBQ+ people determine a rainbow flag's authenticity? What are some LGBQ+ threat cues? I created an initial draft of 10 prompts, following best practices to keep items open, short, clear, and unambiguous (Braun et al., 2020). I sent the 10 prompts to an expert panel of LGBQ+ scholars, including professors and post-doctoral scholars of Sexuality and Health, Nursing, Social Psychology, and Clinical Psychology with expertise in both qualitative and quantitative methods. The expert panel provided critical feedback on the prompts' content and phrasing. For example, one expert suggested splitting longer prompts into several simplified prompts, and another suggested substituting more academic terms like "environment" for colloquial ones like "place." I integrated their feedback to arrive at 5 prompts and added an additional prompt to provide more space for explanation. The total number of prompts is included in the range of the recommended number of qualitative questions per study (i.e., 4-6 questions being ideal; 10 questions being lengthy; Braun et al., 2020). Each open-ended prompt was developed to answer one or more research questions of Study 1.

Research Question 1 – *Cue Efficacy* – aimed to determine how LGBQ+ people perceive rainbow flags, those who use them, and to what extent rainbow flags actually lead to more feelings of safety and belonging. To answer this question, I asked participants the below questions:

> *Prompt 1 (P1): Think about the times in which you've encountered a rainbow flag. What emotions, thoughts, or questions do you have when you see a rainbow flag?*
>
> *Prompt 2 (P2): What do you think people's or businesses' motivations are for using rainbow flags? How do you view people or businesses that use rainbow flags?*

Research Question 2 – *Environment* – aimed to answer in which contexts rainbow flags are desired. To answer this question, I asked participants the below question:

> *Prompt 3 (P3): Where would you want to see a rainbow flag? Why?*

Research Question 3 – *Authenticity* – aimed to determine how LGBQ+ people perceive a rainbow flag's authenticity. The purpose of this question is to create informed experimental materials in Study 2 which are perceived as authentic. To answer this question, I asked participants the below question:

> *Prompt 4 (P4): Please write about a time you saw a rainbow flag that you thought was authentic in its support for LGBQ+ people* ***OR*** *a time you saw a rainbow flag that you thought was inauthentic in its support for LGBQ+ people.*

Research Question 4 – *Threat Cues* – aimed to determine what the opposite of a rainbow flag safety cue is. That is, what cues induce threat for LGBQ+ people? To answer this question, I asked participants the below question:

> *Prompt 5 (P5): What do you see as the opposite of a rainbow flag? That is, what cues or aspects of a place make you feel threatened, unsafe, or unwelcome as an LGBQ+ person?*

I included one final prompt (*Prompt 6*) in accordance with Braun et al.'s (2020) recommendations for collecting rich qualitative data: *Do you have anything else about rainbow flag safety cues you'd like to share?* This ensures participants have room to share additional information that was missed by the other prompts. I presented the prompts in an order that was intuitive and flowed for participants while ensuring rich data (e.g., avoiding starting the survey with the most general of questions; Braun et al., 2020). The final question order was P1, P4, P2, P3, P5, ending with P6.

Finally, I piloted the prompts with LGBQ+ participants, which is an essential step in designing an online qualitative survey as it catches any misunderstandings or unstated assumptions between participants and researcher. Through Qualtrics Paneling Services, I piloted these 6 qualitative questions on a sample of seven LGBQ+ participants (9% of the final sample of n = 75), consistent with the recommendation to pilot on 5-10% of anticipated sample size (Braun et al., 2020). The pilot data contained no obvious misunderstandings or unstated assumptions, so data collection continued until the desired sample size was reached.

Analytic Approach

I analyzed data through thematic analysis as informed by Braun and Clarke (2006). Thematic analysis is a "method for identifying, analyzing, and reporting themes within data" which "minimally organizes and describes the dataset in rich detail" (Braun & Clarke, 2006, p. 79). Accordingly, I followed Braun and Clarke's (2006) six phases for thematic analysis. An advanced research assistant trained in qualitative methods served as a second coder. Given the reflexive properties promoted in thematic analysis, the research assistant and I discussed our interpretation of data frequently together as the process allowed. Our reflexive process involved sharing observations, our own experiences (or those of close others) regarding exposure to safety cues, discussing our assumptions, and reflecting on situational factors that could influence our interpretation of results (e.g., the lasting impact of the Trump Presidency on stigmatized groups' sense of safety in the U.S.).

In Phase 1, the research assistant and I actively (and independently) read through the dataset in its entirety four times, taking notes. In Phase 2, the research assistant and I read through the data again (independently), identified interesting data points, and identified potential themes. We generated a list of potential codes in a separate document and pasted excerpts from the dataset. Importantly, we did not limit the number of potential codes in this step and kept surrounding data (e.g., entire paragraphs for context; Braun & Clarke, 2006). After we had long lists of initial codes to consider, we began Phase 3 by identifying larger themes among the codes. After having a completed draft of larger themes which were generated independently, the research assistant and I met to compare our themes. We synthesized and collapsed themes that were similar, added themes where necessary, and had graduate students and faculty serve as impartial coders on themes that the research assistant and I did not agree on. We completed Phase 3 when we reached consensus about a combined draft of larger themes.

In Phase 4, I independently reviewed and edited the drafted themes. I worked to refine the themes so that they were clearly defined from other themes in the dataset, cohered

meaningfully, and accurately represented the dataset from a broader perspective (Braun & Clarke, 2006). Phase 4 ended when I had a finalized list of themes. In Phase 5, I defined and named the themes in consultation with the research assistant coder. Theme names concisely identify what is of interest and why about the theme (rather than paraphrasing the content of the theme; Braun & Clarke, 2006). I wrote an analysis of the theme to solidify the theme, including what the theme is and is not, the story of the theme, and how the theme fits into the overall research question. The research assistant and I then independently coded participants' responses according to the presence of the themes. After independently coding the data, I departed from traditional thematic analysis recommendations by checking our interrater reliability (80% agreement), discussed any codes that did not match between us, and reached out to the same impartial coders to break ties. Finally, Phase 6 consisted of writing the results. Following Braun and Clarke (2006), I present the results of thematic analysis in a way that goes beyond the description of data, which allows for the results to make an argument and provide sufficient evidence of the themes within the data.

Results

I analyzed and present results by research question. See Table 2 for a summary of themes and subthemes per research question; See Figure 2 for a thematic map. All participants are represented by pseudonyms.

Research Question 1: Cue Efficacy

In the first research question, I ask if rainbow flags serve as effective safety cues. I created three themes (positive reactions, perceptions of flag users, perceptions of businesses) to address cue efficacy.

Theme 1: Positive Affective Reactions

Participants expressed positive emotional reactions to the rainbow flag, including subthemes of feeling pride, safety, and warmth.

Subtheme 1: Pride. Participants indicated that seeing the rainbow flag makes them feel pride in their LGBQ+ identities. This reaction is somewhat expected, and pride may have been a primed reaction (the instructions referred to the cue as a “rainbow pride flag”) or a conditioned response from repeated historical associations between rainbow flags and pride (e.g., Pride parades). One participant noted, “Being a gay man, I am very proud of the Rainbow Flag as it stands for who I am,” (Nate, 66-year-old queer White man) while another noted, “Pride. The rainbow flag invokes pride for the LGBQ+ community” (Ian, 38-year-old queer Black man). Another participant simply stated, “I get a sense of pride when I see them” (Leo, 72-year-old gay White man). Their sense of pride in response to the flag was often described as counter to the negative feelings toward their identities one is expected or encouraged to feel as a minoritized person. Lila, a 21-year-old Black bisexual woman, described her feelings as an absence of negative emotion (i.e., feeling ashamed), saying “I was proud because I am not ashamed of who I become and how I live my life I have a handsome boyfriend and I had girlfriend in the past and I am not ashamed of that.” While Leah, a 23-year-old Latina lesbian woman, noted, “When I encountered a rainbow flag, I think of myself as a powerful woman who is lesbian. And I’m not afraid of who I am.”

Subtheme 2: Safe as Oneself. Participants felt physically and psychologically safe as oneself after seeing the rainbow flag. Specifically, they expressed both feeling safe to exist as LGBQ+ in a space and, beyond that, accepted and valued as an LGBQ+ person. Participants often noted that rainbow flags communicated that they could “be themselves” in an establishment or around a person, noting that the space or person is a safe place and that a rainbow flag made them feel “safe against discrimination” (Claudia, 45-year-old White lesbian woman). Kerri, a 38-year-old Asian queer woman, described feeling a certain openness after seeing a flag, saying, “I felt accepted, supported, secure...I did not have to "hide", "lie" or choose to "remain silent" in order to ensure my safety/feel safe.” Similarly, Elliot, a 57-year-old White gay man, added, “Comfort, acceptance, welcoming, and safe. A bit emotional since years

ago it was more living in fear." Beyond fear of harm, participants expressed feelings of belonging and connection when they are safe to be themselves. McKenna, a 39-year-old White lesbian woman, stated:

> I feel connected to the neighborhood, person, business, or area. I feel accepted, like I can be myself and I belong. I feel safe, I think that there are people here who care about me. I feel happy because of all the above.

Subtheme 3: Warmth. Seeing the rainbow flag evoked feelings of warmth amongst participants. Marissa (a 20-year-old Black bisexual woman) noted, "Happiness and relief seeing the flag more normalized," and Matthew (a 55-year-old White gay man) and Haiden (a 29-year-old Black lesbian woman) noted, "I am happy when I see them," and feeling "happiness and love," respectively. Participants' responses also reflected a general sense of gratitude and appreciation when seeing the flag. For example, Liam (a 70-year-old White gay man) said, "I find it heartwarming and encouraging and am inclined to patronize the establishment or send mental good wishes and thanks to the resident." Similarly expressing gratitude, Vienna, a 28-year-old Black bisexual woman, recalled:

> I saw the flag at a concert a few years ago. I thought receiving one was a cute gesture and I still have that flag with me. It's small and made of cloth and came with a smaller one as a sticker.

Kelly (a 45-year-old White lesbian woman) also expressed gratitude on multiple levels, stating rainbow flags are "...appreciated, as a lesbian, as a parent, as a grandparent."

Theme 2: Perceptions of Flag User

The rainbow flag cued perceptions of the signaler as supportive of LGBQ+ rights. These beliefs may occur because participants assumed the signaler to be in the LGBQ+ community themselves. For example, one participant noted that when someone displays a rainbow flag, they think, "Oh they're gay. Support" (Chloe, 33-year-old Black lesbian woman) while another noted that people who use the rainbow flag are "...proud of being gay or lesbian and are

showing support for the lgbtq community" (Matteo, 42-year-old Latino gay man). Similarly, Brian (a 43-year-old White bisexual man), viewed users of rainbow flags as sexual minorities trying to find community, noting, "I think the people who fly LGBTQ flags are looking for support themselves and announcing that they would like to be part of a larger community, hoping that everyone else will want to be part of that community too."

Some participants perceived those using the rainbow flag cue as allies (e.g., supportive cisgender-heterosexual people) without mention of the user's sexuality. Claudia (a 45-year-old White lesbian woman) noted those who use rainbow flags are simply trying to "...promote safety and diversity" while Joey (a 71-year-old White gay man) noted signalers are displaying that they "...don't have any prejudice." Kerri, a 38-year-old Asian queer woman, noted, "...their motivations are only positive. They are open minded people, accepting & respectful, caring plus supportive. They see everyone without stereotyping or judging. They believe in fair treatments & that we are all humans foremost." While Leah (a 23-year-old Latina lesbian woman) noted that people use the rainbow flag, "…to show that everyone is still a human, and should be treated fairly and should be proud of who they are."

Most often, these two perceptions – the signaler as an ally and the signaler as LGBQ+ – were intertwined and not mutually exclusive. Participants noted that signalers are likely "...either LGBQ+ or friendly towards them" (Kristin, 36-year-old multiethnic queer woman) or that they view signalers as "...gay, or at least supportive" (Sunny, 27-year-old White bisexual woman). Sean (a 41-year-old multiethnic queer man) pointed out how one can be both LGBQ+ and an ally toward other sexual minorities, saying, "...that person is, whether ally or fellow queerio [sic], putting themselves out there and making it known they are queer and/or support that equality and visibility." Sean also offered an explanation as to why those displaying the flag are perceived as allies – because they are going out of their way to show support for the community; they have some "personal stake."

Theme 3: Perceptions of Businesses

I identified unique subthemes about businesses using the flag—suggesting that participants have distinct reactions to individuals versus businesses as flag users.

Subtheme 1: Ulterior Motives. Some participants believed that businesses' primary motivation for displaying a rainbow flag was something other than supporting LGBTQ+ rights (e.g., as a marketing tactic). Sara (36-year-old Middle Eastern bisexual woman) stated that using the flag is "...motivated by a desire for profit." Angel (53-year-old Native American bisexual woman) explained the discrepancy between appearances and actual feeling, such that businesses "...try to make [their business] look friendly to everyone. But that doesn't mean that is how they really feel." Interestingly, not all participants perceived ulterior motives as necessarily negative. Kristin said businesses use the flag "To get LGBTQ business. I'm okay with it myself because the business is smart enough to realize they can't alienate a good chunk of the population and risk getting a boycott." This mention of boycott connected to another sentiment involving social pressures on businesses. Olivia (48-year-old White lesbian woman), suggested that businesses only use the flag for "Social acceptance. The cancel culture is real and it is not enough to just be you have to be actively promoting," later noting, "I don't think they are anti LGBTQ+. I just don't think they are doing it for the right reasons. More out of social pressure." Like Kristin, Olivia felt businesses face pressure to appear inclusive, which motivates flag use.

Subtheme 2: Authentic Motives. Some participants thought the main reason businesses use the flag is to show support for LGBQ+ people. Ryan (a 58-year-old White gay man) reported, "I know people like me are welcome, if not encouraged, at such establishments. I much prefer to patronize such places and prefer to spend money there." The sentiment that one is more likely to spend money at businesses that display the flag was repeated from several participants, like from May (a 29-year-old White queer woman):

> [The rainbow flag] can be helpful sign in a business setting assuming that the business truly stands behind it, to know where you're going to feel safe. Typically I'm more likely

> to choose a place that displays a flag if I am in need of something from a business. I am also more likely to ask for help from a stranger if they display a flag.

Here, I recognized a merging of themes– positive affective reactions (e.g., feeling safe; Theme 1), signalers are LGBQ+ allies (Theme 2), and businesses as authentic in their motives (Subtheme 2: Authentic Motives). This informed my understanding of responses to flags as generally positive. Interestingly, participants expressing that they are more likely to spend money at these businesses supports some of the claims in Subtheme 1: Ulterior Motives – that is, use of the flag indeed may be a good business tactic.

Additional Trends & Insights from Research Question 1

I discovered additional trends in the data that, while not amounting to their own theme, added interesting nuance to my interpretation of results. First, there was a small trend of participants expressing neutral reactions to seeing rainbow flag safety cues. For example, one participant reported that the rainbow flag has no effect on them (Ken, 62-year-old gay man), while another stated, “I don’t really have [any] different thought, emotions, or questions when I see a rainbow flag. I recognize it as a symbol, but no big deal to me” (Chris, 63-year-old White gay man). I did not find it necessary to uncover this as a theme, but it does make a compelling case for considering individual difference variables as moderators in the future (see Figure 1).

Secondly, there was a trend of providing caveats when evaluating businesses. For example, Maria, a 24-year-old White queer woman, noted that small businesses have authentic motives, but big businesses have ulterior motives, stating:

> Individuals or smaller businesses are probably more likely to genuinely just want to show their support. Bigger businesses can often feel like it's a cash grab, especially if they have practices that don't align or support politicians who aren't pro-LGBT.

Another participant noted that they perceive businesses displaying the flag as genuine unless it is during Pride month, in which case, it is a “business tactic” (Stef, 19-year-old White

queer woman). While the proposed research is not primarily interested in business, this insight is important for research on customer perception or business implementation of safety cues.

Answering Research Question 1: Are Rainbow Flags Effective Safety Cues for LGBQ+ People?

I concluded that rainbow flags are effective safety cues for LGBQ+ people. Participants expressed that rainbow flags make them feel prideful, safe, and warm (Theme 1), are indicators of who is an ally (Theme 2), and indicate which businesses support LGBQ+ people (Theme 3).

Research Question 2: Environment

I identified six themes that described desirable environments for flags, ranging from broad (everywhere) to specific (medical settings).

Theme 1: Everywhere

Participants expressed they would like to see rainbow flags anywhere and everywhere. Bianca (a 66-year-old White lesbian woman) said they wanted to see rainbow flags “Everywhere you look – stores, businesses, houses of worship – you name it.” Some participants believed this would ensure their safety, as Naomi (a 36-year-old White lesbian woman) who stated they want to see flags, “...everywhere, then I know I won’t be discriminated against.”

Theme 2: Government-Funded Spaces

Whether local (e.g., police cars) or federal (e.g., the White House), public and governmental spaces are places that some participants desired rainbow flags. For example, Ashley (24-year-old White bisexual woman) said: “Maybe in parks? Somewhere where in theory it’s a public space and not ‘endorsed’ or not looking for a sale? Where people can see it and smile and feel safer.” Participants also believed that flags in public spaces would normalize being out as LGBQ+. Mario (26-year-old Black queer man) said, “In political places, and in schools. So that younger members] of the LGBT community know they are welcome and not abnormal.”

Theme 3: Places of Business

Participants expressed a desire to see rainbow flags in businesses for the same reason as government-funded spaces: They saw it as a normalizing and welcoming gesture. Brian, a 43-year-old White bisexual man, said, “I’d like to see rainbow flags at establishments that aren’t typically seen as LGBTQ-friendly, such as sports venues, to help mainstream support for the LGBTQ community.” While Devon, a 70-year-old White gay nonbinary person, said, “Everywhere business is being conducted to show the public the LGBTQ persons are welcome and won’t face discrimination.” Both participants’ responses show a belief that rainbow flags in businesses tells the public that LGBQ+ community members are welcome, normal, and, furthermore, that discrimination is unacceptable. As such, it demonstrates a belief that the rainbow flag can successfully create a safer and more inclusive space (even when such spaces have been historically exclusionary). Participants also wanted to see rainbow flags in businesses to ease their shopping decisions, for example, desiring rainbow flags in the windows of wedding planners so they would know if their business would be accepted before entering.

Theme 4: Personal Property

Participants expressed a desire to see rainbow flags on personal property – such as front yards and on clothes – especially within their own neighborhoods. Liam, a 70-year-old White gay man, noted, “It is nice to see it in a residence, especially in my own neighborhood.” Similarly, Cleo (a 71-year-old White lesbian woman) noted, “When looking for areas to relocate we paid attention to the neighborhoods that had houses with rainbow flag displayed or rainbow decals on their automobiles. We want to live in an area that is accepting of gay couples.” In this response, Cleo provides some external validity to participants’ expressed desire to see rainbow flags on personal property, as these displays indeed appear to work as intended by promoting feelings of belonging and safety for LGBQ+ people.

Theme 5: Religious Spaces

Participants wanted to see rainbow flags in churches specifically because they are threatening spaces. For example, Jerry (a 71-year-old White gay man) said that they would like

to see rainbow flags in “Catholic churches because for too long they have not been gay friendly,” and Shea (a 30-year-old multiethnic queer nonbinary person) said “...in front of churches that support gay people. They should not be where they are not supported.” In both participant responses, they identified churches as unsupportive of gay people, and noted rainbow flags’ potential to signal support to LGBQ+ patrons. Participants also expressed that rainbow flags would signal safety to “out” oneself, as Stef (a 19-year-old White queer woman) who stated, “Any church, especially Christian ones, so I know which are supportive and which to hide my identity in.”

Theme 6: Medical Spaces

Much like religious spaces, medical spaces are historically threatening places which may need to overtly show support to attenuate LGBQ+ people’s threat. For example, May, a 29-year-old White queer woman, stated, “I would also like to see rainbow flags in doctor’s offices especially which is one of the places I’ve seen the most discrimination.” May’s implication that the rainbow flag would be an effective mechanism to reduce threat in medical spaces was supported by another participant who noted, simply, “...when I see the rainbow flag in a hospital I feel safe” (Blair, 25-year-old Latino queer nonbinary person). Beyond basic respect and freedom from discrimination, another participant noted rainbow flags could tell LGBQ+ people which providers “...focus on LGBQ+ specific issues” (Sarah, a 36-year-old Middle Eastern bisexual woman). Because not all medical providers are knowledgeable in LGBQ+ health care (e.g., hormones for transition; lesbian women’s gynecological care), Sarah surmises rainbow flags would make “shopping” for medical care more convenient. That is, one would be able to tell which providers focus on LGBQ+-specific issues by noting the presence (or absence) of rainbow flags in their space.

Additional Trends & Insights from Research Question 2

When asked where they would like to see a rainbow flag safety cue, several participants said “Nowhere.” Whereas one participant did not want to see flags because a distrust of them or

perception of them as unnecessary ("I put rainbow flags into the same category as baby on board window stickers. Not needed" Angel, 53-year-old Native American bisexual woman), other participants did not want to see flags due to anger that there "had" to be safety cues for LGBQ+ people at all. Indeed, these participants expressed frustration that LGBQ+ people were still not fully accepted into communities, and the visibility of flags fueled their resentment of inequality. Elliot (a 57-year-old White gay man) stated, "I would actually prefer not to see them at all. I just hope some day it is not needed and LGBQ+ people are just part of the whole community." While McKenna (a 39-year-old White lesbian woman) stated:

> I don't really want to have to see a rainbow flag, it honestly makes me a bit sad that the flag carries so much importance. I should be able to go anywhere without fear that people will discriminate or hurt me because of my sexual orientation.

Elliot and McKenna's suggested that seeing rainbow flags may be irritating to some LGBQ+ people because it reminds them of the continuous struggle for LGBQ+ acceptance. Not seeing rainbow flags at all may signal that LGBQ+ people are fully embraced and no longer require an outward sign of acceptance.

Answering Research Question 2: In Which Context Would Rainbow Flag Safety Cues Be Desirable?

I concluded that rainbow flags are desired across a variety of spaces: everywhere, normalizing spaces (i.e., government spaces, places of business, and personal property), and threatening spaces (i.e., churches and medical settings). Across themes, participants emphasized that safety cues served an information-gathering purpose for that setting or situation, such as determining where to shop, who to ask for help, or where to receive health care.

Research Question 3: Perceived Authenticity

I developed three themes (assumed authenticity, contextual indicators, personal displays) to assess participants' perceptions of rainbow flag use as authentic.

Theme 1: Assumed Authenticity

Participants expressed a baseline assumption that every rainbow flag is authentic and trustworthy. Tom, a 74-year-old White gay man, stated, “I make the assumption that all displays of the flag are authentic.” Echoing Tom, Chloe (a 33-year-old Black lesbian woman) stated, “I think all flags are authentic.” Interestingly, several participants found it difficult to “…imagine a circumstance wherein the flag would be inauthentic” (Selena, 43-year-old White gay woman). The results within this theme are promising for future experimental manipulations of rainbow flags: There appears to be a general perception of rainbow flag symbols as authentic.

Theme 2: Additional Contextual Indicators

Contrary to assumed authenticity, some participants actively interpret context clues (e.g., other objects, locations, ally-like behavior, insider knowledge) to determine authenticity. Location was a frequently mentioned contextual indicator. Nate (66-year-old White queer man) stated, “It was a gay-owned business and they sold LGBQ items and they flew the flag openly and proudly” to describe an authentic use of the flag. Participants explained that trust in the flag corresponded with seeing it in “LGBTQ+ centers,” “gay neighborhoods,” and known-to-be-LGBTQ+-friendly cities like San Francisco—spaces with other markers of being LGBTQ+-inclusive. For more information, participants also relied on observing ally-like behavior or lack thereof. Anissa (32-year-old White bisexual woman), stated a rainbow flag at a bar’s entrance was not trustworthy because the bartender was “poking fun at the way some of the gay men were talking.” Kerri explained she trusts rainbow flags “where I already know through word of mouth that they are LGBTQ friendly/open.”

Theme 3: Personal Displays

Participants had overwhelmingly positive perceptions of personal displays. Much like the aforementioned desire to have cues displayed on personal property (see Research Question 2), home displays (e.g., lawn signs) were identified as a meaningful personal show of support. Blair, a 25-year-old Latinx queer nonbinary person, stated, “When I see it on people’s lawns it makes me feel like they actually cared enough to show that they support the LGBTQ

community," and Hannah, a 47-year-old White lesbian woman, stated, "A gay flag hanging in a neighborhood made me feel like that it was an accepting home and area to live in." Through Blair and Hannah's responses, I detected an assumption that personal displays are authentic because it reflects action of a supportive person and shows the values of those who live in a particular area. Summarizing the difference between personal and commercial displays, Sean, a 41-year-old multiethnic queer man, said:

> I'm more inclined to feel safer when I see a personal flag as opposed to one for a business... when I see personal support I feel it's more personal...they have some personal stake and accountability. With businesses that may well still be the case but I feel the physical risk is much less.

Answering Research Question 3: How Does One Determine the Authenticity of Rainbow Flag Safety Cues?

In Research Question 3, I sought to determine how a rainbow flag safety cue could be manipulated and presented in an authentic way. I concluded that contextual "boosters" and personal displays play a significant role in communicating the authenticity of cues; however, for many, perceived authenticity simultaneously cooccurs with the mere presence of the cue. These findings lend insight to the notion that cues do not operate in isolation, but instead are met with other cues and sources of information (for more discussion, see Kruk & Matsick, 2021).

Research Question 4: LGBQ+ Threat Cues

I identified three themes of threat (conservative symbols, religious symbols, absence of cues).

Theme 1: Far-Right Conservative Symbols

Participants interpreted signs of conservativism, the Republican party, and right-wing extremism as threatening. Quinn (18-year-old White queer nonbinary person), stated, "When I see signs that are outwardly republican or right-wing in their message, I don't feel very safe," and Rebecca (30-year-old White queer woman) specified, "The Confederate flag, Trump flags,

and All Lives Matter flags are all indications that the person displaying it isn't LGBTQIA friendly. I don't feel safe near those people." Several participants recalled white nationalist symbols (e.g., swastikas, KKK costuming, White power signs, "Proud Boys" slogans) as threatening, reflecting an acknowledged interconnected system of White supremacy and homophobia.

Theme 2: Religious Symbols

Much like conservative symbols, religious symbols were deemed threatening due to the discriminatory nature of organized religion. Participants' sense of threat was often bolstered by personal and historical history. McKenna (a 39-year-old White lesbian woman), stated, "Honestly, I feel threatened by Christian symbols. And mind you I was raised Catholic. And it has been Christians who have discriminated against me, called me names, spit on me, and threatened me." While not all participants mentioned a specific religion or religious symbol, those mentioned tended to be of the Christian, Catholic, or Evangelical faith. This, however, may be due to the demographic composition of the participant pool (primarily White).

Theme 3: Absence of Cues

When asked about threat, some participants described the *absence* of safety cues. That is, one participant mentioned that the mere lack of any explicit LGBQ+ safety cues made them feel threatened, stating, "It's more of the things you don't see" (Joey, 71-year-old White gay man). This is a novel response of particular interest to the task at hand (i.e., operationalization), indicating that one may detect threat depending on what is *missing* from an environment. No visible effort to support LGBTQ+ people or disrupt homophobia might be interpreted as threat such that seemingly neutral settings may not be neutral to LGBTQ+ perceivers.

Answering Research Question 4: What are LGBQ+ Threat Cues?

What cues do participants find threatening to their LGBQ+ identities? I concluded that religious and conservative cues were prominent LGBQ+ threat cues, and it is possible that the lack of safety cues (e.g., no rainbow flags) also serves as a signal of threat.

Discussion

In Study 1, I conducted a qualitative survey to determine how LGBQ+ people perceive rainbow flags. Across six qualitative prompts, participants provided insight into the four research questions posed. Firstly, participants' responses provided evidence that rainbow flags are, indeed, effective sexual orientation-based safety cues. That is, because participants stated rainbow flags induce pride and safety and indicate who supports LGBQ+ people, I conclude that they fulfil the definition of a safety cue (i.e., an aspect of the environment that communicates one will not be discriminated against). Secondly, because LGBQ+ people generally desired rainbow flags in any and every space (both public and private), I determined rainbow flag cues are wanted and, again, effective. Thirdly, I determined that while most LGBQ+ people may automatically assume rainbow flag authenticity – and therefore, trust the message behind said flag – additional contextual indicators and personal displays are also effective ways to boost perceived authenticity of rainbow flag safety cues. Lastly, participants indicated that religious and conservative cues, as well as an absence of safety cues, are threatening. Conclusions drawn from these data serve two purposes: to establish the rainbow flag as an identity safety cue and to inform future research procedures.

Establishing a Sexual Orientation-Based Safety Cue

The overwhelming majority of research on safety cues focuses on gender and race as target identities. Extant safety cue literature involves researching cues to induce safety in (White) women and people of color. In a conceptual review, Kruk and Matsick (2021) created a taxonomy of gender- and race-based safety cues: *Minority Representation, Diversity Philosophies and Programming, Environmental Cues,* and *Identity-Safe Information*. Although sexuality, as an axis of identity, is relatively absent from the literature, some themes in Study 1 mirror Kruk and Matsick's (2021) cue categorizations.

In querying rainbow flags, Study 1 is inherently about environmental cues (i.e., non-human objects in the environment that induce safety and belonging). Through this qualitative research, I found evidence that environmental cues also work for LGBQ+ people. Though this

may seem a simple finding on its surface, sexual orientation-based cues have been relatively neglected from research on environmental cues compared to gender- and race-based cues. Therefore, this study adds evidence to an emerging body of research showing that LGBQ+ people benefit from environmental safety cues. Further, this study explicitly establishes the rainbow flag – arguably the most common sexual orientation-based cue – as an effective environmental cue.

Though targeting environmental cues, Study 1's data also contained cue categorizations of *Minority Representation* and *Identity-Safe Information* (Kruk & Matsick, 2021). The cue of *Minority Representation* refers to marginalized people feeling safe by the presence of other similarly- or otherly-marginalized individuals. Participants in Study 1 mentioned *Minority Representation* in the context of determining if a rainbow flag is authentic: Other gay people, gay owners, and "gay cities" were recognized as indicators that a place was safe. That is, LGBQ+ participants relied on *Minority Representation* to determine if a rainbow flag was a meaningful display of support; If other gay people were around, the flag could be trusted. As one participant said when describing an instance of an authentic flag: "Key West. Big gay city. You know it's real" (Carolyn, a 57-year-old White lesbian woman). The cue category of *Identity-Safe Information* refers to participants deriving safety and belonging from information that is relevant to their identities. Within the theme of *Additional Contextual Indicators*, participants mentioned identity-safe information guiding their decision on determining a flag's authenticity. For example, participants mentioned word-of-mouth knowledge of a business having gay owners and a business being gay-friendly (or not). This information acted as an additional safety cue – a booster – to the environmental cue of the rainbow flag. It is interesting that in a study of LGBQ+ environmental cues, I detected other previously established types of cues, suggesting that cues may overlap and work simultaneously.

Informing Future Research

Informed by Study 1's results, I determined my context, operationalization, and conditions for future studies. I decided to examine medical spaces (context) with personal displays of rainbow flag safety cues (operationalization) or no display (threat).

Context

Medical spaces offer an excellent opportunity for intervention and the testing of identity safety cues: Not only were they named as threatening spaces in need of rainbow flag safety cues within Study 1, but a rich body of literature establishes medical settings as a threatening context for LGBQ+ people (Fingerhut & Abdou, 2017). If rainbow flag safety cues are effective at inducing belonging and safety for LGBQ+ people within medical spaces, they can perhaps increase LGBQ+ people's willingness to go to medical appointments, their engagement in medical appointments, and their trust of health providers. An intervention that implements safety cues could thus help to alleviate health disparities that exist along sexuality lines.

Operationalization and Conditions

The themes of *Personal Displays* and *Personal Property* together communicated that *individuals'* displays of safety cues are particularly meaningful. Participants identified personal displays of safety cues (e.g., a sign on one's front lawn) as authentic and sincere, and desired to see more personal displays in their daily lives. As presented in the theme *Signaler is an Ally*, participants may view these displays as especially meaningful because they identify which individuals are supportive of their rights (e.g., internal motivations for displaying a cue) and are less concerned about ulterior motives (e.g., external motivations, as in the case of businesses).

To ensure perceived authenticity and meaningfulness, I will display the rainbow flag as an identity safety cue on a sticker on a doctor's nametag. This operationalization also offers external validity, as many doctors and nurses already voluntarily display the rainbow flag on their nametags and lanyards. For example, the University of Massachusetts Medical School, among others, encourages medical staff and students to add a rainbow sticker to their name

badges as “a nice way, for those of us who like stickers, to have a symbol of inclusion.” For more information, see: https://www.umassmed.edu/dio/initiatives/umass-lgbtq/rainbowstickers/.

Religious symbols, far-right symbols, and absence of cues were identified as threat cues. Religious and far-right symbols, while appropriately threatening, are less common to find in a medical space. For example, outside of a religious-affiliated hospital, it may be unprofessional and uncommon to see a doctor display a religious symbol (e.g., crucifix) or far-right symbol (e.g., MAGA sticker). However, across responses, I detected a baseline assumption that unless a space is specifically marked as LGBQ+-friendly (via flag or otherwise, like word-of-mouth) participants expressed a general assumption that it is, or has the potential to be, homophobic. Evidence for this claim is the theme of flags wanting to be seen everywhere *so that LGBQ+ people know they’re welcome everywhere* and that an absence of cues is an indication of the possibility of threat. For example, Karen, a 50-year-old bisexual White woman, stated she would like to see rainbow flags in the window of wedding shops so that she knows her business is welcome. The unstated assumption is that wedding shops are likely homophobic unless explicitly gay-friendly (e.g., they have a rainbow flag displayed). Likewise, Mike, a 69-year-old White gay man, desired rainbow flags at restaurants and accommodations *especially while on vacation* (emphasis my own), demonstrating a baseline distrust of unfamiliar places. In other words, LGBQ+ participants expressed general distrust of spaces until proven otherwise. An absence of cues as the threat cue is, therefore, the most externally valid; A doctor with no outward display of LGBQ+ support on their nametag is commonplace, and, coupled with Study 1 results, potentially threatening given medical settings in and of themselves are threatening spaces for LGBQ+ individuals.

Limitations

Study 1 has several important limitations. While participant responses indicate that rainbow flag safety cues indeed induce safety in LGBQ+ people, they do not indicate *why* this is; the mechanism by which rainbow flags induce safety is unknown. Study 2 will address this

limitation by testing internal and external motivation to avoid prejudice as a mediator. Themes in Study 1 allude to internal and external motivation to avoid prejudice as being particularly important to the perception of safety cues. For example, some participants did not trust businesses that use rainbow flags because they viewed it as motivated by profit (i.e., externally motivated), while others viewed rainbow flags on lawn signs as especially genuine due to it being a personal display (i.e., internally motivated). Themes of *Personal Displays* and *Personal Property* suggest LGBTQ+ people view anyone with a personal cue display (e.g., a lawn sign) as internally motivated, and I aim to confirm this empirically in Study 2. Thus, I will use variables derived from participant responses to test a potential mechanism by which rainbow flags induce safety.

Additionally, because Study 1 was a qualitative survey and not an experiment, there is a lack of casual evidence to participant claims. For example, participants expressed rainbow flag safety cues *cause* them to feel safe, that personal displays of rainbow flags are especially influential, and that medical spaces are especially threatening. Study 2 addresses this lack of experimental causal evidence (e.g., the flag *caused* safety) through its quantitative experimental design. Finally, Study 2's experimental design will allow for a larger sample size than Study 1's qualitative approach, allowing for a wider net of LGBQ+ participant responses.

The original design for this study (planned in March 2020) consisted of multiple in-person focus groups; however, the onset of the COVID-19 pandemic eliminated the possibility to conduct in-person research and I switched the data collection format to an online survey. This design presented some limitations that other methods may not have had. Online focus groups may have been an effective method for this study given their strengths: They provide participants with interactive discussion, producing in-depth results (Morgan, 1996); they give voice to marginalized groups typically ignored in research (Morgan, 1996); they are closer to lived experience and less artificial than experiments (Wilkinson, 1999); and they treat participants as humans (Wilkinson, 1999). Individual interviews also would have been effective

given they lead to more ideas than focus groups (Morgan, 1996) and show the specifics of how individuals speak about a topic (Morgan, 1996). Using either of these methods may have resulted in more specific data; for example, why rainbow flags signal safety to participants (which I inferred from themes derived from the data) or how rainbow flags impact participants' emotions (e.g., if I studied their non-verbal cues). However, these methods come with weaknesses, such as online focus groups' lack of anonymity and tendency to polarize participants' viewpoints (Morgan, 1996; Sussman et al., 1991) or individual interviews' lack of discussion, lack of anonymity, and intimate nature (limiting discussion of sensitive topics).

I ultimately chose an online survey because of the strengths it offered: It was an efficient way to collect data from a large number of LGBQ+ people, participants could share sensitive information anonymously, participants could complete it in their own time, and it did not require finding a shared time for multiple people in the uncertain early months of the pandemic. Online surveys also allow for a breadth of data compared to focus groups (Morgan, 1996) and are effective at capturing a wide array of perspectives on sensitive topics (Braun et al., 2020).

Conclusion

In this study, I employed a qualitative design to determine if the rainbow flag is an effective environmental safety cue for LGBQ+ people. Using thematic analysis, I found that the rainbow flag is effective, that rainbow flags are desired in a variety of environments, but especially in threatening spaces (e.g., religious spaces, medical spaces), that cue authenticity is determined through context, personal displays, or assumption, and that threat cues range from conservative symbols, religious symbols, to an absence of cues. This study greatly informs the study of sexuality-based safety cues, demonstrating that sexual minorities benefit from environmental cues much like racial and gender minorities. In Study 2, I use this qualitative evidence to create an online immersive storyboard that quantitatively tests the rainbow flag safety cue.

Chapter 3: Experimentally Testing Responses to the Presence or Absence of a Safety Cue (Study 2)

I conducted an online experiment in Study 2. I tested the effects of an environmental cue (i.e., rainbow flag) in a historically-threatening space for LGBQ+ participants – a medical office. In Study 2, I ask: Does a rainbow flag operate as a safety cue for LGBQ+ people in medical settings? I hypothesized:

Hypothesis 1 (H1): Participants will have higher trust, belonging, perceived inclusivity, and comfort when a safety cue is present.

Hypothesis 2 (H2): Participants will have lower fear and identity threat when a safety cue is present.

Hypothesis 3 (H3): Internal motivation to avoid prejudice will mediate the relationship between safety cue (cue vs. no cue) and dependent variables, such that higher trust, belonging, perceived inclusivity, and comfort and lower fear and identity threat will be explained by the perception of the doctor as *high* in internal motivation to avoid prejudice.

Hypothesis 4 (H4): External motivation to avoid prejudice will mediate the relationship between safety cue (cue vs. no cue) and dependent variables, such that higher trust, belonging, perceived inclusivity, and comfort and lower fear and identity threat will be explained by the perception of the doctor as *low* in external motivation to avoid prejudice.

Method

Participants

An a priori power analysis in G*Power (Faul et al., 2009) recommended 210 participants to detect a medium sized effect (f=.25) with 95% power. I recruited from Qualtrics paneling, which identifies eligible participants by using a demographic screener and excludes participants who do not fit criteria or who generate low quality data (e.g., complete the survey in under 2 minutes; provide gibberish responses). I recruited lesbian, gay, bisexual, and queer (LGBQ+) people, requesting roughly equal numbers of women and men (though not excluding non-binary

people). All participants were at least 18 years of age and lived in the United States. The initial sample included 251 participants. After data cleaning, the final sample included 231 participants consisting of 112 women, 108 men, and 11 nonbinary people (eight participants were removed for indicating they provided joking or not-serious responses and 12 participants were removed for indicating they took the survey more than one time). All participants were LGBQ+-identified. See Table 1 for full demographic information.

Design and Procedure

Participants provided informed consent and then answered essential demographic questions in a survey screener (i.e., sexual orientation, age). If eligible to participate, participants proceeded with the survey and were randomly assigned to experience one of two conditions presented through immersive storyboards: a safety cue (i.e., rainbow flag) or no safety cue. Following their engagement with the immersive storyboard, participants answered measures of identity safety, perceptions of the doctor, and an open-ended question asking if they would recommend this medical doctor. At the end of the survey, participants completed data-quality checks (i.e., a reading comprehension quiz), provided demographic information (e.g., education level, race/ethnicity, income level), and were debriefed.

Materials and Measures

Study 2 used immersive storyboard materials and measures that include identity safety outcomes and perceptions of the doctor.

Immersive Storyboard

Participants engaged with one of two immersive storyboards describing a medical doctor's office. Immersive storyboards are a type of experimental vignette methodology (EVM) which allows the researcher to present participants with realistic, immersive experiences while holding constant features of the virtual environment (Aguinis & Bradley, 2014). Participants virtually walked through a doctor's appointment through descriptions and photos to increase participant engagement and immersion in the study's task. Through EVM methodology, I can

manipulate the independent variables while maintaining realism, thus increasing both internal and external validity (Aguinis & Bradley, 2014).

In all immersive storyboards, participants experienced a routine medical doctor's appointment. Participants were first asked to imagine they are entering a doctor's office for an examination and shown a standard image of a doctor's office. Next, participants were told to imagine they are given a demographic form to complete (e.g., age, sexual orientation) and they were shown a photo of a doctor holding a clipboard. The storyboard then introduced the doctor (Dr. Snider) and showed an image of the doctor's name badge; This scene is manipulated such that the doctor's name badge displays or does not display a safety cue (i.e., rainbow flag present in the Safety Cue Present condition or no rainbow flag in the Safety Cue Absent condition). Following this scene, the participant was walked through the physical portion of the exam (i.e., blood pressure and questions of medical concerns) accompanied with a photo of a blood pressure cuff. Dr. Snider then viewed the patient's forms. The storyboard then lead participants out of the examination room and medical office. See Appendix for the storyboards.

Identity Safety Outcomes

Trust in Physician. Participants responded on a 5-point scale (1 = *Strongly Disagree*, 5 = *Strongly Agree*) to one original item measuring trust in the doctor. The item read, "I would trust this doctor." Higher scores indicated greater trust in the doctor (M = 3.84; SD = 0.90)

Fear of Physician. Participants responded on a 4-point scale (1 = *Not at All*, 4 = *Very Much So*) to five items measuring fear of the physician (or doctor; *Fear of Physician Scale*; Richmond et al., 1998). Example items included "When communicating with my physician, I feel tense" and "When communicating with my physician, I feel jittery." Consistent with use of the original scale, two items were reverse scored (e.g., "When communicating with my physician, I feel calm"). I averaged the items to create scores (α = .83), such that higher scores indicated greater fear of the doctor (M = 1.94, SD = 0.72).

Belonging. Participants responded on a 5-point scale (1 = *Strongly Disagree*, 5 = *Strongly Agree*) to eight items measuring their anticipated belonging as a patient at the doctor's office. As used in previous studies (e.g., Pietri et al., 2018), three items derived from Walton and Cohen's (2007) measure of belonging (e.g., "I would belong at this doctor's office") and five items derived from Good et al.'s (2012) measure of belonging (e.g., "I would feel respected at this doctor's office"). Consistent with use of the original scales, two items were reverse scored (e.g., "I would feel excluded at this doctor's office"). As the original scales are about workplaces, I made minor adjustments to fit the context of a doctor's office (e.g., "...this company" to "...this doctor's office"). I averaged items to create scores (α = .86), such that higher scores indicated greater belonging as a patient in the doctor's office (*M* = 3.61, *SD* = 0.70).

Identity Safety Concerns. Participants responded on a 7-point scale (1 = *Never*, 7 = *Always*) to four items measuring their anticipated concern about being stereotyped as a sexual minority at the doctor's office (Hall et al., 2018). I made minor adjustments to the items' wording to refer to sexual orientation (rather than gender identity, as in the original scale). Example items included "How often do you think people might judge you because of what they think of your sexual orientation?" and "How often do you think people would think about your sexual orientation when judging you?" I averaged the items to create scores (α = .92), such that higher scores indicated greater concern about being stereotyped (*M* = 2.57, *SD* = 1.44).

Comfort. Participants responded on a 5-point scale (1 = *Strongly Disagree*, 5 = *Strongly Agree*) to three items measuring their comfort with the doctor (Broussard et al., 2018; Matsick, Kruk, et al., 2022). Items included: "I would feel that this doctor's office was welcoming to LGBTQ patients," "I would feel comfortable at this doctor's office," and "I would feel that people understand me at this doctor's office." I averaged the items to create scores (α = .90), such that higher scores indicated more comfort with the doctor's office (*M* = 3.90, *SD* = 0.95).

Perceived Inclusivity. Participants responded on a 101-point sliding scale (0 = *Not At All True,* 100 = *Very True*) to one question asking the extent to which they believe the doctor

tries to create an inclusive environment (Howansky et al., 2021). Higher scores indicated a greater belief that the doctor tries to create an inclusive environment (*M* = 70.93, *SD* = 25.44).

Perceived Internal Motivation to Avoid Prejudice. Participants responded on a 7-point scale (0 = *Completely Disagree*, 6 = *Completely Agree*) to five items measuring their perception of the doctor as being internally motivated to avoid prejudice (*Perceived Motives to Avoid Prejudice Scale*; Major et al., 2013). The original reliabilities for this scale ranged from .63 to .88. Example items included, "It is personally important to [this doctor] not to be prejudiced," and "It is important to [this doctor's] self-concept to be unprejudiced." Consistent with the use of the original scale, no items were reverse scored. I averaged the items to create scores (α = .85), such that higher scores indicated greater perception of the doctor as internally motivated to avoid prejudice (*M* = 4.36; *SD* = 1.06).

Perceived External Motivation to Avoid Prejudice. Participants responded on a 7-point scale (0 = *Completely Disagree*, 6 = *Completely Agree*) to five items measuring their perception of the doctor as being externally motivated to avoid prejudice (*Perceived Motives to Avoid Prejudice Scale*; Major et al., 2013). The original reliabilities for this scale ranged from .76 to .85. Example items included, "[This doctor] wants to avoid negative reactions from others" and "[This doctor] feels pressure from others to act nonprejudiced." Consistent with the use of the original scale, no items were reverse scored. I averaged the items to create scores (α = .78), such that higher scores indicated greater perception of the doctor as externally motivated to avoid prejudice (*M* = 3.26; *SD* = 1.26).

General Threat. Participants responded on a 7-point scale (1 = *Very negative*, 7 = *Very positive*) to one item asking, "Generally speaking, how do you psychologically feel when having to visit the doctor?" (*M* = 4.49, *SD* = 1.62).

Recommendation Form. Participants provided qualitative responses through the open-ended question "Would you recommend this physician to others? Why?"

Perceptions of Doctor's Identity. Participants answered demographic questions about the doctor, including items asking what they perceived the doctor's gender, race, and sexuality to be.

Results

I conducted a series of independent samples T-tests to analyze the influence of a safety cue on identity safety and perceptions of the provider. I present results in order of hypotheses. Following, I present additional qualitative and quantitative insights concerning perception of the doctor. See Table 3 for means and standard errors.

Hypothesis 1. Hypothesis 1 stated that participants will have higher trust, belonging, perceived inclusivity, and comfort when a safety cue is present. Because Hypothesis 1 specified the direction of the relationship (i.e., the safety cue condition would lead to a greater value of the dependent variable) all T-tests are one-sided.

Trust. There was no significant difference in trust between the safety cue present condition (M = 3.89, SE = .08) and safety cue absent condition (M = 3.80, SE = .08), $t(229) = -0.77$, p = .22, d = -.10 .

Belonging. There was a significant difference in belonging between the safety cue present condition (M = 3.71, SE = .06) and safety cue absent condition (M = 3.53, SE = .07), such that the presence of a rainbow flag safety cue led to more LGBQ+ participant belonging, $t(229) = -1.93$, p = .03, d = -.25.

Perceived Inclusivity. There was no significant difference in perceived inclusivity of the doctor between the safety cue present condition (M = 72.73, SE = 2.35) and safety cue absent condition (M = 69.26, SE = 2.38), $t(229) = -1.04$, p = .15, d = -.14.

Comfort. There was a significant difference in comfort between the safety cue present condition (M = 4.02, SE = .09) and safety cue absent condition (M = 3.79, SE = .09), such that the presence of a rainbow flag safety cue led to more LGBQ+ participant comfort, $t(229) = -1.80$, p = .04, d = -.24.

In sum, two predictions of Hypothesis 1 were supported. There was no significant difference in LGBQ+ participants' trust of the doctor or perception of the doctor's intent to create an inclusive environment based upon the presence of a rainbow flag safety cue. However, LGBQ+ participants' belonging and comfort was higher when a rainbow flag safety cue was present.

Hypothesis 2. Hypothesis 2 stated that participants will have lower fear of physician and identity threat when a safety cue is present.

Fear of Physician. There was a significant difference in fear between the safety cue present condition (M = 1.84, SE = .07) and the safety cue absent condition (M = 2.03; SE = .07), such that participants in the safety cue present condition reported less fear of the physician, $t(229) = 1.94$, $p = .03$, $d = .26$.

Identity Threat. There was no significant difference in identity threat between the safety cue present condition (M = 2.45, SE = .15) and the safety cue absent condition (M = 2.67; SE = .12), $t(229) = 1.17$, $p = .12$, $d = .15$.

In sum, one prediction of Hypothesis 2 was supported. The presence of a rainbow flag safety cue on a medical doctor's nametag did not decrease LGBQ+ participants' identity threat; however, participants in the safety cue condition experienced lower fear of the doctor.

Hypothesis 3. Hypotheses 3 proposed internal motivation to avoid prejudice would serve as a mediator in the relationship between safety cue (cue vs. no cue) and the dependent variables of trust, belonging, perceived inclusivity, comfort, fear, and identity threat. I only performed mediation analyses upon variables found to differ between conditions (i.e., fear of physician, belonging, and comfort) and not those that did not differ between conditions (i.e., trust, inclusivity, and identity threat).

I conducted mediational analyses to explore the indirect effect of safety cue on fear of physician, belonging, and comfort through participants' perception of the doctor's internal motivation to avoid prejudice. I used bootstrapped mediation analysis with the PROCESS macro (Hayes, 2017; Model 4) and re-sampled 5,000 times for bootstrapping estimates; the distribution

of the effects was used to obtain 95% confidence intervals for the size of the indirect effect of internal motivation to avoid prejudice. I interpreted significance of indirect effects based on whether or not obtained confidence intervals excluded 0. The indirect effect of safety cue use (0 = safety cue absent, 1 = safety cue present) through internal motivation to avoid prejudice was significant on fear of physician ($b_{indirect}$ = -.06, *SE* = .03, 95% CI [-.12, -.01]), belonging ($b_{indirect}$ = .08, *SE* = .04, 95% CI [.01, .15]), and comfort [$b_{indirect}$ = .12, *SE* = .06, 95% CI [.02, .14]). As shown in Figure 3, those who were exposed to a rainbow flag safety cue perceived the doctor as being more internally motivated to avoid prejudice, which accounted for greater belonging, greater comfort, and less fear of the physician. Importantly, no bidirectionality was found in any of the models when the variables were reversed, strengthening my interpretation that internal motivation is driving the effect (Fear: $b_{indirect}$ = .07, *SE* = .04, 95% CI [-0.00, 0.17]; Belonging: $b_{indirect}$ = .10, *SE* = .06, 95% CI [-0.00, 0.22]; Comfort: $b_{indirect}$ = .11, *SE* = .06, 95% CI [-0.01, 0.24]).

In sum, Hypothesis 3 was partially supported. While mediational analyses were not performed upon variables that did not differ by condition (i.e., trust, inclusivity, and identity threat), internal motivation to avoid prejudice indeed served as a mediator between safety cue usage and fear of physician, belonging, and comfort.

Hypothesis 4. Hypotheses 4 proposed external motivation to avoid prejudice would serve as a mediators in the relationship between safety cue (cue vs. no cue) and the dependent variables of trust, belonging, perceived inclusivity, comfort, fear, and identity threat. As in Hypothesis 3, I only performed mediation analyses upon variables found to differ between conditions (i.e., fear of physician, belonging, and comfort).

I again conducted mediational analyses to explore the indirect effect of safety cue on fear of physician, belonging, and comfort through participants' perception of the doctor's external motivation to avoid prejudice. I used bootstrapped mediation analysis with the PROCESS macro (Hayes, 2017; Model 4) and re-sampled 5,000 times for bootstrapping estimates. The indirect

effect of safety cue use (0 = safety cue absent, 1 = safety cue present) through external motivation to avoid prejudice was non-significant on fear of physician ($b_{indirect}$ = .00, *SE* = .01, 95% CI [-.01, .03]), belonging ($b_{indirect}$ = -.00, *SE* = .01, 95% CI [-.03, .01]), and comfort [$b_{indirect}$ = .00, *SE* = .01, 95% CI [-.03, .02]).

In sum, Hypothesis 4 was not supported. External motivation did not mediate the relationship between safety cue usage and fear, belonging, or comfort.

Additional Quantitative and Qualitative Insights

At the end of the survey, participants provided both qualitative and quantitative perceptions of the doctor's identity. Though the doctor's photo purposely gave no indication of their gender or race, 81% of participants believed the doctor to be a man, 15% believed the doctor to be a woman, and the remainder of participants indicated they either were not thinking of gender, gender did not matter to them, or they could not answer because the doctor's gender was not provided. Regarding race, 64% of participants believed the doctor to be White, 10% believed the doctor to be multiethnic in some way, 8% believed the doctor to be Black, and the remainder of participants indicated they were not thinking of race, that race did not matter, that race was not mentioned, or that they could not tell (similar to the answers regarding the doctor's gender).

While the doctor's sexuality was not *explicitly* mentioned (similar to gender and race), the rainbow flag sticker served as an implicit signal of sexuality to some participants. When looking all participants, the majority (*n* = 134) believed the doctor to be heterosexual. There was a significant association between cue condition and perceived sexual orientation of the doctor, however, $\chi^2(3) = 45.41$, $p < .001$. Separating participants by condition revealed that 89 participants in the no rainbow condition thought the doctor was heterosexual compared to only 45 participants in the rainbow condition. A similar pattern emerged for perceptions of the doctor as lesbian or gay: 5 of those in the no rainbow condition thought the doctor was lesbian or gay compared to 43 of those in the rainbow condition. Thus, the rainbow flag sticker led more

participants to believe the doctor was lesbian or gay compared to the absence of a sticker. Interestingly, the perception of the doctor as bisexual did not change between the conditions: 14 people in the rainbow condition believed the doctor to be bisexual and 13 people in the no rainbow condition believed the doctor to be bisexual. It is possible that participants' felt safety was influenced by their perception of the doctor's sexuality (e.g., LGBQ+ participants felt safer if they thought the doctor was queer). While my sample size does not allow for this analysis, future research can address how assumptions about a doctor's identity influences LGBQ+ patients' identity safety. Or, in future analyses with this dataset, I can explore how assumptions about the doctor's identities contribute to people's experiences of safety.

Participants were lastly provided an open-ended textbox to answer if they would recommend this doctor to others. Given the large amount of data, qualitative responses were quantitatively coded with a simple scheme of 1 = *yes*, 2 = *no*, and 3 = *unsure* to assess participants' baseline recommendations (participants who did not answer were coded as 4). This coding scheme allows for a quantification of data to be paired with having additional context in participants' written responses. There was no significant association between condition and if participants would recommend this doctor to others, χ^2 (3) = 2.76, p = .43. However, the majority of participants who answered (n = 119) indicated they *would* recommend this doctor to others. This did not appear to differ between conditions (n = 58 participants in the no rainbow and n = 61 participants in the rainbow condition said they would recommend the doctor). Some reasoning for recommending the doctor was shared across conditions: The doctor seems kind, nice, and friendly; the doctor seems professional; and the doctor seems inclusive to LGBQ+ identities. Those in the no rainbow condition recommended the doctor because they did *not* treat the participant differently because of their sexual orientation. As one participant wrote, there was "no evidence the doctor was biased." While those in the rainbow condition shared the sentiment that the doctor was not biased, the rainbow flag gave them more concrete evidence. Participants in the rainbow condition wrote the doctor is "gay friendly,"

welcoming and non-threatening, not judgmental, and supportive. As one participant said, “The subtle gesture with the rainbow flag is enough to show support but not push an agenda or be an ideologue.”

However, 24 participants would not recommend the doctor to others; of these, 16 participants were in the no rainbow condition while 8 were in the rainbow condition. Regardless of condition, participants mentioned the doctor not getting to know the patient (e.g., not asking personal questions) or not being friendly. In the rainbow condition, one participant mentioned the rainbow sticker felt like “pandering;” in the no rainbow condition, one participant would not recommend the doctor because they did not ask LGBQ+-specific heath questions. Forty-four participants were unsure if they would recommend the doctor, and this was similar across conditions (*n* = 24 in the no rainbow condition; *n* = 20 in the rainbow condition).

Discussion

My hypotheses were partly confirmed. The results demonstrated that LGBQ+ participants exposed to a rainbow flag safety cue experienced greater belonging, greater comfort (partially confirming Hypothesis 1) and lower fear of the doctor (partially confirming Hypothesis 2) than those not exposed to a rainbow flag safety cue. However, participants’ trust in the doctor, perceived inclusivity of the doctor (Hypothesis 1), and identity threat (Hypothesis 2) were unaffected by the safety cue. Internal motivation to avoid prejudice explained the relationship between safety cue usage and fear of the physician, belonging, and comfort (confirming Hypothesis 3). However, external motivation to avoid prejudice did not emerge as a mediator (Hypothesis 4).

Explaining Non Significant Results

While Hypotheses 1 and 2 were partially confirmed (safety cue usage led to more belonging and comfort and less fear), safety cue usage did not affect participants’ trust, inclusivity, or identity threat. This is possibly due to a lack of baseline threat in the experiment, given the doctor’s limited interaction with the participant. There may not have been enough threatening

information to *not* trust this doctor, believe this doctor is *not* being inclusive, or feel threatened on the basis of one's sexual orientation. Another explanation is that the online nature of this experiment reduced threat; participants may experience heightened threat in field studies of medical offices. The single environmental cue (or lack thereof), in this case, was not salient enough to trigger changes on these safety variables.

Additionally, identity threat, as currently measured, may be a weak variable because of the nature of its translation. The identity threat scale (Hall et al., 2018) was created to measure threat resulting from *unconcealable* identities (i.e., race, gender). Because sexual orientation as an identity is potentially concealable (that is, it can be hidden), its threat may not be captured by this measure. Indeed, the mean of identity threat was very low (M = 2.45 on a seven-point scale where greater scores indicate higher identity threat), demonstrating a possible floor effect. Thus, in Study 3, I measure sexual orientation identity threat with a new measure, tailored specifically to sexual orientation in medical settings (Kroeper et al., in prep).

Furthermore, the variables affected by safety cue usage (belonging, comfort, and fear) differed in important ways from the ones that were not affected (trust, inclusivity, and identity threat). Variables affected by safety cue usage were largely generalized about the self, unspecific to sexual orientation (e.g., "I like this doctor"). Variables unaffected by safety cue usage, however, were largely about others' behavior (e.g., if they create inclusive environments) and specific to sexuality-related threat. From this, I conclude that the safety cue without any additional information – such as the doctor's affirming or threatening behavior towards a patient's identity – seems to improve generalized emotions (e.g., tension, calmness, comfort) but not impact more specific and identity-focused emotions (e.g., worrying about sexuality-related discrimination).

Translation into Real-World Medical Settings

Though the safety cue did not impact all variables hypothesized, participants' greater belonging, greater comfort, and lessened fear is an important and novel finding. Patient comfort

– including psychological comfort – is essential to improving patients' health. In the nursing literature, Comfort Theory states that enhancing a patient's comfort empowers them to "engage in behaviors that move them toward a state of well-being" (Wilson & Kolcaba, 2004; p. 165). Indeed, a lack of comfort with a medical provider can lead to reluctance to engage in difficult conversations with a provider (Goins & Pye, 2013). This may be especially consequential for LGBQ+ patients, who often have to engage in difficult disclosure conversations and report a fear of being vulnerable with their provider (Malik et al., 2009). Good communication with a doctor – aided by more comfort and less fear – is furthermore associated with more disclosure of medical information, more adherence to doctor advice, and more compliance with treatment (Ha & Longnecker, 2010; Kerse et al., 2004). Overall, the rainbow flag sticker represents a small, easily-implemented, and cost-efficient intervention that many doctors can take to improve belonging and comfort, reduce fear, improve the vital doctor-patient relationship.

The findings around internal and external motivation to avoid prejudice also hold important implications in real-world medical settings. Participants viewed the doctor wearing the rainbow flag as higher in internal motivation to avoid prejudice than the doctor with no flag, but viewed no difference in external motivation to avoid prejudice between the two doctors. In other words, participants perceived the doctor with the rainbow flag sticker as wearing it because *the doctor* wanted to and did not perceive the doctor as being pressured by outside sources (i.e., external motivation). That the rainbow flag sticker was not seen as *performative* (i.e., without action for marginalized groups or to appease outside sources) demonstrates efficacy of safety cues in real-world settings, as LGBQ+ people in this sample did not have a distrustful view of a doctor's personal safety cue. Rather, the safety cue signaled the doctor was internally motived to avoid LGBQ+ prejudice, and this explained why the cue improved participant belonging, safety, and reduced fear. It is thus important that doctors using safety cues are perceived by

LGBQ+ patients as internally motived to use the cue. In Study 3, I introduce another variable – doctor behavior – that may impact perceptions of the cue as internally or externally motivated.

Limitations

The largest limitation of Study 2 are the measurements used for social identity threat and trust. The translation of the social identity threat items were not easily understandable in a medical setting, and this may have contributed to the null finding between conditions (e.g., "How often would you worry about other people of your sexual orientation acting in ways that confirm sexual orientation stereotypes?"). Study 3 introduces a new scale (*The Social Identity Threat Concerns Scale*; Kroeper et al., in prep) that allows me to manipulate both the setting and stigmatized identity in question. Further, it has been validated as a tool for measuring social identity threat in sexual minority individuals. I measured trust with a single item, which may have limited its ability to be impacted by the experimental conditions because the single item could be capturing too much breadth or noise in participants' definitions of "trust." However, due to the limited interaction with the doctor in the experimental design, it is also possible that participants may not have been given enough information about the doctor for their trust to be impacted.

The second limitation of this study was the brief interaction between participants and the doctor. Many noted they could not judge the doctor because of the limited information. This limited information may have impacted participants' ability to judge the doctor on other variables (e.g., perceived inclusion) as well. Study 3 thus includes a longer interaction between the doctor and the participant, including the doctor acting in an affirming or threatening way while receiving and confirming intake information with a patient. This design will inform how safety cues interact with other situational information, increasing the study's external validity.

Conclusion

In Study 2, I asked if the rainbow flag operates as an effective safety cue for LGBQ+ people in medical settings. Through an online immersive storyboard study, I found that a rainbow flag on a doctor's nametag leads to more belonging, more comfort, and less fear in

LGBQ+ participants. This study provided initial evidence that Environmental Cues – one of the four types of gender- and race-based cues organized by Kruk and Matsick (2021) – are effective for LGBQ+ people. Overall, constructing and testing safety cue interventions may be an important tool in improving healthcare experiences of LGBQ+ people.

Chapter 4: Examining Safety Cues with Cue Users' Behaviors (Study 3)

Study 3 was a replication and extension of Study 2. Given the novelty of the results in Study 2, I aimed to replicate the finding that safety cues (i.e., a rainbow flag) can lead to a higher sense of safety in a threatening space (i.e., a doctor's office) due to perceiving the doctor as internally motivated to avoid prejudice. Beyond replication, Study 3 introduced a new variable –the doctor's behavior toward the patient – to provide evidence that safety cues interact with situational information. In Study 3, I asked: How does a doctor's affirming or threatening behavior toward an LGBQ+ patient impact the efficacy of safety cues?

Study 3 was a 2 (safety cue: present or absent) x 2 (behavior: affirming or threatening) experimental design. The setting will remain a doctor's office. I hypothesized the following:

Hypothesis 1 (H1): Main effect of cue, such that participants will have higher trust, belonging, perceived inclusivity, and comfort and lower fear and identity threat when a safety cue is present.

Hypothesis 2 (H2): Main effect of behavior, such that participants will have higher trust, belonging, perceived inclusivity, and comfort and lower fear and identity threat when behavior is affirming.

Hypothesis 3 (H3): An interaction between cue and behavior, such that the cue results in more positive psychological outcomes (i.e., higher trust, belonging, inclusivity, comfort; lower fear, identity threat) except when it is coupled with threatening behavior.

Hypothesis 4 (H4): The extent to which the signaler of the cue is perceived to be internally motivated to avoid prejudice will mediate the relationship between cue and outcome (i.e., trust, belonging, inclusivity, comfort, fear, identity threat), but only when behavior is affirming (i.e., moderated mediation).

Hypothesis 5 (H5): The extent to which the signaler of the cue is perceived to be externally motivated to avoid prejudice will mediate the relationship between cue and

outcome (i.e., trust, belonging, inclusivity, comfort, fear, identity threat), but only when behavior is affirming (i.e., moderated mediation).

Method

Participants

An a priori analysis in G*Power (Faul et al., 2009) recommended 210 participants for this 2 x 2 design (power analysis for moderated mediation – Hypotheses 4 and 5 – is unnecessary given the bootstrap technique used by PROCESS). I recruited from Prolific, which identifies eligible participants by using a demographic screener and excludes participants who do not fit criteria. Because I moved to a new recruitment platform, I chose to overrecruit by 40% to account for any low-quality data or non-eligible participants. In total, I recruited 300 LGBQ+ participants of any gender. All participants were at least 18 years of age and lived in the United States. Due to Prolific error, 13 participants were paid without completing the survey, making the initial sample 287 participants. Fifty-three participants were removed for not identifying as LGBQ+ (e.g., 13 people identified as asexual). After data cleaning, the final sample included 234 participants consisting of 99 women, 101 men, 30 nonbinary people, 3 genderqueer/fluid people, and 1 genderless person. All were LGBQ+ identified. See Table 1 for full demographic information.

Design and Procedure

Study 3's design was identical to Study 2's, save for two new experimental conditions. Participants provided informed consent, answered essential demographic questions, then (If eligible to participate), were randomly assigned to experience one of four immersive storyboard conditions: a safety cue with affirming behavior (n = 58), a safety cue with threatening behavior (n = 57), no safety cue with affirming behavior (n = 58), or no safety cue with threatening behavior (n = 61). Participants then answered measures of my dependent variables, completed data-quality checks, provided demographic information (e.g., education level, race/ethnicity, income level), and were debriefed.

Materials and Measures

Immersive Storyboard

Participants were randomly assigned to one of four immersive storyboards. Save for the experimental manipulation (see below), the immersive storyboard was identical to that of Study 2. See Appendix for the storyboards.

Immersive Storyboard 1: Safety Cue Present/Affirming Behavior. In the Safety Cue Present/Affirming Behavior storyboard, the doctor's name tag contained a small rainbow pride flag. When the doctor notices the patient is a sexual minority while checking their intake forms, the storyboard described the doctor nodding, smiling, turning toward the patient, and thanking the patient for sharing sensitive information that helps them to provide the best care.

Immersive Storyboard 2: Safety Cue Present/Threatening Behavior. In the Safety Cue Present/Threatening Behavior storyboard, the doctor's name tag contained a small rainbow pride flag. When the doctor notices the patient is a sexual minority while checking their intake forms, the storyboard described the doctor frowning, shaking their head, turning away from the patient, and recommending mental health services (consistent with LGBQ+ people's reported experiences with non-affirming providers; e.g., Dean et al., 2016; Fuzzell et al., 2016; Meads et al., 2019).

Immersive Storyboard 3: Safety Cue Absent/Affirming Behavior. In the Safety Cue Absent/Affirming Behavior storyboard, the doctor's name tag did not contain a small rainbow pride flag. When the doctor notices the patient is a sexual minority while checking their intake forms, the storyboard described the doctor nodding, smiling, turning toward the patient, and thanking the patient for sharing sensitive information that helps them provide the best care.

Immersive Storyboard 4: Safety Cue Absent/Threatening Behavior. In the Safety Cue Absent/Threatening Behavior storyboard, the doctor's name tag did not contain a small rainbow pride flag. When the doctor notices the patient is a sexual minority while checking their

intake forms, the storyboard described the doctor frowning, shaking their head, turning away from the patient, and recommending mental health services.

Identity Safety Outcomes

Study 3 contained identical outcomes to that of Study 2, except for the operationalization of social identity threat (formerly measured using Hall et al., 2008).

Trust in Physician. Participants responded on a 5-point scale (1 = *Strongly Disagree*, 5 = *Strongly Agree*) to one original item measuring trust in the doctor. Higher scores indicated greater trust in the doctor (*M* = 2.80; *SD* = 1.57)

Fear of Physician. Participants responded on a 4-point scale (1 = *Not at All*, 4 = *Very Much So*) to five items measuring fear of the physician (or doctor; *Fear of Physician Scale*; Richmond et al., 1998). I averaged the items to create scores (α = .93), such that higher scores indicated greater fear in the doctor (*M* = 2.70, *SD* = 0.99).

Belonging. Participants responded on a 5-point scale (1 = *Strongly Disagree*, 5 = *Strongly Agree*) to eight items measuring their anticipated belonging as a patient at the doctor's office. I averaged items to create scores (α = .98), such that higher scores indicated greater belonging as a patient in the doctor's office (*M* = 2.66, *SD* = 1.35).

Comfort. Participants responded on a 5-point scale (1 = *Strongly Disagree*, 5 = *Strongly Agree*) to three items measuring their comfort with the doctor (Broussard et al., 2018; Matsick, Kruk, et al., 2022). I averaged the items to create scores (α = .98), such that higher scores indicated more comfort with the doctor's office (*M* = 2.78, *SD* = 1.66).

Social Identity Threat Concerns. Participants responded on a 9-point scale (1 = *Not At All True of Me*, 9 = *Extremely True of Me*) to the 23 items of *The Social Identity Threat Concerns Scale* (Kroeper et al., in prep). Example items include, "In medical spaces, I sometimes wonder whether people have less respect for me because of my sexuality," and "Sometimes, I am concerned that someone in medical spaces might taunt or harass me because of my sexuality." Consistent with use of the original scale, no items were reverse scored. I averaged the items to

create scores (α = .97), such that higher scores indicate greater social identity threat concerns (*M* = 3.52, *SD* = 2.07).

Perceived Inclusivity. Participants responded on a 101-point sliding scale (0 = *Not At All True,* 100 = *Very True*) to one question asking the extent to which they believe the doctor tries to create an inclusive environment (Howansky et al., 2021). Higher scores indicated a greater belief that the doctor tries to create an inclusive environment (*M* = 48.31, *SD* = 41.70).

Perceived Internal Motivation to Avoid Prejudice. Participants responded on a 7-point scale (0 = *Completely Disagree*, 6 = *Completely Agree*) to five items measuring their perception of the doctor as being internally motivated to avoid prejudice (*Perceived Motives to Avoid Prejudice Scale*; Major et al., 2013). I averaged the items to create scores (α = .94), such that higher scores indicated greater perception of the doctor as internally motivated to avoid prejudice (*M* = 3.57, *SD* = 1.95).

Perceived External Motivation to Avoid Prejudice. Participants responded on a 7-point scale (0 = *Completely Disagree*, 6 = *Completely Agree*) to five items measuring their perception of the doctor as being externally motivated to avoid prejudice (*Perceived Motives to Avoid Prejudice Scale*; Major et al., 2013). I averaged the items to create scores (α = .93), such that higher scores indicated greater perception of the doctor as externally motivated to avoid prejudice (*M* = 3.18, *SD* = 1.69).

Recommendation Form. Participants provided qualitative responses through the open-ended question “Would you recommend this physician to others? Why?”

General Threat. Participants responded on a 7-point scale (1 = *Very negative*, 7 = *Very positive*) to one item asking, “Generally speaking, how do you psychologically feel when having to visit the doctor?” (*M* = 3.38, *SD* = 1.60).

Results

Analyses of Main Effects and Interactions

A series of 2 X 2 analyses of variance (ANOVAs) were conducted to analyze the influence of a safety cue and provider behavior on identity safety outcomes. See Table 4 for main effects means (standard errors) and Table 5 for interaction means (standard errors).

Hypotheses 1, 2 and 3. I predicted a main effect of cue (a safety cue would lead to more positive psychological outcomes; H1), a main effect of behavior (affirming behavior would lead to more positive psychological outcomes; H2), and an interaction between cue and behavior (the cue results in more positive psychological outcomes except when it is coupled with threatening behavior; H3).

Trust. There was no main effect of cue on trust, $F(1, 230) = 2.75$, $p = .10$, $\eta_p^2 = 0.01$. There was a main effect of behavior on trust, $F(1, 230) = 616.66$, $p < .001$, $\eta_p^2 = .73$, such that those in the affirm condition ($M = 4.14$, $SD = 0.77$) trusted the doctor more than those in the threat condition ($M = 1.48$, $SD = 0.88$). Additionally, there was an interaction between cue and behavior on trust, $F(1, 230) = 6.91$, $p = .01$, $\eta_p^2 = .03$, such that in the threatening behavior condition, the cue condition ($M = 1.72$, $SE = 0.11$) led to more trust than no cue condition ($M = 1.26$, $SE = 0.10$), $p < .01$. In the affirming behavior condition, there was no difference in trust between the cue and no cue condition, $p = .50$.

Fear of Physician. There was a main effect of cue on fear of physician, $F(1, 230) = 6.08$, $p = .01$, $\eta_p^2 = .03$, such that those in the cue condition ($M = 2.57$, $SD = 0.99$) had less fear than those in the no cue condition ($M = 2.82$, $SD = 0.97$). There was also a main effect of behavior, $F(1, 230) = 224.81$, $p < .001$, $\eta_p^2 = .49$, such that those in the affirm condition ($M = 2.00$, $SD = 0.73$) had less fear than those in the threat condition ($M = 3.38$, $SD = 0.69$). There was no interaction between cue and behavior on fear of physician, $F(1, 230) = 2.56$, $p = .11$, $\eta_p^2 = .01$. However, in the threat condition, those in the cue condition ($M = 3.19$, $SE = 0.09$) had less fear than those in the no cue condition ($M = 3.56$, $SE = 0.09$), $p < .01$.

Belonging. There was a main effect of cue on belonging, $F(1, 230) = 7.76$, $p < .001$, $\eta_p^2 = .03$, such that those in the cue condition ($M = 2.81$, $SD = 1.29$) felt more belonging than those in the no cue condition ($M = 2.51$, $SD = 1.40$). There was also a main effect of behavior, $F(1, 230) = 626.56$, $p < .001$, $\eta_p^2 = 0.73$, such that those in the affirm condition ($M = 3.81$, $SD = 0.65$) felt more belonging than those in the threat condition ($M = 1.52$, $SD = 0.77$). Additionally, there was an interaction between cue and behavior on belonging, $F(1, 230) = 8.07$, $p = .005$, $\eta_p^2 = .03$, such that in the threatening behavior condition, the cue ($M = 1.79$, $SE = 0.09$) led to more belonging than no cue ($M = 1.27$, $SE = 0.09$), $p < .001$. In the affirming behavior condition, there was no difference in belonging between the cue ($M = 3.81$, $SE = 0.09$) and no cue condition ($M = 3.82$, $SE = 0.09$), $p = .97$.

Comfort. There was no main effect of cue on comfort, $F(1, 230) = 4.07$, $p = .045$, $\eta_p^2 = .02$. There was a main effect of behavior on comfort, $F(1, 230) = 810.72$, $p < .001$, $\eta_p^2 = .78$, such that those in the affirm condition ($M = 4.25$, $SD = 0.87$) felt more comfort than those in the threat condition ($M = 1.33$, $SD = 0.83$). Additionally, there was an interaction between cue and behavior on comfort, $F(1, 230) = 6.94$, $p = .009$, $\eta_p^2 = .03$, such that in the threatening behavior condition, the cue ($M = 1.58$, $SE = 0.10$) led to more comfort than no cue ($M = 1.10$, $SE = 0.10$), $p = .001$. In the affirming behavior condition, there was no difference between the cue ($M = 4.22$, $SE = 0.10$) and no cue condition ($M = 4.28$, SE = 0.10), $p = .66$.

Social Identity Threat. There was no main effect of cue on social identity threat, $F(1, 230) = 2.49$, $p = .12$, $\eta_p^2 = .01$. There was no main effect of behavior on social identity threat, $F(1, 230) = .80$, $p = .37$, $\eta_p^2 = .003$. There was no interaction between cue and behavior on social identity threat, $F(1, 230) = .10$, $p = .75$, $\eta_p^2 = .000$.

Perceived Inclusivity. There was a main effect of cue on perceived inclusivity, $F(1, 230) = 10.71$, $p = .001$, $\eta_p^2 = .04$, such that those in the cue condition ($M = 53.19$, $SD = 40.07$) perceived the doctor as trying to create a more inclusive environment than those in the no cue

condition (M = 43.59, SD = 42.85). There was a main effect of behavior on perceived inclusivity, $F(1, 230) = 819.26$, $p < .001$, $\eta_p^2 = .78$, such that those in the affirm condition (M = 85.13, SD = 17.68) perceived the doctor as trying to create a more inclusive environment than those in the threat condition (M = 12.11, SD = 22.12). Additionally, there was an interaction between cue and behavior on perceived inclusivity, $F(1, 230) = 5.75$, $p = .02$, $\eta_p^2 = .02$, such that in the threatening behavior condition, the cue (M = 19.56, SE = 2.56) led to more perceived inclusivity than no cue (M = 5.15, SE = 2.49), $p < .001$. In the affirming behavior condition, there was no difference between the cue (M = 86.24, SE = 2.55) and no cue condition (M = 84.02, SE = 2.55), $p = .54$.

My hypotheses were partially confirmed. Hypothesis 1, that the cue would lead to better psychological identity safety outcomes, was supported as the presence of a rainbow flag safety cue led to more belonging, more perceived inclusivity, and less fear than the absence of a rainbow flag safety cue. However, the presence of a rainbow flag safety cue did not lead to more trust, comfort, or social identity threat. Hypothesis 2, that affirming behavior would lead to better psychological identity safety outcomes, was supported given that affirming behavior led to more trust, belonging, comfort, inclusivity, and less fear. However, affirming behavior did not lead to less social identity threat. Hypothesis 3, that a cue would lead to better identity safety outcomes except when coupled with threatening behavior, was not confirmed. Interactions between cue and behavior were present on all variables except social identity threat and fear of physician, though in a different direction than hypothesized: Threatening behavior coupled with a cue led to *better* psychological identity safety outcomes than threatening behavior coupled with no cue.

Moderated Mediation

Hypotheses 4 and 5. I predicted moderated mediation through perceived internal motivation to avoid prejudice (H4) and moderated mediation through perceived external motivation to avoid prejudice (H5). To test these hypotheses, I conducted moderated mediation

to examine the indirect effect of safety cue exposure on the dependent variables through perceived internal motivations (moderated mediation 1) and external motivations (moderated mediation 2) moderated by actual behavior. This analysis determines whether the positive effect of a safety cue on the dependent variables is attributable to perceiving the cue target as more internally motivated or externally motivated to be non-prejudiced than the non-cue target, and whether this effect depends on the actual behavior of the target. Using PROCESS (Hayes, 2017; model 7), I re-sampled 5,000 times for bootstrapping estimates, and the distribution of the effects were used to obtain 95% confidence intervals for the size of the indirect effect of perceived internal and external motivations. I interpreted significance of indirect effects based on whether the index of moderated mediation excludes 0.

I entered cue condition as the independent variable (0 = no cue, 1 = cue), actual behavior as the moderator (0 = threatening, 1 = affirming), and dependent variables of trust, fear, belonging, comfort, and inclusivity (leaving out social identity threat due to a lack of significant result in the previous hypothesis). The index of moderated mediation of cue (0 = no cue ,1 = cue) through perceived internal motivation to avoid prejudice (moderated by behavior) was not significant for trust (*b* = 0.23, *SE* = .22, 95% CI [-0.67, 0.21]), fear (*b* = .12, *SE* = .12, 95% CI [-.11, .36]), belonging (*b* = -0.20, *SE* = .20, 95% CI [-.59, .18]), comfort (*b* = -.25, *SE* = .24, 95% CI [-.75, .21]), or inclusivity (*b* = -6.20, *SE* = 6.11, 95% CI [-18.44, 5.53]).

To test perceived external motivation to avoid prejudice, I again entered cue condition as the independent variable (0 = no cue, 1 = cue), actual behavior as the moderator (0 = threatening, 1 = affirming), and dependent variables of trust, fear, belonging, comfort, and inclusivity. The index of moderated mediation of cue (0 = no cue ,1 = cue) through perceived external motivation to avoid prejudice (moderated by behavior) was not significant for trust (*b* = .02, *SE* = 0.05, 95% CI [-0.09, 0.11]), fear (*b* = -0.01, *SE* = 0.03, 95% CI [-0.07, 0.06]), belonging (*b* = .01, *SE* = 0.04, 95% CI [-0.07, 0.09]), comfort (*b* = 0.02, SE = 0.05, 95% CI [-0.10, 0.13]), or inclusivity (*b* = 0.27, *SE* = 1.00, 95% CI [-1.89, 2.45]).

In sum, neither Hypothesis 4 nor Hypothesis 5 were confirmed. There was no moderated mediation between the cue, the behavior (moderator), and perceived internal/external motivation (mediators) on any of the dependent variables of trust, fear, belonging, comfort, or inclusivity.

Exploratory Mediation

I conducted two exploratory mediational analyses to explore the indirect effect of cue use (mediational analysis 1) and behavior (mediational analysis 2) on identity safety outcomes (i.e., trust, belonging, fear, comfort, and inclusivity) through participants' perceptions of the doctor as internally motivated to avoid prejudice. I did not test perceived external motivation due to there being no differences in the perception of the doctor as externally motivated between conditions; there was no main effect of cue use on external motivation, $F(1, 230) = 2.41$, $p = .12$, $\eta_p^2 = .01$, and no main effect of behavior on external motivation, $F(1, 230) = 0.30$, $p = .59$, $\eta_p^2 < .01$.

I used bootstrapped mediation analysis with PROCESS (Hayes, 2017; Model 4) to examine the indirect effect of cue use (analysis 1) and behavior (analysis 2) on trust, belonging, fear, comfort, and inclusivity. I used the PROCESS macro and re-sampled 5,000 times for boot-strapping estimates, and the distribution of the effects was used to obtain 95% confidence intervals for the size of the indirect effect of freedom threat. I interpreted significance of indirect effects based on whether or not obtained confidence intervals excluded 0. The indirect effect of cue use (0 = cue absent, 1 = cue present) through perceived internal motivation to avoid prejudice was not significant on trust, $b_{\text{indirect}} = 0.25$, $SE = 0.14$, 95% CI [-0.29, 0.54], belonging, $b_{\text{indirect}} = 0.22$, $SE = 0.13$, 95% CI [-0.03, 0.47], fear, $b_{\text{indirect}} = -0.13$, $SE = 0.08$, 95% CI [-0.30, 0.01], comfort, $b_{\text{indirect}} = 0.60$, $SE = 0.12$, 95% CI [0.39, 0.85], or inclusivity, $b_{\text{indirect}} = 6.89$, $SE = 3.97$, 95% CI [-0.71, 14.80].

However, the indirect effect of behavior (0 = threatening, 1 = affirming) through perceived internal motivation to avoid prejudice was significant on trust, $b_{\text{indirect}} = 0.55$, $SE =$

0.12, 95% CI [0.33, 0.81], belonging, b_{indirect} = 0.49, *SE* = 0.11, 95% CI [0.29, 0.73], fear, b_{indirect} = -0.34, *SE* = 0.09, 95% CI [-0.53, -0.18], comfort, b_{indirect} = 0.60, *SE* = 0.12, 95% CI [0.39, 0.85], and inclusivity, b_{indirect} = 15.17, *SE* = 3.07, 95% CI [9.71, 21.72]. As shown in Figure 4, those exposed to affirming behavior perceived the doctor as high in internal motivation to avoid prejudice, which accounted for greater trust, belonging, comfort, inclusivity, and lower fear.

Additional Quantitative and Qualitative Analysis

As in Study 2, participants provided both quantitative and qualitative perceptions of the doctor's identity at the end of the survey. Eighty-five percent of participants believed the doctor to be a man, 12% believed the doctor to be a woman, and the remainder of participants (~3%) indicated they either were not thinking of gender. Regarding race, 91% of participants believed the doctor to be White, 3% believed the doctor to be multiethnic in some way, 1% believed the doctor to be Asian, 4% of participants were split between Black, Latinx, Middle Eastern, Pacific Islander (<1% each). The remainder of participants (~3%) indicated they were not thinking of race.

In terms of sexual orientation, the majority of participants (76%) believed the doctor to be heterosexual, 14% perceived the doctor to be lesbian or gay, 8% perceived the doctor to be bisexual, and 3% indicated they were not thinking of sexual orientation. There was a significant association between cue condition and perceived sexuality of the doctor, $\chi^2(3) = 15.67$, p = .001. One hundred and one participants in the no rainbow condition perceived the doctor as heterosexual, while only 77 participants in the rainbow condition did. Conversely, 26 participants in the rainbow condition believed the doctor to be lesbian or gay, while only 6 participants in the no rainbow condition did. Perception of bisexuality were split between conditions (n = 9 in both the no rainbow and rainbow condition). As in Study 2, the presence of a rainbow flag sticker led to more people perceiving the doctor as lesbian or gay, while the absence of a sticker led to a perception of the doctor as heterosexual. While my sample size does not allow me to determine

if participants' perception of the doctor's sexuality influenced their identity safety, I again believe this research question could be worthwhile to pursue in subsequent exploratory analyses.

There was also a significant association between behavior condition and perceived sexuality of the doctor, $\chi^2(3) = 24.83$, $p < .001$. Four participants in the threat condition perceived the doctor to be bisexual compared to 14 participants in the affirm condition, 7 participants in the threat condition perceived the doctor to be lesbian/gay compared to 25 participants in the affirm condition, and 106 participants in the threat condition believed the doctor to be heterosexual compared to 72 participants in the affirm condition. As demonstrated by these results, affirming behavior led to a greater perception that one is bisexual or lesbian/gay, and threatening behavior led to a greater perception that one is heterosexual.

Participants were lastly provided an open-ended textbox to answer if they would recommend this doctor to others. As in Study 2, qualitative responses were coded with a simple scheme of 1 = *yes*, 2 = *no*, and 3 = *unsure* to assess participants' baseline recommendations. Overall, 48% of participants said they would *not* recommend the doctor, with 42% saying they would and 9% being unsure. Of the four conditions, 79% those *both* in the Cue/Affirm condition and the No Cue/Affirm condition said they would recommend the doctor, the highest percentage of the conditions (Cue/Threat condition 12%; No Cue/Threat condition 0%).

Participants in the affirm conditions (both cue and no cue) said they would recommend the doctor because they seemed to be a good person: The doctor was described as "respectful," "kind," "welcoming," "competent," and "gets to know the patient." Beyond bedside manner, participants described the doctor as LGBQ+ friendly, courteous and respectful about their sexual orientation, and as knowledgeable about LGBQ+ struggles (e.g., that coming out in medical spaces is difficult). In addition, participants specifically mentioned that the doctor eased their medical anxiety, noting it "feels nice to be validated in a medical setting, especially as someone who gets very nervous in hospitals and medical appointments." Perhaps surprisingly,

only several participants noted the rainbow flag sticker as the reason for recommending the doctor, noting it alerted them that the doctor is an ally.

Participants who would *not* recommend the doctor had similar reasons to ones who would. Participants in the affirming behavior conditions noted it was “inappropriate” for the doctor to mention their sexuality, and described the doctor’s behavior as “patronizing.” These participants felt “singled out” by this mention of their sexuality, saying that they wanted to be treated like heterosexual people who, most likely, do not get the same mention of their sexuality. Though this was only a small percentage (3% in Cue/Affirm and 7% in No Cue/Affirm), it is important to be sure LGBQ+ patients do not feel stereotyped or “lumped into a group” when inclusionary behavior is enacted.

The percentage of those who would recommend the doctor in the Cue/Threat and No Cue/Threat conditions was much lower (12% and 0%, respectively). Participants in these conditions overwhelmingly would not recommend the doctor because of their bigotry toward LGBQ+ people (e.g., “homophobic,” “ignorant,” “insinuated sexuality is a choice”). Participants also described the doctor as incompetent not only in LGBQ+ domains, but strictly medical ones as well. As one participant noted, “…if they’re this ignorant about that then what else are they behind on or allowing to be government not by medical standards but by their personal beliefs?” All participants in the threat conditions that recommended the doctor came from the Cue/Threat condition (7%), and it appears the rainbow flag attenuated some effects of the threatening behavior. Several participants mentioned the would recommend the doctor because of their “rainbow badge.” Other participants, interestingly, liked the mental health referral, noting that “having someone to talk to” is helpful. These participants may have read the doctor’s recommendation in terms of dealing with the stress of being a sexual minority, and not in terms of one’s sexuality needing to be fixed. Overall, the threatening behavior doctor was indeed unpopular, with the rainbow flag sticker only slightly improving recommendations from LGBQ+ people.

Discussion

I found that a rainbow flag safety cue in a medical office led to more belonging, more inclusivity, and less fear in LGBQ+ patients over the safety cue's absence. Additionally, the medical provider's affirming behavior led to greater trust, belonging, comfort, inclusivity, and less fear over the medical provider's threatening behavior. The presence of a safety cue in combination with a medical provider's threatening behavior led to *greater* trust, belonging, and inclusivity, and *lower* fear. In other words, when the medical provider was exhibiting threatening behavior, the rainbow flag safety cue attenuated threat. The safety cue did not impact comfort or trust, and social identity threat was not impacted by safety cue or behavior. Although the hypothesized moderated mediation was not found to be significant, in an exploratory test, I found that perceiving the doctor as high in internal motivation to avoid prejudice explained why the affirming behavior led to more positive identity safety outcomes. That is, participants believed the doctor exhibited affirming behavior because they *wanted* to, not because they were being pressured by outside forces, and this led to more participant trust, comfort, belonging, inclusivity, and less fear.

Combining Different Categories of Safety Cues

Identity safety cues are often tested in isolation; for example, testing the effects of an environmental safety cue in one study and the effects of minority representation in another. However, this study tested environmental safety cues (i.e., rainbow flag sticker) and identity-safe information (i.e., doctor's behavior) in combination. While the doctor's behavior positively impacted nearly every variable, the rainbow flag sticker did not influence LGBQ+ participants' trust or comfort, perhaps because the rainbow flag was less salient or left less of an impression on the participants. The implication for safety cue literature is that, when used in combination with each other, identity-safe information may be more impactful than environmental cues, instilling more psychological safety in LGBQ+ people. Indeed, within the affirming behavior condition, the rainbow flag did not impact participant identity safety outcomes, communicating

that when situations are deemed safe by other cues (i.e., identity-safe information), environmental cues may offer no additional psychological benefits. For participants, behavior seemed to speak louder than symbols, and additionally, offer insight into the doctor's motivation for being an ally.

Rainbow Flags and Anti-LGBQ+ Behavior in Tandem

I expected that a rainbow flag safety cue in combination with threatening behavior would lead to *worse* identity safety outcomes, hypothesizing an expectation violation between the supposed values of the provider (i.e., LGBQ+ accepting) and their actions (i.e., homophobic remarks). However, participants exposed to the threatening provider with a rainbow flag had greater trust, belonging, comfort, inclusivity, and reduced fear compared to participants exposed to the threatening provider without a rainbow flag. Therefore, this study provides no evidence that LGBQ+ people will experience expectation violation when presented with safety and threat cues in tandem. Rather, the (environmental) safety cue appears to provide small benefits within the threatening (behavior) situation.

One explanation for this unexpected result is that participants' situation was ambiguous. Introducing conflicting information (i.e., threatening behavior with a safety cue) introduces doubt into the scenario. Participants may have become confused and given the doctor the benefit of this doubt, concluding that, given the rainbow flag sticker, the doctor was *trying* to be inclusive or was, at the least, not dangerous. Deciphering prejudice is cognitively taxing, and participants may have simply chosen to lean into the more favorable possibility (e.g., the rainbow flag was a genuine show of support even alongside the homophobic remarks) to save cognitive energy (Salvatore & Shelton, 2007). Another possibility is that participants doubted themselves after hearing the threatening remarks, deciding they must have misinterpreted the remark given the rainbow flag sticker. Indeed, one participant wrote "I'm confused about this physician, I of course noticed the LGBT flag on their name tag, but then they told me to think about my sexuality?" Marginalized groups must decipher prejudice levels and their safety on a daily basis,

and this study provides insight into what marginalized groups are psychologically contending with when they received mixed messaging on their safety. Future experiments combining safety cues would benefit from measuring participants' level of ambiguity and how they process this conflicting information.

A second explanation is simply that some good information is better than no good at all. Participants in the Threatening Behavior/No Cue condition experienced the worst of the conditions, experiencing a homophobic doctor with no indication they were safe as sexual minorities. Participants in the Threatening Behavior/Cue Condition, at the least, had a small indication that their identities were valued and protected. Indeed, the rainbow flag afforded a small boost in participants' safety levels when in the threatening condition (e.g., participants felt significantly more belonging when the threatening doctor had a rainbow flag sticker). This boost, however, is small, and participants in the threatening condition overall experienced low levels of safety (e.g., belonging averaging 1.8 on a 5-point scale, even with the rainbow flag). Regardless, this experiment demonstrates that small environmental cues – like the rainbow flag – are small a stepping stone of interventions, offering some benefit in threatening scenarios.

Translation Into Real Medical Settings

A question to consider when translating these results into a real medical setting is the value of an environmental safety cue (i.e., rainbow flag) as compared to identity safe information (i.e., behavior). From the results, it appears that behavior is significantly more impactful than the environmental safety cue. In the cases where the doctor exhibited affirming behavior, the environmental safety cue did not add any benefit for the participant – the two conditions (Affirming/Cue and Affirming/No Cue) had similar levels of trust, belonging, fear, and inclusivity. Affirming behavior, then, may be all that is needed for medical professionals to ensure their LGBQ+ patients feel psychologically safe. In that sense, actions speak louder than gestures, and doctors signal safety best through their inclusive messaging and safe information. When translating cue research into real-world settings, we should consider large, structural change

(e.g., better LGBQ+ training of doctors) as a better use of our time and resources than small, gestural changes (e.g., recommending doctors to wear rainbow flag stickers).

It is ethically tense to translate the fact that the safety cue did improve identity safety when the doctor's behavior was threatening. The conclusion is not to recommend that all homophobic doctors wear rainbow flag stickers to assuage patients' threat responses. Rather, I conclude environmental safety cues are just one piece of the puzzle in terms of improving LGBQ+ patients' psychological outcomes in medical settings that may be threatening for a variety of reasons (e.g., homophobic doctors, fears of disclosing one's sexuality, lack of medical coverage for needed procedures). Real-world experiences do not afford the ability to isolate one cue over another as we can in experiments, and this experiment gives insight into how LGBQ+ patients may respond when a provider trying to show support to the LGBQ+ community exhibits ignorant behavior.

Limitations and Future Directions

Study 3 comes with important limitations. This study's online design limits its ability to fully capture the threat involved in real-world medical settings. Future research would benefit from lab studies and field studies in medical doctor's offices that implement (and do not implement) sexual orientation-based safety cues in order to get a more realistic measurement of LGBQ+ people's threat in medical settings. A future field study could have post-appointment surveys where LGBQ+ participants answer questions relating to their felt safety and threat with doctors that either wear or do not wear rainbow flag stickers. Field studies may also benefit from measuring participants' safety and threat multiple times throughout the experiment via momentary assessments; for example, before and after meeting the doctor who is or is not wearing a rainbow flag sticker and behaving in affirming or threatening ways. This design would allow researchers to determine the individual function of the cue and the behavior. These studies would facilitate the necessary transfer of cue research into applied settings, and ultimately, recommendations for best practices in medical settings.

This study is also limited by the time in which it was conducted. Study 3 was collected in May 2022, a month before Pride month in the United States. Conversations about the rainbow flag and performative activism are ripe during Pride month, and participants' feelings about a doctor wearing a rainbow flag may have been vastly different a mere month later. However, this is an interesting aspect of sexual orientation-based safety cue research and research with LGBQ+ populations more broadly: It is temporally dependent. Future studies would benefit from testing perceptions of safety cues at different cultural moments; for example, during and after Pride month, after major political elections, and during viral outbreaks largely affecting LGBQ+ populations (e.g., the 2022 Monkeypox outbreak; see General Discussion for more discussion).

Lastly, this study is limited in its measures. First, I did not measure participants' level of ambiguity or confusion in the conditions, and this was a missed opportunity. Study 3 was unique in that one condition (i.e., Threatening Behavior/Cue Present) presented very conflicting behavior on the doctor's part, introducing a level of ambiguity concerning the doctor's prejudice. It would have been theoretically informative to know what participants felt during this moment and how they wrestled with this confusion and heightened ambiguity. Clearly, from the results, participants did not have favorable feelings toward this doctor. However, measuring felt ambiguity may help with future studies on how marginalized groups grapple with determining prejudice, safety, allyship, and disclosure intentions. Second, I kept the single-item measure of trust from Study 2, hypothesizing the additional interaction with the doctor in Study 3 would be sufficient to impact this variable. However, trust is a multidimensional and complex construct, and a single-item measure is not a sufficient measurement. Future work on safety cues and trust would benefit from using a multi-dimensional measure of trust which captures the complex ways people define trust in a doctor.

Conclusion

Using an online immersive experiment, I tested the effect of an environmental safety cue in combination with actual behavior on LGBQ+ participants' identity safety. I found the doctor's

affirming behavior led to the most positive psychological identity safety outcomes (e.g., more belonging), and while the environmental safety cue also led to positive psychological identity safety outcomes (e.g., decreased fear), it did not confer as much benefit as the doctor's behavior. Interestingly, and counter to my hypotheses, I found the safety cue led to more positive psychological identity safety outcomes when paired with *threatening* behavior, demonstrating that some signal of safety in the scenario was better than none at all. Study 3 builds evidence that safety cues are effective for sexual minorities (i.e., environmental cues), with the important additional information that behavior (i.e., identity-safe information cues) may be more salient and effective for inducing identity safety.

Chapter 5: General Discussion

My proposed dissertation had four aims: (1) To determine if rainbow flags are effective environmental safety cues for LGBQ+ people, (2) To examine if the rainbow flag safety cue leads to more safety in a threatening medical office, (3) To determine if perceived internal and external motivation of the cue user (i.e., medical doctor) can explain the relationship between safety cues and more safety, and (4) To analyze how the safety cue interacts with affirming or threatening behavior of the safety cue user.

Dissertation Aims and Results

Study 1 addressed Aim 1. Through qualitative analysis of more than seventy LGBQ+ adults, I determined that rainbow flags do indeed function as effective environmental safety cues. Participants expressed positive affective reactions when seeing rainbow flags (e.g., pride, safety), saw rainbow flag users as allies and LGBQ+ community members, and acknowledged a general desire to see rainbow flags in all areas of their communities (e.g., hospitals, lawns). Study 1 also laid groundwork for the experimental materials of Studies 2 and 3. Participants desired rainbow flag safety cues in medical settings (which they identified as threatening) and indicated a general distrust of spaces without safety cues, leading me to set my experiments in a medical doctor's office with the threat cue operationalized as the lack of a rainbow flag sticker.

Study 2 addressed Aims 2 and 3. Because the presence of a rainbow flag sticker (i.e., safety cue) on a medical professional's nametag lead to more belonging, more comfort, and less fear, I concluded that LGBQ+ safety cues are efficacious in a threatening environment (Aim 2). I also found that perceiving the cue-using medical doctor as internally motivated explained why cue use led to more psychological well-being (i.e., internal motivation served as a mediator), demonstrating that safety cues are effective because they communicate who is *internally* motivated to be an LGBQ+ ally (Aim 3). Perceived external motivation did not emerge as a mediator, signaling that LGBQ+ people's perception of a cue user's external motivations are not as influential as internal motivation in their resulting identity safety. An alternative

explanation is that a medical doctor's use of a safety cue does not signal any external motivations for allyship to LGBQ+ participants. In other words, a doctor's rainbow flag sticker does not arouse suspicions of the doctor as being externally motivated.

Study 3 also addressed Aim 2 by demonstrating a medical doctor's rainbow sticker led to more LGBQ+ participants belonging and inclusion and less fear. By introducing a new variable – the doctor's behavior – Study 3 addressed Aim 4, and provided evidence on how LGBQ+ participants contend with situational information in tandem with safety cues. I found that the doctor's behavior positively impacted more aspects of identity safety than the safety cue. Counter to hypothesis, I found that threatening behavior with a safety cue led to more psychological well-being than threatening behavior without a safety cue (Aim 4); that is, LGBQ+ participants faced with threatening behavior had better identity safety outcomes when the doctor had a rainbow flag sticker.

Overall, my dissertation established that (1) the rainbow flag operates as an environmental safety cue for LGBQ+ people, even in a threatening medical setting, (2) that perceptions of a cue user's internal motivation to avoid LGBQ+ prejudice explain why cues are effective at increasing identity safety, and that (3) when in tandem with an environmental safety cue, affirming behavior is a more effective way to add to LGBQ+ patients' identity safety.

Implications for Cue Research

While the safety cue literature largely focuses on gender- and race-targeted safety cues (Kruk & Matsick, 2021), the current dissertation establishes that sexual minority people are impacted by safety cues much like (race unspecified) women's responses to gender-focused cues and (gender unspecified) people of color's responses to race-focused cues. Providing qualitative and quantitative evidence of the rainbow flag as a sexual orientation-based environmental safety cue carries several implications for the safety cue research.

A major finding of Study 1 is that LGBQ+ people believed rainbow flags in medical settings would reduce their fear and improve their comfort, and Studies 2 and 3 supported this

finding through experimental evidence that rainbow flags in a doctor's office led to more identity safety. These findings lay groundwork, rationale, and experimental justification for field and in-laboratory studies of sexual orientation-based safety cues. Immersive, real-world experimental methods have been successful in establishing successful gender-based safety cues, including daily diary studies to evaluate the effect of minority representation on women's identity safety in STEM (Hall et al., 2018) and laboratory studies of soon-to-be-fathers in a mock medical doctors' offices (Albuja et al., 2019). Sexual orientation-based safety cues would benefit from similarly immersive experiments, as field and in-laboratory studies could capture more realistic threat (e.g., in medical settings) than online experiments. Conducting these experiments would provide needed evidence to justify the implementation of safety cues in real medical offices.

Neither Study 2 nor Study 3 found impact of safety cues on social identity threat. While researchers may conclude that environmental safety cues are not salient enough to impact social identity threat, behavior (shown to be a more influential variable on identity safety in Study 3) did not impact social identity threat either. Alternatively, this null finding may demonstrate that extant measures are insufficient to capture aspects of social identity threat unique to LGBQ+ populations (e.g., the concealable nature of a sexual minority identity). Study 2's measure of social identity threat (Hall et al., 2018) was developed on samples of women; it is therefore reasonable that the translation to LGBQ+ populations was inappropriate as gendered social identity threat (unconcealable) may be functionally different from sexuality identity threat (concealable). I addressed this limitation by replacing Hall et al.'s (2018) measure with the Social Identity Threat Concerns Scale (Kroeper et al., in prep). Though this measure has been validated on LGBQ+ populations, it, too, was unaffected by safety cue usage (and behavior). This may be due to the items asking about general medical threat, and not threat specific to the experiment. For example, a better way to phrase an item may have been "I would sometimes wonder whether I am being stereotyped because of my sexuality in *this* medical setting," not "…in medical settings." Capturing and improving social identity threat in LGBQ+

populations remains a challenge, and safety cue literature would benefit from establishing constructual differences between the social identity threat resulting from concealable and unconcealable identity threat.

There were discrepancies between Study 2's and Study 3's results which speak to the combination of cues and situational information. First, safety cue use had no effect on inclusion in Study 2, but led to more perceived inclusion of the doctor's office in Study 3. Second, safety cue use led to more comfort in Study 2, but had no effect on comfort in Study 3. Both of these discrepancies may be due to Study 3's extended experimental manipulation (i.e., receiving more information about the doctor's office) and new variable of doctor behavior. The doctor's behavior proved to be a more salient variable than safety cue use, improving five psychological outcomes (e.g., comfort) over the cue's three. These discrepancies also illuminate that when used in tandem, behavior may have overpowered the safety cue, thus leading the safety cue to not influence variables like LGBQ+ people's comfort. This discrepancy provides useful information that, when safety cues and behavior occur simultaneously (as they do in real-world scenarios), behavior is more influential to an LGBQ+ person's felt comfort.

While the safety cue literature mainly focuses on how the target perceives the *cue*, my dissertation shows the importance of studying how the target perceives the cue *user*. In Study 1, participants emphasized that personal safety cue displays (e.g., on one's lawn) are especially meaningful because they show the cue user cares and is personally invested. This personal investment was operationalized in Studies 2 and 3 as the doctor's perceived *internal motivation to avoid prejudice*. Indeed, the cue using doctor in both studies was seen as higher in internal motivation to avoid prejudice than the doctor without the cue, and this perception of internal motivation explained the rainbow flag sticker's (Study 2) and doctor's behavior's (Study 3) efficacy. While perceived external motivation to avoid prejudice did not emerge as a significant mediator in either Studies 2 or 3, this may be due to their unfamiliarity with the cue user. If participants were given more information about the doctor (e.g., the doctor's background on

LGBTQ+ knowledge, activism, political viewpoints), they may have had stronger perceptions of the doctor's external motivation to avoid prejudice. Given their limited knowledge of the doctor's background and personality, participants defaulted to perceptions of internal motivation to avoid prejudice.

While perceptions of cue user are largely missing from extant literature, popular culture is saturated with discussions of cue users' internal or external motivations. Whether its talks of people wearing safety pins on the subway following President Trump's election (e.g., D'Oyley, 2016), White people posting black squares on Instagram to support #BlackLivesMatter (e.g., Marine, 2020), or suburbanites posting yard signs with liberal slogans at their houses (e.g., Lawson, 2020), marginalized groups seem to focus on intentions of the cue user when determining their level of felt safety. Therefore, if we aim to create and install cues that work, we must determine when and how the cue user is perceived as internally motivated, not pressured by outside sources.

Lastly, this dissertation prompts consideration on including behavior as an operationalization of the *identity-safe information* safety cue. Kruk and Matsick (2021) identify *identity-safe information* as "…providing members of stigmatized groups with explicitly non-threatening information that induces identity safety" (p. 22). In extant literature, this cue is often operationalized as information prior to an examination; for example, describing a test as diagnostic of intellectual ability or not (providing identity safety or identity threat to Black students (Wout et al., 2009). In Studies 2 and 3, the doctor said they are thankful the patient shared their sexual orientation, that they acknowledge it may be difficult to share personal information, and that this demographic information will help the doctor provide the best care. While not an explicit statement of non-discrimination (e.g., "I will not discriminate against you because of your identity"), this statement, nonetheless, provided participants with information that sharing their identity is not only tolerated, but helpful. Including behavior as a form of *identity-safe information* widens the range of operational possibilities for safety cues, and allows

researchers to test a realistic and externally valid way many sexual minorities determine their level of safety in a given situation.

Implications for Policy and Practice

The present research yields important implications for policy, practice, and intervention, using empirical evidence to guide recommendations for cue implementation. This empirical evidence is particularly important, as current recommendations to use sexual orientation-based cues are not evidence based. The finding that rainbow flag stickers result in small improvements to psychological well-being of LGBQ+ patients is encouraging, as it provides a cost-effective and easily-implemented solution to LGBQ+ people's lack of identity safety in medical settings. Fear of medical settings (shown to be reduced by a rainbow flag) is an especially important variable, as fear can cause people to delay or avoid healthcare (Kılıç, et al., 2021). This may be especially true for LGBQ+ populations, who face stigma on the basis of their identity and delay healthcare at a larger rate than heterosexual people (Fingerhut & Abdou, 2017; Kılıç, et al., 2021). Medical practices looking for small, cost-effective ways to show allyship could indeed implement policy recommending their doctors wear rainbow flag stickers. Though the reduction in fear was small (but statistically significant), Studies 2 and 3 show that rainbow flag stickers represent one small step medical spaces and doctors can take to improve LGBQ+ patients' identity safety.

However, it is clear from Study 3 that affirming behavior is much more effective than rainbow flag stickers in instilling well-being across a wide variety of psychological constructs, from reducing fear to improving belonging. A systemic policy solution for medical practices and schools is to invest in training programs for their medical professionals to ensure all interactions with LGBQ+ patients are affirming. Alarmingly, U.S. and Canadian medical schools have a median of only five hours of LGBQ+ specific education (Obedin-Maliver et al., 2011; Pregnall et al., 2021). LGBQ+ training programs for medical professionals have shown promising results, however: University of Louisville School of Medicine's 50.5 hours of required LGBQ+ health

curriculum increased knowledge of LGBQ+ specific medical issues (Holthouser et al., 2017; Sawning et al., 2017), Baylor College of Medicine's Social Determinants of Health Orientation Program increased medical students' self-confidence in addressing LGBQ+ specific issues (Cooper et al., 2018; Song et al., 2018); and the Oregon Family Medicine's Residency Program's "Caring for LGBQ+ Patients" training program improved doctors' ability to create patient-centered treatment plans for LGBQ+ populations (Klein & Nakhai, 2016). While medical practices should not necessarily be dissuaded from implementing environmental safety cues, it is important to recognize their benefits are incremental and they are not the solution to systemic discrimination. A clear solution is investment in training for medical professionals, and practices would be wise to create policy requiring this training for their staff.

The perception of doctors is also important when discussing practical applications, as internal motivation explained why cues (Study 2) and behavior (Study 3) were effective. For independent doctors, clinicians, and other practitioners, rainbow flag stickers and affirming behavior are an effective way to support LGBQ+ patients as long as one's patients believe this display and behavior is internally motivated. Participants in Study 1 seemed to express that personal displays always signal internal motivation, and this was somewhat confirmed by the cue-wearing doctors in Studies 2 and 3 being perceived as higher in internal motivation than the doctors without a cue. Future research would benefit from determining how LGBQ+ participants determine whether cue users are internally motivated, as this information could guide recommendations for medical provider allies.

Lastly, I caution against using the finding that rainbow flags are easily-implemented environmental safety cues to justify placing a rainbow flag wherever one can. These results indeed show that rainbow flags are generally wanted and provide a small boost of well-being (less than 1 point on a Likert scale, generally) in a medical setting. However, my evidence also shows LGBQ+ people look for context clues, and are particularly focused on a cue user's internal motivation when determining if the flag signals a genuine show of LGBQ+ allyship.

Participants were active investigators of the safety cue, and knew when it did and did not signal a commitment to LGBQ+ allyship (e.g., when it was a personal display or when a bar employee with a rainbow flag was mocking a gay man's speech, respectively). Therefore, in and outside of medical settings, rainbow flags are only going to be effective safety cues when they are supported by contextual clues and when cue users are seen as internally motivated. I predict simply placing rainbow flags on people and objects without experimental study or critical thought will not result in psychological well-being for LGBQ+ people, and may contribute to a sense of diversity dishonesty or rainbow washing (e.g., Kaiser et al., 2013; for more discussion, see Kruk & Matsick, 2021). My conclusion on the implementation of safety cues is one of common sense: Safety cues need to mean something, coming from someone who means it, and cannot be a band-aid solution used to easily hope for results without taking a hard look at the issue at hand.

Intersectional Considerations

Intersectionality Theory is an approach derived from Black Feminist Theory considering the "interdependence of systems of inequality" and the interlocking nature of oppression (McCormick-Huhn et al., 2019, p. 445; see Combahee River Collective, 1977/2005; Cooper, 1892; Crenshaw, 1989, 1991; Truth, 1851). Analyzing Studies 1-3 through the lens of intersectionality theory opens up new understandings and exciting avenues for future research. In Study 1, while I noted participants' full identities in their quoted responses, I did not compare and contrast differing identity groups' relation to the flag. One tenet of intersectionality theory is that participants identities are multidimensional, and an option for future work is to examine how differing axes of identities produces different reactions to the rainbow flag. For example, those rendered intersectionally invisible within the LGBTQ+ community (e.g., Black lesbian women) may feel less affected by the rainbow flag or more skeptical of others' displays of the flag due to their lack of representation and protection in the LGBTQ+ community at large. An analysis of looking within LGBTQ+ respondents and not merely at the summation of observations (i.e., responses as a whole dataset) could provide greater insights for understanding how

intersectionality theory and safety cues interact. Another opportunity for re-analysis of Study 1's data is to recognize that participants' social group memberships are dynamic (a tenet of intersectionality theory; McCormick-Huhn et al., 2019). Participants may not always have held the same identity as they did while taking the survey (e.g., may have once identified as heterosexual) or may not have always lived within the same social context (e.g., may have moved from a less LGBTQ+-accepting to more LGBTQ+-accepting location); these fluid factors shape identities and experiences and thus may impact one's relationship to the rainbow flag.

Studies 2 and 3 also present future opportunities for intersectional analysis. One major tenet of intersectionality theory is considering how differing access to power influences social groups' realities (McCormick-Huhn et al., 2019). Power is a critical component of analyzing access to and feelings toward medical care, especially when studying marginalized groups historically discriminated against in medical settings (e.g., LGBTQ+ people). A direction for future research on safety cues in medical settings is examining how it influences participants' perceived power in their medical care in the structures that provide care and in their interactions for care; for example, feeling a sense of safety may increase participants' willingness to self-advocate or report discriminatory behavior. This feeling of power likely intersects with other identity groups in addition to sexual orientation, and future research incorporating intersectionality theory could consider how different identity combinations lead to unique perceptions of power in relation to safety cues. For example, LGBTQ+ patients under 18 may not feel increased power when a doctor wears a rainbow flag because they still face restrictions of being a minor (e.g., their parent has access to their medical records). Implementing effective safety cues in all settings, not just medical ones, relies on future researchers seriously considering systems of interlocking privilege and power (i.e., Intersectionality Theory).

Constraints on Generalizability

Consistent with recommendations from intersectionality theory, feminist science, and the open science movement more broadly (Crenshaw, 1991; Matsick et al., 2021; McCormick-Huhn

et al., 2019), I recognize constraints on my results' generalizability. I echo Van Bavel et al.'s (2016) sentiment that context is "…too important to ignore," and that my sample of majority White, American LGBQ+ people do not represent all sexual minorities (p. 6458). Stating constraints on generalizability takes seriously historical, political, and social contexts, incorporates lived experience, resists traditional science's push for human universality, increases transparency, and avoids overstating results (Matsick et al., 2021).

All participants were U.S. based. This is important due to the inconsistent protection of LGBQ+ rights globally. In the U.S., LGBQ+ people live in a specific culture of both freedom and stigma in which some rights exist (e.g., same-sex marriage) at the same time that violence remains pervasive and is even increasing (e.g., Ronan, 2020). American LGBQ+ people's perceptions of a supportive doctor in my studies will not generalize to places where being a sexual minority is differently protected, for example, countries in which LGBQ+ identities are punishable by law (e.g., Iran, Sri Lanka; Human Rights Watch, n.d.) or where LGBQ+ people have broad legal protections (e.g., Sweden's prohibition of anti-LGBQ+ discrimination in its constitution). In places where LGBQ+ identities are punishable by law, feelings of threat in medical settings may be especially severe, and, consequently, affirming behavior and safety cues could be even more effective in reducing fear and improving comfort. In settings where LGBQ+ rights are more protected than they are in the U.S., small environmental cues in medical settings may not impact LGBQ+ people at all.

The threat of the environment is an important variable in the salience and effectiveness of safety cues (e.g., Kaiser et al., 2006), and environmental threat for LGBQ+ people is extremely temporal and situation-dependent. My results should be interpreted with this context in mind. U.S. American LGBQ+ people's rights and safety exist in the context of an ever-changing political environment that shifts rapidly by the day and by the state. LGBQ+ patients, accordingly, may have more positive or negative reactions to rainbow flag safety cues depending on the month (e.g., Pride month, where discussions of rainbow-washing are

common; Desjardins et al., 2020), the year (e.g., what President is in power and their stance on LGBQ+ rights), what laws are enacted (e.g., the threat of federal gay marriage protections being repealed; Roe v. Wade being overturned), what medical guidelines change (e.g., gender-affirming care being banned for children and adults; Sarkissian, 2022), or what state one lives in (e.g., same-sex adoption guidelines vary by U.S. state; Movement Advancement Project, n.d.). LGBQ+ patients may benefit greatly from rainbow flag cues during times of homophobic panic in the law and national conversation, and may not benefit from them at all when threat is low or when displays of rainbow flags reach a saturation point. The temporal and place-dependent aspect of LGBQ+ rights presents challenges for replicating results of sexuality-targeted safety cues over time and place, and until LGBQ+ rights are so cemented that they face no risk of being taken away, research on sexual orientation-based safety cues must be flexible and generalize only to the current political and cultural moment.

Over half of the sample in each study was White, limiting the generalizability of results for LGBQ+ of color populations. LGBQ+ people of color contend with a racialized homophobia in medical settings along with a brutally racist history of medical care; this includes White doctors believing Black patients can tolerate more pain than White patients (Hoffman et al., 2016), the use of race correctors in clinical algorithms and assessments (Vyas et al., 2020), and anti-gay and HIV stigma for Black gay men (Cahill et al., 2017). My manipulations, in which a homophobic doctor recommends mental health treatment, may have been relatively tame compared to the quotidian medical violence that LGBQ+ people of color experience. As a result, this experimental manipulation may not have captured threat felt by LGBQ+ people of color in real medical interactions. My operationalization of a safety cue may have also been less effective for people of color as it did not address racism as well as homophobia; indeed, past studies have shown the need to address multiple identities when instilling safety in doubly-marginalized samples (e.g., Black women in Johnson et al., 2019). I thus recommend caution when generalizing these results to LGBQ+ people of color.

In addition to focusing on participants of color's differential experience, it is crucial to ask what Whiteness means for White participants (Remedios, 2022). The White participant experience exists because of an access to White privilege and power, and this certainly affects experiences of medical environments. White participants in my sample likely have greater odds of reliable access to healthcare (e.g., Blendon et al., 1989; Rooks et al., 2008; Saadi et al., 2017; Trevino et al., 1991; Williams & Rucker, 2000) and avoid threatening aspects of healthcare like medicalized racism. This may increase White LGBQ+ participants familiarity in and comfort with medical settings. Additionally, White sexual minority people (especially White sexual minority cis men) may be more impacted by a rainbow flag safety cue because being a sexual minority is the primary axis by which they feel threat in a medical environment. That is, White LGBQ+ people may not be contending with multiple stigmas in a medical environment, and thus may be more impacted by a cue aimed at their only stigmatized identity. This specific White LGBQ+ experience – which represents the majority of my sample – may render it non-generalizable to other populations that do not have a similar level of social privilege and power.

While I recruited participants for Studies 1 and 2 through Qualtrics Paneling Services, a steep price increase prior to launching Study 3 caused me to shift my recruitment strategy to a more affordable option. I chose Prolific, a web-based service specifically catered to recruiting research participants (prolific.uk). However, my Prolific sample was more White and more liberal than the samples I had become accustomed to through Qualtrics. My Prolific sample had a lower rate of Black participants (6% Black participants, compared to 15% and 17% from Studies 1 and 2, respectively), a higher rate of White participants (73% White participants, compared to 65% and 62% from Studies 1 and 2, respectively), and was more left-leaning politically than my Qualtrics samples (1.94 on a 7-point political scale, compared to 3.07 and 3.46 in Studies 1 and 2, respectively). Though the only necessity for my participants was an adult LGBQ+ identity, the generalizability of Study 3's results is now limited due to the large percentage of White and liberal respondents. I learned an important lesson to pre-determine all desired demographic

breakdowns of my sample; with more research into Prolific's participant pool, I may have known to request a more balanced racial sample of participants. I would advise researchers using Prolific in the future to specify all desired demographic breakdowns in their samples, not just the experimental essentials.

Future Directions

This dissertation provides many exciting areas for future research. As previously stated, researchers could examine marginalized groups' perceptions of cue users, establishing when cue users are seen as internally motivated (found to be of import in this dissertation) or externally motivated. There are likely other psychological constructs regarding perceptions of cue users that explain cue effectiveness; for example, perceptions of the cue users familiarity with the stigmatized group (e.g., sexual minorities), as empathetic, or as holding similar political beliefs may explain cue effectiveness. Additionally, researchers could examine dominant group members' motivations for using safety cues, sexuality-targeted (e.g., the rainbow flag) or otherwise (e.g., #BlackLivesMatter signs). An interesting study would be examining if an (self-reporting) internally motivated dominant group member using a cue is in fact perceived as internally motivated by a marginalized group member. For example, a heterosexual person may report wearing rainbow flags because they care about LGBQ+ rights (i.e., internally motivated), but additional contextual indicators may cause LGBQ+ people to perceive the display as ingenuine. Because cue use is a two-way street between user and target, it is important for future research to investigate both sides of these interactions.

Figure 1 – a conceptual map of safety cue effectiveness for sexual minorities – offers several individual difference variables that could be of use in future studies. Individual difference variables specific to a sexual minority identity are of particular interest. For example, queer consciousness – the level at which an individual has a politicized collective identity related to their sexual orientation (Duncan et al., 2017) – may increase the effectiveness of safety cues. Those with high vigilance – the extent to which an individual is aware of and attentive to

potential discrimination –are theoretically more likely to observe safety cues and be affected by them, and those high in queer consciousness may be highly attuned to activist efforts to promote LGBQ+ rights (e.g., safety cues). In another example, positive identification with the LGBQ+ community may contribute to greater benefit from safety cues; those who value community connection may feel heightened positive affective reactions when dominant groups make efforts to include their marginalized community. Previous discriminatory experiences, however, may decrease one's benefit from safety cues, as one with a history of discriminatory experiences may not trust something as simple as safety cues very easily. Individuals affected by discrimination may require concrete evidence of a bias-free environment, perhaps benefitting more from variables like affirming behavior. Specific to a medical environment, LGBQ+ people's level of medical mistrust or anxiety is important to evaluate – those with high medical anxiety may benefit more from safety cues than those who feel relatively at ease in medical settings.

Gender differences are an individual difference variable unexplored in this dissertation. Though it is crucial to only investigate gender differences when there is established evidence to suggest differences exist (e.g., Matsick et al., 2021; McCormick-Huhn et al., 2019), the extensive literature on medical homophobia is often gendered. For example, lesbian women often report denial of their identity in healthcare (e.g., focus on pregnancy and contraception when that does not apply; Jahn et al., 2019) while gay men report facing hyper-sexualization stereotypes (e.g., being told gay men are sex-obsessed; Beehler, 2001). Homophobia often manifests in gendered ways, and this is especially true in medical settings where discussions of pregnancy, STIs, and sexual activity are common. The present research did not examine gender as an individual difference variable nor differentiate conditions based upon gender (i.e., all threatening and affirming behaviors were the same, regardless of gender). However, future studies could manipulate the type of provider behavior based upon participant gender and determine if safety cues are still effective, which genders they're effective for, and why. Knowing

this information would help specify interventions when improving well-being for a particular group of sexual minorities (e.g., lesbian women).

Future research would benefit from exploring differing degrees of threatening behavior, assessing which levels of threat safety cues assuage. Threatening behavior in this dissertation was operationalized as a medical association between sexual minority identities and mental health issues, which may differ in felt threat from an assumption of heterosexuality (e.g., “Do you have a wife?”) or a refusal of treatment (e.g., “I don’t treat gay patients”). It is possible that subtle environmental cues like rainbow flags only ease threat to an extent, and are not effective in explicitly discriminatory environments. Of course, experimentally creating explicitly discriminatory environments presents challenges for the ethical treatment of LGBQ+ participants, and researchers may be hesitant about laboratory or real-world studies with such threatening conditions.

An exciting path for future research that could both provide realistic threat while caring for LGBQ+ participants is virtual reality. Virtual reality is an increasingly feasible method—even accommodating online participation—that works toward a more immersive social psychology (Blascovich et al., 2002). Virtual reality would allow for the manipulation of threatening behavior in an engaging and realistic way that is nonetheless artificial. Along with a comprehensive debrief following the experiment, virtual reality may allow researchers to expose LGBQ+ participants to threatening environments while protecting them from believing they are in actual danger. Virtual reality could also be used to place cues in a covert way (e.g., on the wall in an examination room), allowing researchers to determine which situations cues instill safety. Innovative methods like virtual reality could be an exciting middle step between online studies and field studies, allowing researches gather realistic evidence of cue efficacy before recommending institutions use valuable resources to install cues.

Lastly, evidence of cue transfer suggests that LGBQ+ safety cues may benefit more than just LGBQ+ people. In Chaney and Sanchez (2018), cisgender women felt increased identity

safety from the presence of an all-gender restroom sign – a cue ostensibly designed to increase feelings of safety transgender individuals. Similarly, in Chaney et al. (2016), White women felt increased identity safety when viewing a company with diversity structures aimed at racial minorities, and men of color felt increased identity safety when viewing a company with diversity structures aimed at women. In all examples, a minoritized group benefits from a cue not explicitly aimed at their group, demonstrating that cues may not be strictly one dimensional. LGBQ+ safety cues, then, may induce safety in heterosexual minoritized populations. While some preliminary evidence suggests heterosexual women benefit from LGBQ+ safety cues (Matsick et al., in prep), further research could examine when and why heterosexual minoritized people (e.g., heterosexual women of color; heterosexual disabled people) benefit from cues aimed at sexual minorities. Studying cue transfer could reveal additional mediating variables in cue effectiveness beyond internal motivation. For example, a rainbow flag sticker on a doctor's nametag may communicate to heterosexual women that the doctor is likely a feminist, easing her fears of facing medical sexism.

Conclusion

In this dissertation, I aimed to test the efficacy and boundary conditions of arguably the most externally-valid LGBQ+ safety cue: The rainbow flag. In Study 1, I found qualitative evidence that rainbow flags are effective safety cues for LGBQ+ people, inducing feelings of safety and indicating who is an ally. In Study 2, I found experimental quantitative evidence that rainbow flags lead to greater LGBQ+ people's psychological well-being in a medical office, and further, that these positive effects were because the cue user was perceived as internally motivated to avoid LGBQ+ prejudice. In Study 3, I replicated the finding that rainbow flags lead to greater well-being in medical settings, but found that the doctor's behavior improved more constructs of psychological well-being. I also found that the reason behavior improved well-being was, as in Study 2, that the doctor was seen as internally motivated to avoid prejudice. Together, I found that rainbow flags are an effective environmental safety cue for LGBQ+

people, that other situational information like behavior may “overpower” environmental cues when used in tandem, and that the perceptions of the cue user are essential in ensuring safety cue efficacy. This dissertation provided evidence to the growing field of identity safety cues for LGBQ+ people, and guided recommendations for when and how to implement safety cues in real-world settings.

Appendix

Figure 1

Conceptual Model of Safety Cue Efficacy for LGBQ+ Individuals
(Dashed lines indicate moderation; shaded blue indicates cues are situated within broader social and historical environments)

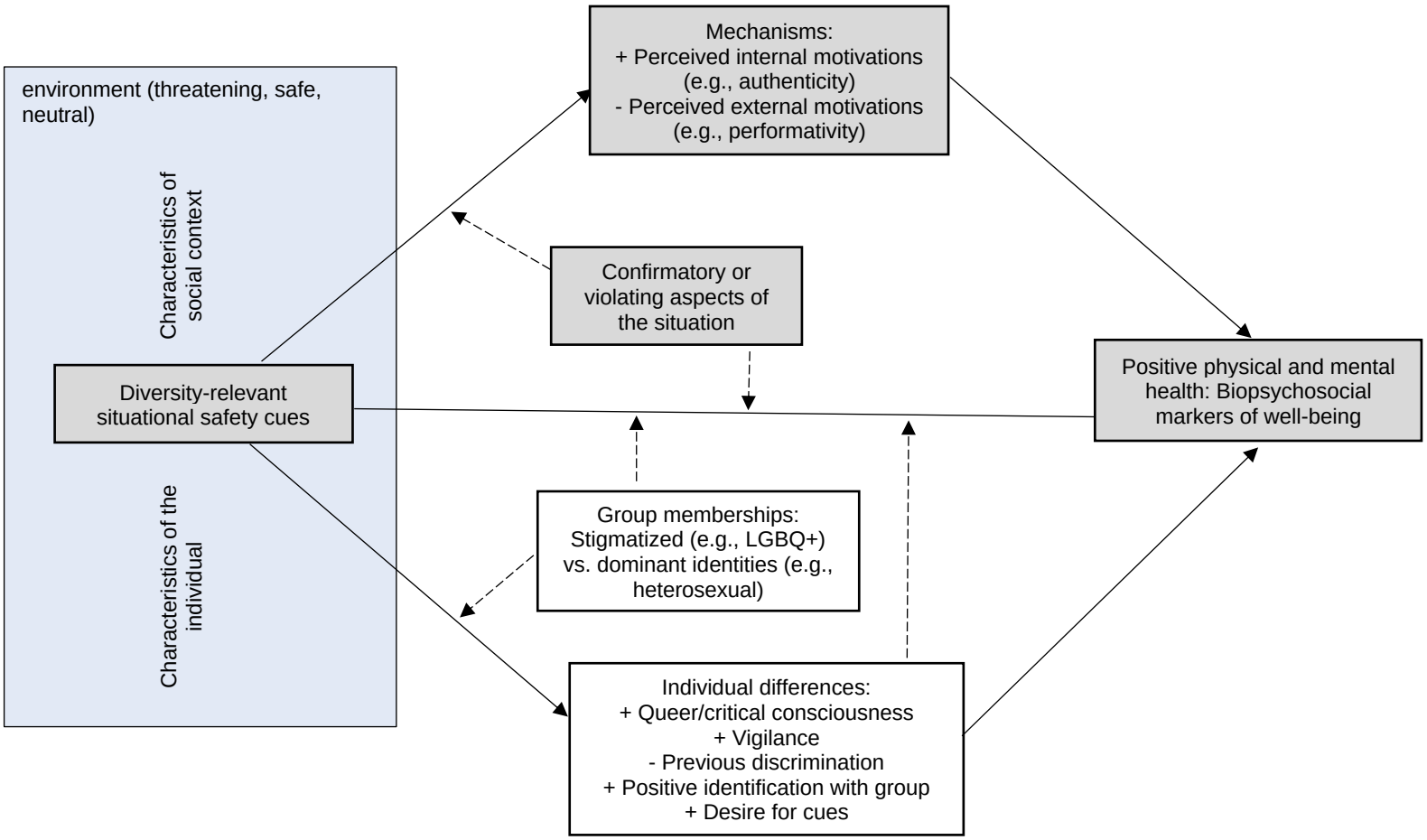


Figure 2
Thematic map of content generated by LGBQ+ participants.
(Bolded circles refer to the four research questions pursued in Study 1.)

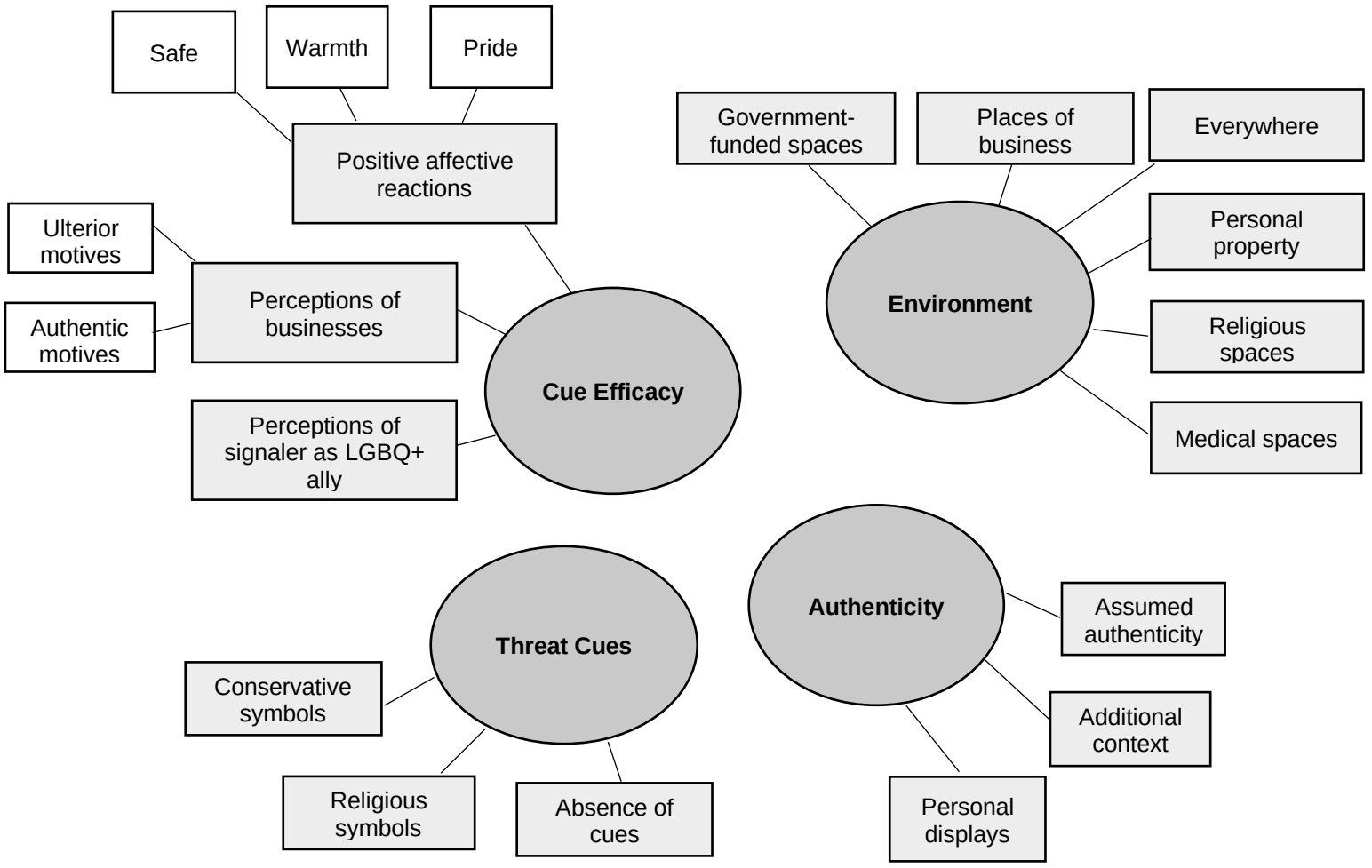


Figure 3

*Study 2. The mediating role of perceived internal motivation in the effect of cue use on fear of physician, belonging, and comfort. Unstandardized beta coefficients are reported. *p* < .05, **p* < .001*

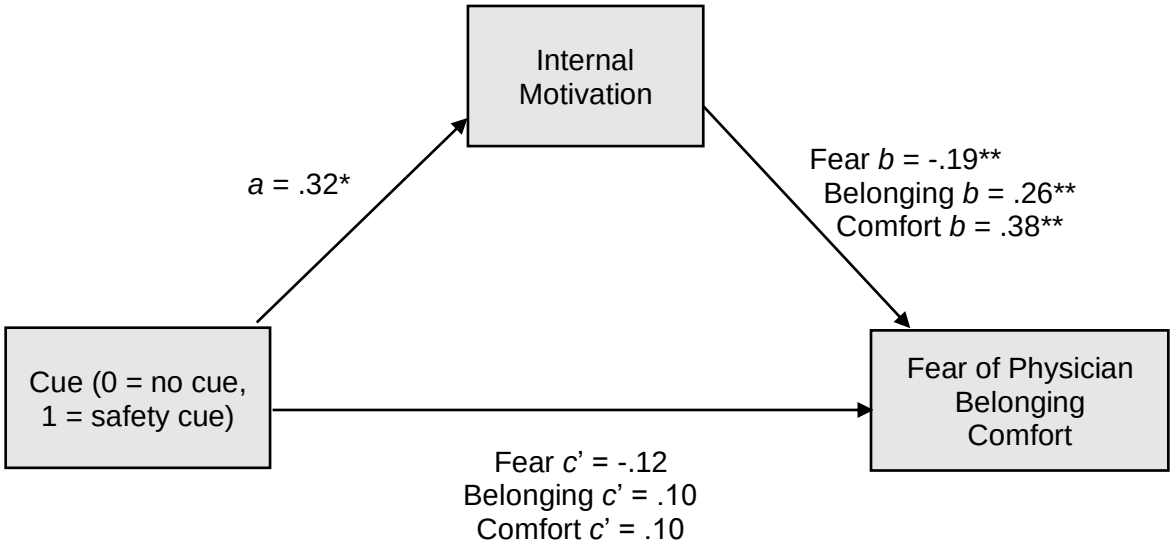


Figure 4

Study 3. The mediating role of perceived internal motivation in the effect of behavior on trust, belonging, fear of physician, comfort, and inclusivity. Unstandardized beta coefficients are reported. *$p < .05$, **$p < .001$

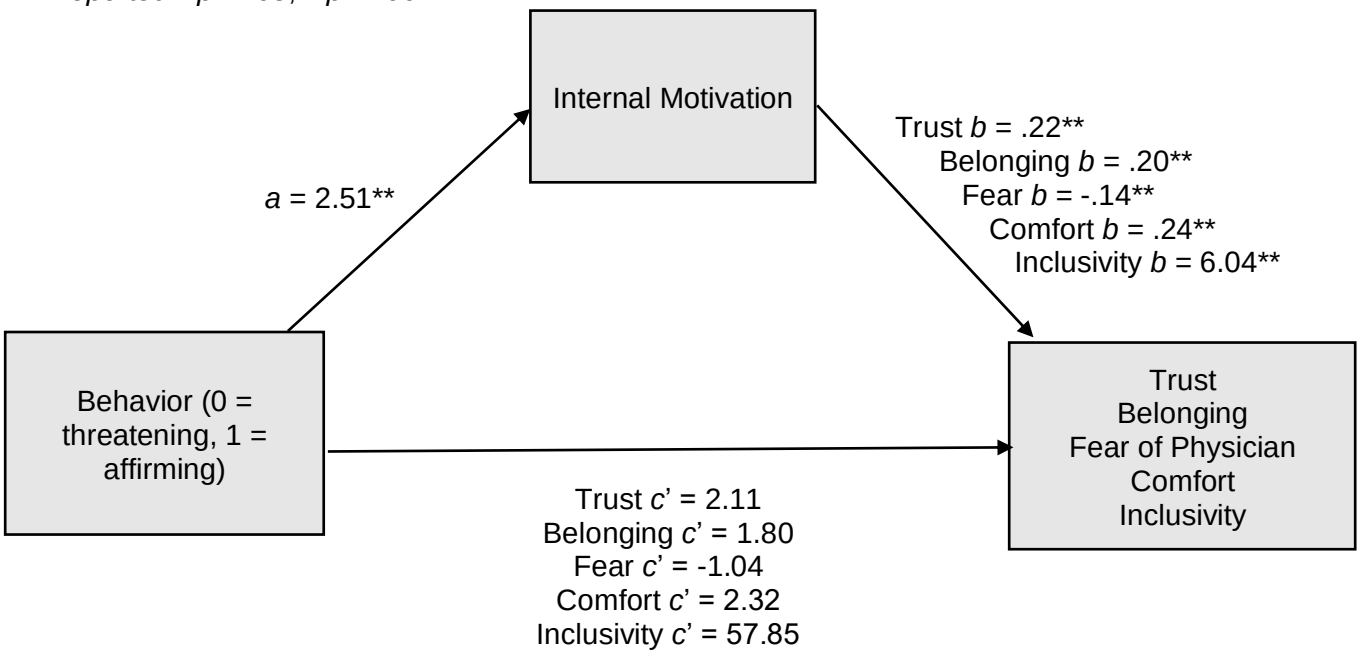


Table 1
Demographic information by study.

Characteristic	Study 1 (*N* = 76)	Study 2 (*N* = 231)	Study 3 (*N* = 234)
Age	42.13 (*SD* = 18.62)	39.07 (*SD* = 16.65)	32.29 (*SD* = 11.82)
Sexual Orientation			
Gay	28%	28%	21%
Lesbian	24%	10%	11%
Bisexual	21%	61%	56%
Queer	5%	1%	12%
Pansexual	13%	0%	0%
Asexual	9%	0%	0%
Gender			
Woman	57%	47%	42%
Man	33%	49%	43%
Non-Binary	9%	5%	13%
Unspecified or another gender	1%	0%	2%
Ethnicity/Race			
African American/Black	15%	17%	6%
Asian American/Asian	1%	2%	6%
European American/White	65%	62%	73%
Latinx	9%	9%	6%
Multiracial	7%	6%	7%
Native American/American Indian	1%	2%	1%
Pacific Islander	0%	1%	0.5%
Middle Eastern	1%	1%	1%
Unspecified or another ethnicity	1%	1%	0%
Highest Level of Education			
Less than high school	3%	4%	2%
High school diploma or GED	17%	25%	18%
Some college	25%	30%	28%
2-Year degree or higher	39%	31%	42%
Advanced degree	18%	12%	10%
Undergraduate status	9%	12%	18%
U.S.-Based Region			
Midwest	20%	20%	21%
Northeast	20%	15%	17%
South	36%	41%	40%
West	25%	23%	23%
Rurality	3.5 (*SD* = 1.28)	N/A	N/A
Income	N/A		
<20k		22%	19%
20k-34,999k		23%	21%
35k-49,999k		15%	19%
50k-74,999k		22%	16%
75k-99,999k		8%	9%
>100k		11%	15%
Political Orientation	3.07 (*SD* = 1.63)	3.46 (*SD* = 1.78)	1.94 (*SD* = 1.24)

Device		N/A	N/A
Mobile phone	60%		
Laptop/Desktop	32%		
Tablet	9%		

Note. Percentages rounded. Participants rated their political views from *extremely liberal* (1) to *extremely conservative* (7). Participants rated their area very rural (1) to very urban (5).

Table 2
Study 1 Themes.

	Description	**Example quote**
RQ1: Cue Efficacy		
Theme 1: Positive affective reactions		
Subtheme 1: Pride	Feelings of pride	*"I was proud because I am not ashamed of who I become and how i [live] my life i have a handsome boyfriend and i had girlfriend in the past and I am not ashamed of that."*
Subtheme 2: Safe as oneself	Feelings of safety	*"I feel safe, I think that there are people here who care about me."*
Subtheme 3: Warmth	Feelings of warmth	*"I find it heartwarming and encouraging…"*
Theme 2: Perceptions of signaler as LGBQ+ ally	Signaler is supportive of LGBQ+ rights	*"that person is, whether ally or fellow queerio, putting themselves out there and making it known they are [queer] and/or support that equality and visibility and they have some personal stake and accountability."*
Theme 3: Perceptions of businesses		
Subtheme 1: Ulterior motives	Businesses' primary purpose is not supporting LGBQ+ people	*"I don't think they are anti. I just don't think they are doing it for the right reasons. More out of social pressure."*
Subtheme 2: Authentic motives	Businesses' primary purpose is supporting LGBQ+ people	*"I know people like me are welcome, if not encouraged, at such establishments."*
RQ2: Cue Environment		
Theme 1: Everywhere	Every/any space	*"Everywhere you look – stores, businesses, houses of worship – you name it."*
Theme 2: Government-funded spaces	Places funded by government	*"Somewhere where in theory it's a public space and not "endorsed" or not looking for a sale?"*
Theme 3: Places of business	Commercial spaces	*"Everywhere business is being conducted to show the public the LGBTQ persons are welcome and won't face [discrimination.]"*
Theme 4: Personal property	A non-commercial personal property	*"It is nice to see it [in] a residence, especially in my own neighborhood."*
Theme 5: Religious spaces	Places that hold religious services	*"Catholic churches because for too long they have not been gay friendly."*
Theme 6: Medical spaces	Places where medical examinations are done	*"I would also like to see [rainbow flags] in doctor's offices especially which is one of the places I've seen the most discrimination."*
RQ3: Cue Authenticity		
Theme 1: Assumed authenticity	Every rainbow flag is authentic	*"I think all flags are authentic."*
Theme 2: Additional context	Context clues used to determine a rainbow flag's authenticity	*"It was a gay owned business and they sold LGBQ items and they flew the [flag] openly and proudly."*
Theme 3: Personal displays	Rainbow flags displayed by an individual	*"When I see it on people's lawns it makes me feel like they actually cared enough to show that they support the LGBTQ community."*
RQ4: Threat Cues		
Theme 1: Conservative symbols	Symbols associated with the American Conservative party	*"Anything with Trump on it!"*
Theme 2: Religious symbols	Symbols pertaining to religion	*"I feel threatened by Christian symbols"*
Theme 3: Absence of cues	No LGBQ+ safety cues present	*"It's more of the things you don't see."*

Table 3

Study 2: Means (Standard Errors) for Dependent Variables by Cue Condition

Dependent Variable	Cue	No Cue
Trust	3.89 (0.08)	3.80 (0.08)
Belonging	3.71 (0.06)*	3.53 (0.07)*
Inclusivity	72.73 (2.35)	69.26 (2.38)
Comfort	4.02 (0.09)*	3.79 (0.09)*
Fear of Physician	1.84 (0.07)*	2.03 (0.07)*
Social Identity Threat	2.45 (0.15)	2.67 (0.12)
Internal Motivation to Avoid Prejudice	4.54 (0.09)*	4.22 (0.10)*
External Motivation to Avoid Prejudice	3.29 (0.12)	3.24 (0.11)

Note. Asterisk indicates means are significantly different between conditions at $p < .05$.

Table 4

Study 3: Main Effect Means (Standard Errors)

Dependent Variable	Cue	No Cue	Affirm	Threat
Trust	2.91 (.14)	2.69 (.15)	4.14 (.77)[b]	1.48 (.88)[b]
Belonging	2.81 (1.29)[a]	2.51 (1.40)[a]	3.81 (.65)[b]	1.52 (.77)[b]
Inclusivity	53.19 (40.07)[a]	43.59 (42.85)[a]	85.13 (17.68)[b]	12.11 (22.12)[b]
Comfort	2.91 (.15)	2.65 (.15)	4.25 (.87)[b]	1.33 (.83)[b]
Fear of Physician	2.57 (.99)[a]	2.82 (.97)[a]	2.00 (.73)[b]	3.38 (.69)[b]
Social Identity Threat	3.74 (.19)	3.31 (.19)	3.40 (.20)	3.64 (.18)
Internal Motivation to Avoid Prejudice	3.79 (1.83)[a]	3.35 (.92)[a]	4.83 (.89)[b]	2.33 (1.91)[b]
External Motivation to Avoid Prejudice	3.00 (.15)	3.35 (.16)	3.12 (.13)	3.24 (.17)

Note. [a] indicates a significant main effect of cue at $p < .05$; [b] indicates a significant main effect of behavior at $p < .05$.

Table 5

Study 3: Interaction Means (Standard Errors)

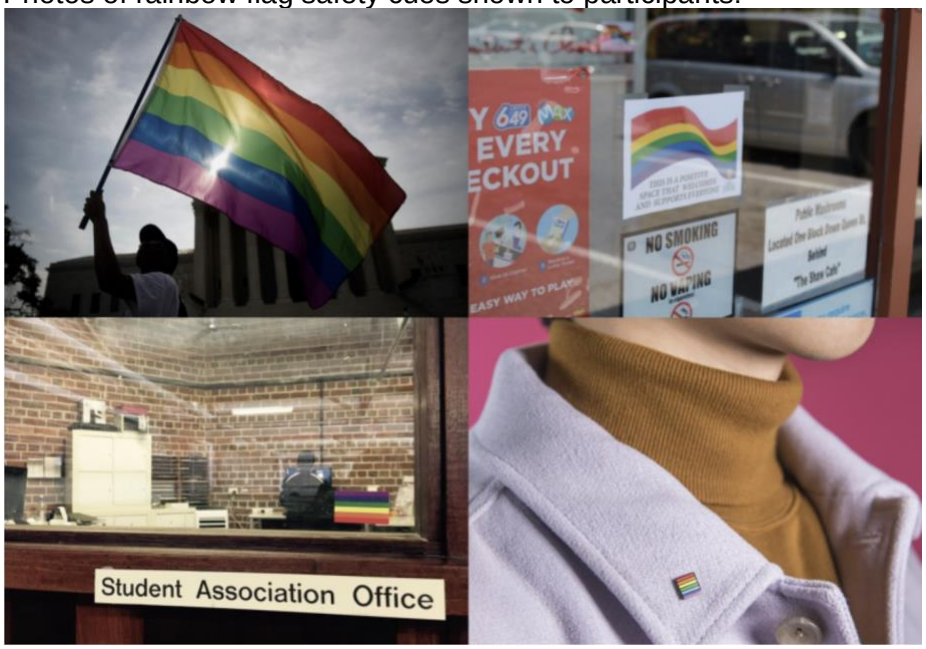
Dependent Variable	Cue		No Cue	
	Affirm	Threat	Affirm	Threat
Trust	4.09 (.11)	1.72 (.11)[a]	4.19 (.11)	1.26 (.10)[a]
Belonging	3.81 (.09)	1.79 (.09)[a]	3.82 (.09)	1.27 (.09)[a]
Inclusivity	86.24 (2.55)	19.56 (2.56)[a]	84.02 (2.55)	5.15 (2.49)[a]
Comfort	4.22 (.10)	1.58 (.10)[a]	4.28 (.10)	1.10 (.10)[a]
Fear of Physician	1.96 (.09)	3.19 (.09)[a]	2.04 (.09)	3.56 (.09)[a]
Social Identity Threat	3.57 (.27)	3.90 (.27)	3.23 (.27)	3.39 (.27)
Internal Motivation to Avoid Prejudice	4.93 (.20)	2.64 (.20)	4.73 (.20)	2.04 (.19)
External Motivation to Avoid Prejudice	2.90 (.22)	3.12 (.22)	3.34 (.22)	3.36 (.22)

Note. Matching letters indicate a significant difference between conditions at $p < .05$.

Study Materials

Study 1

Photos of rainbow flag safety cues shown to participants:



Measures

Question 1: Think about the times in which you've encountered a rainbow flag. What emotions, thoughts, or questions do you have when you see a rainbow flag?

Question 2: Please write about a time you saw a rainbow flag that you thought was *authentic* in its support for LGBQ+ people OR a time you saw a rainbow flag that you thought was *inauthentic* in its support for LGBQ+ people.

Question 3: What do you think people's or business's motivations are for using rainbow flags? How do you view people or businesses that use rainbow flags?

Question 4: Where would you want to see a rainbow flag? Why?

Question 5: What do you see as the *opposite* of a rainbow flag? That is, what cues or aspects of a place make you feel threatened, unsafe, or unwelcome as an LGBQ+ person?

Study 2

Immersive Storyboards

On the following page, you will read through a story as if you are a new patient at a doctor's office. Please read through the information carefully and imagine you are actually a new patient at this doctor's office. You will be asked to recall information about the presentation later.

Click 'next' to continue.

Imagine you are a new patient at a doctor’s office and you are going to visit the doctor's office to receive a routine physical exam. You drive to the doctor’s office and easily find parking. You enter the building at your scheduled arrival time. You may be feeling a little nervous.

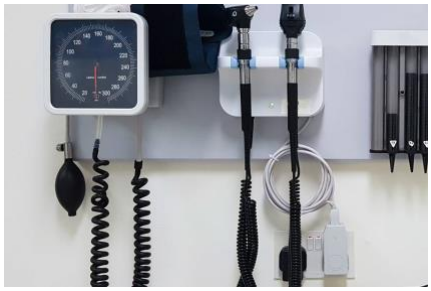
You walk into the doctor's office and ‘check in’ at the front desk. The receptionist gives you some forms to complete while you wait for your appointment with the doctor. You find an empty seat in the waiting room to complete the forms that you've been handed.

You get started on the forms while you're waiting for your appointment. You are asked to fill out basic information about yourself, like your name, address, age, gender, height/weight, sexual orientation, and race. You also fill in some basic health information about yourself. You hear your name being called and it is time for your appointment.

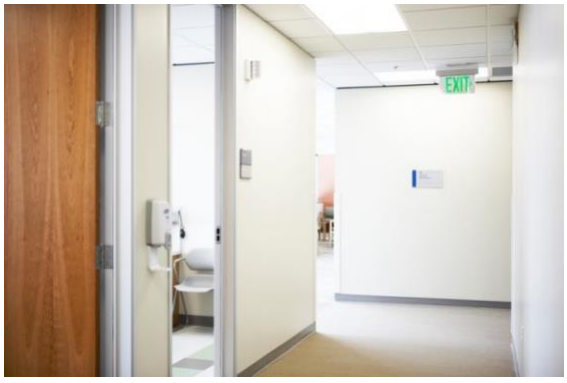
You hand in your completed forms and are then walked into an examination room. The doctor who will be doing your exam enters the room. Dr. Snider thanks you for completing your intake forms and begins to look over your responses and history.

OR

Dr. Snider begins the examination by checking your basic vital signs. The doctor then asks if you've been having any medical problems lately. You answer that you haven't noticed any changes in your health.



Dr. Snider proceeds with the rest of your physical exam and leads you into the hallway when you are finished. You follow the instructions to 'check out' at the front desk and then you exit the building.



Measures

Trust in physician (1 = *strongly disagree,* 2 = *disagree,* 3 = *neither agree nor disagree,* 4 = *agree, 5 = strongly agree)*

- I would trust this doctor.

Fear of physician (1 = *not at all*, 2 = *somewhat*, 3 = *moderately so*, 4 = *very much so;* Richmond et al., 1998)

- When communicating with this doctor...
    - I would feel tense
    - I would feel calm
    - I would feel jittery
    - I would feel nervous
    - I would feel relaxed

Belonging (1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, 5 = *agree*; Pietri et al., 2018)

- This doctor would like me
- This doctor would be a lot like me
- I would feel like I belong with this doctor
- I would feel respected by this doctor
- I would feel excluded by this doctor (R)
- I would feel anxious with this doctor (R)
- I would enjoy being an active patient with this doctor

Social identity threat (1 = *never*, 2 = *very rarely*, 3 = *rarely*, 4 = *sometimes*, 5 = *often*, 6 = *very often*, 7 = *always*; Hall et al., 2018)

- if you were a patient at this doctor's office…
    - How often would you think this doctor uses stereotypes about your sexual orientation against you?
    - how often would you worry that this doctor might judge you because of what they think of your sexual orientation?
    - how often would you worry that this doctor would judge your sexual orientation because of your behavior?
    - how often would you worry about other people of your sexual orientation acting in ways that confirm sexual orientation stereotypes?

Comfort (1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, 5 = *agree*; Broussard et al., 2018; Matsick, Kruk, et al., 2022)

- I feel that this doctor was welcoming to LGBTQ patients.
- I feel comfortable with this doctor.
- I feel that this doctor understands me.

Perceived inclusivity (0 = *not at all true*, 100 = *very true*; Howansky et al., 2021)

- Please rate the extent to which the doctor tries to create an inclusive environment.

Perceived Motives to Avoid Prejudice scale (0 = *completely disagree*, 1 = *disagree*, 2 = *slightly disagree*, 3 = *neither agree nor disagree*, 4 = *slightly agree*, 5 = *agree*, 6 = *completely agree*; Major et al., 2013)

Subscale 1: perceived internal motivation scale

- If this doctor acts in a non-prejudiced way toward LGBTQ patients, it is because...

- It is personally important to this doctor not to be prejudiced
- It is in accordance with this doctor's personal values to be unprejudiced
- This doctor believes it is wrong to use stereotypes about LGBTQ people
- This doctor is personally motivated by their beliefs
- It is important to this doctor's self-concept to be unprejudiced

Subscale 2: perceived external motivation scale

- If this doctor acts in a non-prejudiced way toward LGBTQ patients, it is because...
  - This doctor wants to avoid negative reactions from others
  - This doctor feels pressure from others to act nonprejudiced
  - This doctor thinks other people would be angry with them if they acted prejudiced
  - This doctor wants to avoid disapproval from others
  - This doctor is trying to act politically correct

Study 3

Immersive storyboard

Imagine you are a new patient at a doctor's office and you are going to visit the doctor's office to receive a routine physical exam. You drive to the doctor's office and easily find parking. You enter the building at your scheduled arrival time. You may be feeling a little nervous.

You walk into the doctor's office and 'check in' at the front desk. The receptionist gives you some forms to complete while you wait for your appointment with the doctor. You find an empty seat in the waiting room to complete the forms that you've been handed.

You get started on the forms while you're waiting for your appointment. You are asked to fill out basic information about yourself, like your name, address, age, gender, height/weight, sexual orientation, and race. You also fill in some basic health information about yourself. You hear your name being called and it is time for your appointment.

You hand in your completed forms and are then walked into an examination room. The doctor who will be doing your exam enters the room. Dr. Snider thanks you for completing your intake forms and begins to look over your responses and history.

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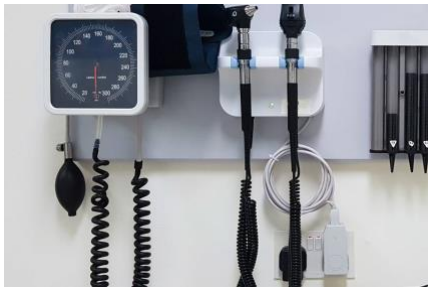


You then sit on the patient table while Dr. Snider reviews your intake information. You then notice Dr. Snider pauses and seems to frown, shake their head, and turn away from you.

Dr. Snider then says:

"I'm just noting your sexual orientation you've listed here. I hope you've given this some serious thought, that's all. I'd recommend looking into some mental health resources about your sexuality. I can do a mental health referral."

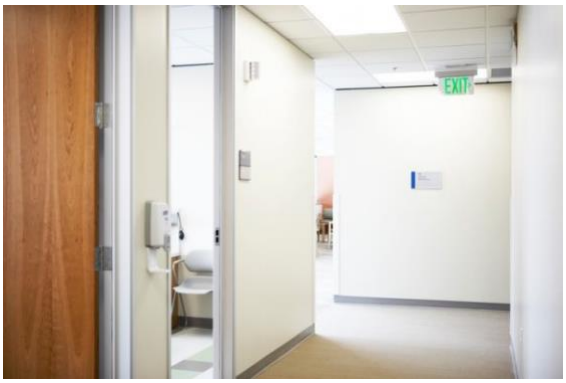
OR

You then sit on the patient table while Dr. Snider reviews your intake information. You then notice Dr. Snider pauses and seems to smile, nod, and turn toward you.

Dr. Snider then says:

"I'm just noting your sexual orientation you've listed here. I know it can be difficult to share, so thank you for sharing that with me. This information helps me to get to know you better so I can tailor my care to best suit you."

Dr. Snider proceeds with the rest of your physical exam and leads you into the hallway when you are finished. You follow the instructions to 'check out' at the front desk and then you exit the building.



Measures

Measures in Study 3 are the same as Study 2, with the substitutions of Study 2's Identity Threat measure (Hall et al., 2018) with the following:

The Social Identity Threat Concerns Scale (1 = *not at all true of me*, 5 = *moderately true of me*, 9 = *extremely true of me*; Kroeper et al., in prep)

- Sometimes, I'm not sure that people think I belong (or "fit in") in medical settings because of my sexuality.

- In medical settings, I sometimes wonder whether people have less respect for me because of my sexuality.
- Sometimes, I'm not sure that others in medical settings value my opinions or contributions because of my sexuality.
- In medical settings, I sometimes wonder whether I am being left out or marginalized because of my sexuality.
- Sometimes, I wonder whether I am being stereotyped because of my sexuality in medical settings.
- Sometimes, I am concerned that someone in medical settings might physically hurt me because of my sexuality.
- Sometimes, I am concerned that someone in medical settings might taunt or harass me because of my sexuality.
- Because of my sexuality I sometimes wonder whether others in medical settings will give me a fair shot.
- Because of my sexuality, I sometimes wonder whether I can trust others in medical settings to have my back and support me.
- Sometimes, I wonder whether people in medical settings treat me as the "token" member of my sexuality group.
- Because of my sexuality, I sometimes wonder whether people in medical settings see me as a "true" good patient.
- In medical settings, I am sometimes concerned that someone will single me out (or shine a spotlight on me) because of my sexuality.
- Sometimes, I wonder if people in medical settings overlook (or forget about me) because of my sexuality.
- Sometimes, I wonder whether others in medical settings think I get "special advantages" or "unfair privileges" because of my sexuality.
- In medical settings, I sometimes wonder whether I'll feel pressured to downplay my connection to my own sexuality, and, instead, be expected to fit in with heterosexual people.
- In medical settings, I am not sure that receiving healthcare will be equally accessible to people who share my sexuality.
- Sometimes, I'm not sure I am being true to my sexual identity while I'm in medical settings.
- I sometimes wonder whether I should reveal my sexuality to others in medical settings.
- In medical settings, I am sometimes concerned that someone will reveal my sexuality to others without my permission.
- Sometimes, I am not sure if I should try to "pass" as a heterosexual person in order to blend in with everyone else in medical settings.
- In medical settings, I sometimes wonder whether people might dismiss my sexuality as "unreal" or "fake."
- In medical settings, I am sometimes concerned that others might incorrectly identify my sexuality—assuming I belong to a sexual orientation group that I don't actually belong to.

- In medical settings, I am sometimes concerned that others will become preoccupied with “correctly” identifying my sexuality.

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Education

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Select Awards and Fellowships

Outstanding Graduate Student Teaching Award in WGSS • Outstanding Teaching Award in Psychology • College of Liberal Arts' Superior Teaching and Research Award • Prevention Research Center Award to Reduce Racism • NIH Translational Science Fellowship • McCourtney Institute for Democracy's Eleanor Roosevelt Scholarship • Society for Personality and Social Psychology Diversity Graduate Travel Award

Peer-Reviewed Publications

Salomaa, A., Matsick, J. L., Exten, C., & **Kruk, M.** (2022). Different categorizations of women's sexual orientation reveal unique health outcomes in a nationally representative U.S. sample. *Women's Health Issues.*

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