# INCLUSIVITY IS A CHOICE: NUDGING PRONOUNS AT WORK

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# ABSTRACT

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Pronoun sharing in the workplace serves as a visible act of allyship, promoting inclusivity for transgender and gender-diverse (TGD) individuals. However, the factors that encourage or inhibit pronoun sharing, particularly among cisgender individuals (gender majorities), remain underexplored. This study utilized an experimental design to examine whether nudges—a form of choice architecture intended to subtly prompt desirable behaviors—could increase pronoun sharing among gender majorities. Participants (N = 318) were randomly assigned to one of three groups: a control group, a list nudge group, or a text-box nudge group. In the list nudge group, participants received a pre-populated list of pronoun options, while the text-box nudge group provided participants with a prompt to manually type out their pronouns. Results indicated that both nudge groups significantly increased pronoun-sharing rates compared to the control group, with the list nudge proving most effective. Additionally, individual differences were found to correlate with pronoun-sharing behaviors: those who identified as high in allyship and supportive of gender diversity were more likely to share pronouns, whereas those who endorsed gender as biologically determined were less likely. However, these individual differences did not moderate the effect of nudges. These findings highlight the potential of nudge-based interventions to encourage inclusive practices, supporting the normalization of pronoun sharing as an allyship behavior in the workplace.

This thesis is dedicated to Hayden DeBuse.

Your endless support and unconditional love have been my anchor throughout this journey.

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# PREFACE

**Author Note:** The acronyms LGBTQ (lesbian, gay, bisexual, transgender, and queer) and TGD (transgender and gender diverse) are used to refer to those who do not identify with societally privileged groups of heterosexual or cisgender people. These terms were chosen because they are consistent with present literature; however, these acronyms do not capture all the identities held by those who are sexually and gender diverse.

**Positionality Statement**: The author self-identifies as a U.S. American white bisexual cisgender woman.

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# INTRODUCTION

The behaviors of gender majorities (i.e., cisgender people whose gender matches their sex assigned at birth) in the workplace have the potential to create positive outcomes for gender-nonconforming coworkers. An increasing number of studies have focused on the important role that "allies" play in reducing perceptions of discrimination and supporting their stigmatized coworkers (Martinez & Hebl 2010; Ruggs et al., 2015; Sabat et al., 2013). The external forms of assistance allies provide could play a pivotal role in fostering a culture of supportiveness across an organization (Kalev et al., 2006). As one example, many people have begun sharing their gender pronouns (e.g., they/them, she/her, he/him) at work to promote inclusion, specifically for transgender and gender diverse (TGD) people. Pronoun sharing—explicitly stating how one would like to be referred to in the third person—allows people to communicate their gender identity rather than relying on inferences based on appearance and gender stereotypes. Research has shown that including gender pronouns in workplace biographies signals identity-safety cues, increases perceptions of fairness, and encourages positive organizational attitudes among sexual and gender minorities (Johnson et al., 2021).

By normalizing pronoun sharing in the workplace, gender majorities can contribute to dismantling assumptions based on gender and foster an environment where gender-nonconforming persons feel respected and included. This simple yet powerful gesture aligns with broader efforts to combat discrimination and create workplaces that embrace diversity and promote equality. Therefore, promoting pronoun sharing is a tangible way for gender majorities to actively support gender minorities and contribute to building more inclusive organizational cultures. While prior research has demonstrated the positive outcomes that can result from

pronoun sharing in the workplace, little is known about what hinders pronoun sharing and what can be done to increase the rate of pronoun sharing among gender majorities.

Choice architecture (Thaler & Sunstein, 2008) and the concept of nudging (Thaler & Sunstein, 2008) are tools identified in the behavioral sciences that may prove useful for encouraging pronoun sharing among gender majorities. Choice architecture suggests that decisions can be influenced by how options are presented (Thaler & Sunstein, 2008). Nudges are subtle cues that can motivate people to make socially desirable choices (Münscher et al., 2016). For example, research has shown that nudges encouraging sustainable environmental behaviors resulted in pro-sustainable behavioral change (Olya et al., 2024). In the case of pronoun sharing, more people may opt to share their pronouns in electronic workplace communications if the behavior is nudged via a subtle stimulus that acts as a reminder.

The present study seeks to investigate how an allyship intervention utilizing nudges can be used to increase pronoun sharing behaviors among gender majorities at work. Specifically, using an experimental design, this study will examine whether the presence or absence of a nudge will impact pronoun-sharing behaviors. Additionally, by measuring beliefs on sex and gender and individual differences in ally identity, this study will investigate how preexisting preferences and beliefs may limit the effectiveness of nudges in this context. It was anticipated that nudges would be an effective tool to increase rates of pronoun sharing; however, personal attitudes and beliefs may moderate the effectiveness of the experimental manipulations.

# LITERATURE REVIEW

## Gender Diverse Identities and Allyship Behaviors

Over the past two decades, research on lesbian, gay, bisexual, transgender, and queer (LGBTQ) individuals has increased. Initially, the literature primarily focused on sexual minorities, and more recently has begun to focus on gender minorities, yet there is still a significant gap in the literature (Beauregard et al., 2018; Fletcher & Marvell 2023; Ozturk & Tatli, 2016). While the workplace has made strides in becoming more inclusive for sexual minorities, it has lagged in making improvements for TGD identities. The emphasis on "LGB" identities has left many TGD individuals on the fringe, even in seemingly supportive and inclusive environments (Huffman et al., 2021). It is estimated that half of trans people conceal their identity at work (Gut et al., 2018) compared to less than one third of gay men and lesbian women (Mallory et al., 2022). The disparity between identity disclosure among members of the LGBTQ community speaks to the fact that many workplaces remain far from trans-inclusive. The disparity in disclosure rates is likely related to the disparity in the level of support relative to LGB peers, as well as the distinctly different needs TGD people have from their cisgender counterparts (e.g., support during transitions, use of gender-affirming titles, and access to gender-affirming services). Ozturk and Tatli (2016) emphasized that "gender identity diversity [is] a key blind spot in human resource management and diversity management research and practice" (p.781). There is a great need to better understand how to best support and implement practices that create trans-inclusive workspaces.

Previous research has sought to better understand TGD workplace experiences (Ozturk & Tatli, 2016), how to cultivate disclosure supportive environments (Chaudoir & Quinn, 2010; Follmer et al., 2017; Herek, 2003), and the benefits of identity integration via disclosing at work

(Lindsey et al., 2020; Velez et al., 2013). Gender nonconforming persons may be undergoing a gender transition or in a discovery phase, meaning they have not settled on which gender label best aligns with their identity. A qualitative study focusing on transgender workplace disclosure experiences reported that trans people may be reluctant to disclose during this period out of anxiety of being viewed as fearsome or strange objects of fascination by colleagues as they undergo a gender transition (Ozturk & Tatli, 2016). Additionally, the same study revealed that anticipating adverse reactions from coworkers resulted in identity concealment (Ozturk & Tatli, 2016). Furthermore, disclosure may also induce an uncomfortable line of questioning and result in fear or discomfort from cisgender coworkers. Some TGD people report their disclosure created conflict regarding which toilets they are allowed to use (Ozturk & Tatli, 2016) due to coworker unrest and poor diversity and inclusion culture and policies within an organization. While there are many documented reasons why gender minorities may choose to conceal their stigmatized identity, many people in the workplace still choose to disclose (Fletcher & Everly, 2021).

A limited number of studies have examined features of workplace environments that promote identity disclosure or concealment among TGD employees (Chaudoir & Quinn, 2010; Follmer et al., 2017; Herek, 2003). Gender minorities may not disclose their identity or share their pronouns due to fear of discrimination or discomfort caused by coworkers' lack of understanding and acceptance (Ward & Winstanley, 2003). Several studies have demonstrated that organizational support influences disclosure decisions (Follmer et al., 2019). Unsurprisingly, supportive and positive transgender organizational climates are strongly related to TGD disclosure at work (Huffman et al., 2021). Specific ways in which organizations can signal a positive TGD climate are by providing appropriate bathroom access, discouraging derogatory

comments, training that distinguishes the difference between sex and gender, and providing medical benefits for trans related care (Huffman et al., 2021). Additionally, the use of gender-affirming pronouns and titles is a key organizational behavior that relates to perceptions of support, openness, and satisfaction (Huffman et al., 2021).

Organizational environments that accept those who disclose identities that are not societally privileged, such as gender-nonconforming persons, allow for identity integration at work (Bowring & Brewis, 2009). Identity integration theories suggest that having congruent levels of disclosure across life domains can alleviate the negative cognitive and emotional requirements of "filtering" one's identity (Velez et al., 2013). Thus, identity integration at work is important as it has been linked to increased life satisfaction (Lindsey et al., 2020). People with concealable stigmatized identities are more likely to disclose at work if they perceive their colleagues and supervisors to be a social support resource (Follmer et al., 2019). Research also suggests that allyship—where members of socially advantaged groups that take action to uplift and improve the treatment and status of disadvantaged groups or persons (Droogendyk et al., 2016)—plays a crucial role in cultivating disclosure-supportive environments, which in turn promote identity integration.

In attempts to make organizations more trans-inclusive and foster disclosure supportive environments some human resource management professionals have begun to promote allyship to support trans workers (Stonewall, 2020). Research has found that when allyship is successful, it can create positive change and challenge transphobic and harmful norms and behaviors (Ragins, 2008) that negatively impact TGD people. In the context of this study, pronoun behaviors are a form of allyship that demonstrates support for LGBTQ coworkers and signals a disclosure-supportive environment while simultaneously combating the oppression of TGD

people. The main goal of this study is to determine if the allyship behavior of pronoun sharing can be increased among cisgender employees in the workplace.

**Allyship Interventions**

There is a wide range of behaviors that can be considered allyship. Allyship behaviors have been classified as either reactive or proactive (De Souza & Schmader, 2024). Reactive allyship is challenging a bias after witnessing the oppression as a bystander. On the other hand, proactive allyship behaviors are less contingent on occurring in response to a bias and aim to increase personal capacity for inclusion and respect. The key distinction between proactive and reactive allyship is that reactive allyship is in response to a negative event, while proactive allyship tries to prevent oppression. According to this behavior classification typology, pronoun sharing could be both proactive and reactive allyship. Pronoun sharing could be reactive if an employee decides to begin sharing their pronouns after witnessing a TGD coworker be harassed at work. Alternatively, a person could start sharing their pronouns at work after learning that pronouns signal support for LGBTQ people.

Much of the existing literature investigates reactive allyship. The foundational study that has influenced much of the allyship intervention literature developed a framework classifying how an ally can act (Bowes-Sperry & O'Leary-Kelly, 2005). This work is popularized as it emphasizes action in response to prejudice. Utilizing interventions to train employees to take action against bias is a more effective strategy to further diversity efforts than traditional diversity training (Martinez & Bernard, 2024). Allies have been identified as key elements in aiding diversity management efforts due to their social power and influence. Therefore, equipping employees with an avenue to engage in allyship is critical to advancing organizational inclusion.

Within the literature, several constructs have been investigated that are adjacent to allyship interventions. First, bystander interventions, which involve individuals not directly involved in a problematic encounter speaking up or supporting the targeted individual (Griffith et al., 2021), are the most studied. Second, constructive confrontation involves an ally verbally confronting a perpetrator's negative behavior, attitude, or assumption (Martinez et al., 2017). Third, the concept of oppositional courage encourages allies to intervene by speaking up when social injustices occur (Thoroughgood et al., 2021). Last, positive psychology interventions have been utilized to highlight the value of a stigmatized group or person as a strategy to combat negative stereotypes and assumptions (Warren et al., 2022). While all of these interventions have different names, they all have the same goal to encourage a nontargeted individual to confront bias and oppression and promote equality for marginalized persons.

Research on these reactive allyship behaviors has been investigated in the context of sexual harassment (Bowes-Sperry & O'Leary-Kelly, 2005), prejudice (Ashburn-Nardo et al., 2008), workplace bullying (Saam, 2010), and LGBTQ bias (Martinez & Bernard, 2024). Across the allyship intervention literature, there is a clear consensus; interventions that disrupt and address bias in some way lead to more positive organizational and interpersonal outcomes (Griffith et al., 2021). This powerful finding should be harnessed by practitioners and mobilize organizations to incite allyship interventions.

Initiating allyship interventions shifts the focus of allyship from the individual level to a systems level. When organizations generate and promote allyship interventions, it alleviates the burden for employees to overcome barriers to allyship independently. Emerging literature is calling for the dominant theme of the burden of allyship being placed on individuals to shift to being placed on the organization (Warren et al., 2024). Framing allyship as an individual's

responsibility can be limiting and unrealistic (Warren et al., 2024). Allyship does not occur in a vacuum; allyship is a function of individuals and organizational contexts. The responsibility to promote allyship exceeds the responsibility of any single person; organizations need to prompt and incite allyship interventions.

Researchers theorize that the most effective allyship interventions – deliberate actions or strategies designed to promote allyship behaviors within organizations – are those that address barriers at the contextual, interindividual, and intraindividual levels (Warren et al., 2024). Taking on a systems-level approach and considering how individuals, group norms, and policies influence allyship behaviors can be used to generate interventions. In turn, these interventions can be utilized to dismantle and address multiple barriers that hinder allyship engagement.

The current study seeks to test an allyship intervention. The proposed allyship intervention seeks to increase pronoun sharing behaviors among cisgender people. Investigating if individual-level behaviors can be increased by organizations removing knowledge and ability barriers to allyship engagement is likely to be better than no intervention based on the findings of past studies. This study specifically seeks to increase rates of pronoun sharing as a form of TGD allyship by reducing barriers related to pronoun sharing.

**Pronoun Sharing**

There are two distinct kinds of pronoun-related behaviors allies can engage in: pronoun sharing and pronoun usage. Pronoun usage refers to the act of employing the appropriate and preferred gender labels or titles when addressing or referring to someone else (Huffman et al., 2021). The consistent use of gender-affirming pronouns and titles has been linked to increased perceptions of support from supervisors, coworkers, and organizations for transgender (TGD) employees (Huffman et al., 2021). In contrast, pronoun sharing involves the explicit declaration

of one's own pronouns, indicating how they prefer to be referred to in third-person contexts. Importantly, pronoun sharing is often a necessary precursor to proper pronoun usage for TGD people because individuals' pronouns cannot always be assumed based on traditional gender stereotypes. Without clear pronoun sharing, others may inadvertently rely on incorrect gender assumptions. More broadly, research on cisgender pronoun sharing suggests that when cisgender individuals engage in pronoun sharing, it has the potential to signal genuine support for pronoun norms and can be perceived as an allyship behavior endorsing TGD inclusivity (Kodipady et al., 2022). When pronoun sharing becomes normalized by the gender majority, it has the potential to increase comfort levels for gender minorities, making them more likely to share their own pronouns. Given the social influence exerted by majority groups, the pronoun behaviors of cisgender individuals can shape norms within organizations.

The present research focuses specifically on pronoun sharing rather than usage. Explicit pronoun sharing is particularly beneficial as it helps avoid stereotypes and biases that can lead to misgendering, which is often disrespectful, alienating, and invalidating for gender-nonconforming individuals (Dietert & Dentce, 2009; Sawyer et al., 2016). Members of the gender majority, due to their social privilege, are uniquely positioned to normalize pronoun-sharing behaviors by sharing their own pronouns and appropriately using the pronouns of TGD coworkers. Titles and pronouns are prevalent in workplace communication, both verbally and in written forms (Huffman et al., 2021). Given the demonstrated impact of pronouns on trans well-being (Huffman et al., 2021), it is likely that widespread adoption and normalization of pronoun-sharing behaviors will positively correlate with feelings of support among TGD individuals.

In attempts to create more TGD inclusive workspaces some people have recently begun trying to normalize pronoun behaviors. It is becoming increasingly common for employees using

workplace applications like PeopleSoft, Zoom, LinkedIn, and Slack, to display their pronouns on their profile (Ale-Ebrahim et al., 2023). Additionally, there is an increased trend of including pronouns in email signatures, online profiles, and workplace biographies (Strophshire, 2019). Similarly, some people have begun introducing themselves by sharing their names and gender pronouns (Pew Research Center, 2019). An example of this practice would be, "My name is Taylor, and my pronouns are she/hers." Possible pronouns are she/her, he/him, they/their, ze/hir, a combination of these, others not listed, or a preference to be referred to by name and not pronouns. The heightened frequency of pronouns at work likely stems from the desire to promote diversity, inclusion, and respect.

With many companies seeking to be perceived as LGBTQ-friendly and inclusive, the display of pronouns is a simple, low effort way to achieve this image. Research has demonstrated that pronouns have the potential to serve as an identity safety cue (Johnson et al., 2021) and signal that an organization is welcoming to gender and sexual minorities. Other research has found that LGBTQ-friendly environments are associated with higher job satisfaction (Huffman et al., 2008), increased feelings of psychological safety (Trau, 2015), and organizational citizenship behavior (Drechny, 2021) among gender and sexual minorities. Overall, pronoun behaviors can be interpreted as a social action encapsulating a pro-TGD attitude and behavior seeking to create a more equitable environment for LGBTQ people at large (Gates et al., 2021).

With the influx of pronoun behaviors entering the workforce, more people are becoming familiar with and forming opinions related to the appropriateness and meaningfulness of pronouns. Over a third of Americans believe it is extremely important or very important to use a person's preferred pronouns (such as "he" instead of "she") if a person transitioned to a gender different than their sex assigned at birth (Pew Research Center, 2022). This emerging societal

value is being integrated into the workplace by normalizing pronoun use and creating gender identity-focused policies. One study found that gender equality policies, along with supportive coworkers, were related to a reduction in perceived discrimination among transgender individuals (Ruggs et al., 2015). Additional research demonstrated that coworkers influence positive outcomes for gender minorities (Griffith & Hebl, 2002; Law et al., 2011). Together, these research findings highlight the key role gender majorities play in reducing discrimination experiences and providing social support in the workplace for gender minorities.

**Choice Architecture and Nudges**

Despite the evidence supporting the potential benefits of gender majorities engaging in pronoun sharing, little is known about how to encourage and increase such behavior. Choice architecture (Thaler & Sunstein, 2008), and the concept of nudging (Thaler & Sunstein, 2008) are tools identified in the behavioral sciences that may prove useful for encouraging pronoun sharing among gender majorities. Choice architecture suggests that decisions and behaviors can be influenced by what and how information is presented (Thaler & Sunstein, 2008). A nudge is any aspect of choice architecture that guides behavior in a predictable way. If organizations utilize choice architecture and the theory of nudges to present cues to cisgender employees during decision points where pronouns could be shared, cisgender people may be more likely to engage in the behavior. This study seeks to design a test an allyship intervention that is rooted in principles of choice architecture to increase rates of pronoun sharing.

Broadly, choice architecture refers to how the design, presentation, and type of information given to decision-makers impacts what is chosen (Thaler & Sunstein, 2008). According to choice architecture literature, there is no neutral way to present options without impacting the choice being made (Johnson et al., 2021). Some examples in which choices can be

influenced are the number of options, presentation order, ease of selection, and pre-set defaults. Because choice architecture is such an effective, inexpensive, and easily implemented behavioral intervention it has become very popular in the social sciences. This generally applicable technique has been used to help aid in improving complex social issues such as public health (Blumenthal-Barby & Burroughs, 2012), sustainable environmental behaviors (Olya et al., 2024; Pichert & Katsikopolous, 2008), and financial planning and decision making (Madrian & Shea, 2001; Thaler & Benartzi, 2004).

Münscher et al. (2016) provided a review of choice architecture literature and identified three broad categories of choice architecture with each category containing distinct intervention techniques that have been found to be effective in driving choice outcomes. The authors labeled the first category *decision information*, a design technique that focuses on the presentation of relevant information without changing any of the options. Examples of this technique are changing the format or presentation, making it easily available and visible, simplifying the information, and providing a social reference point of decision-relevant content. A second category is *decision structure*, which can involve changing the decision-making format by setting pre-selected defaults, inducing or reducing effort required to make the decision, or modifying the consequences of decision options. Lastly, *decision assistance* is meant to help decision makers choose the options that are beneficial and align with their behavior intentions. This technique can be done by providing reminders and fostering commitment to actions that align with one's goals and beliefs. The proposed study seeks to investigate how decision structuring can be used to frame the option of pronoun sharing in a way that results in more people engaging in the behavior.

Nudges are any intervention falling under the larger umbrella of choice architecture that alters behavior in a predictable way without limiting choices (Thaler & Sunstien,2008). More specifically, nudges are small environmental cues that attract attention and influence behavior without requiring much cognitive effort (Thaler & Sunstein, 2008). They are transparent and not intended to trick people into engaging in behaviors they would not otherwise choose (de Ridder et al., 2022). That is, they do not limit a choice set; people have the same amount of choice autonomy in their decision-making when a nudge is present. Nudges simply tilt people towards a decision or behavior while still allowing the option to opt out of a behavior. For example, nudges make a desirable behavior easy to engage in or remind people of an option that may not be at the forefront of their minds. Nudges can be a simple and cost-effective way to encourage adopting a specific behavior.

Popular examples of using decision structure and nudges to facilitate behavior outcomes can be found in our everyday lives. During the COVID-19 pandemic people were advised to engage in social distancing and stay six feet away from others when in public spaces. Decision structuring was used to promote proper social distancing and reduce the effort required to achieve safe practices. Highly visible markers were stickered to the floor to nudge people to remain six feet apart. Research found that people were significantly better at social distancing with the help of social distancing markers compared to when no nudge was present (Lu & Zhu, 2024). Another example can be observed in how waste management behaviors are nudged. To prevent recyclable material from going to landfills recycling bins often have different visible design features than trash bins. In some cases, recycling bins are a different size, shape, color, have smaller bottle sized opening, or have visual sorting instructions. By modifying the design of recycling bins, the amount of effort needed to properly sort waist can be altered. One study found

that sorting information nudges decreased sorting errors by 7% (Lotti et al., 2023). These are just a few examples in which nudge interventions have been used to successfully create behavior change.

Sometimes, structuring choices can help people learn to make better choices independently (Thaler & Sunstein, 2008). Prior to the COVID-19 pandemic, many people were likely unaware of how to correctly social distance, yet reminders flooded public spaces and aided people in learning and executing the behavior. The proposed study will examine the impact of changing the decision structure by manipulating the effort required to share pronouns. The control condition in this study will not explicitly mention pronoun sharing in the decision choice set, but participants will have the option to share if they are self-inclined. The experimental conditions will test whether a nudge increases pronoun sharing likelihood. There are two different nudge conditions; the first is a text box nudge, which has an open text box where participants can choose to type out their pronouns. The second is a list nudge, which has a list of common pronouns as choices.

It was expected that although both nudge conditions would be more effective than a no nudge condition, the listed choice condition would be more effective because it reduces effort and decreases the likelihood that knowledge of how to share pronouns is a barrier. The list option will enable participants to make inferences about what a pronoun is, allowing people to learn while deciding whether to share. Additionally, the listed choices are more salient and easier to access, which has been found to increase the chance of steering a behavior toward a particular outcome (Münscher et al., 2016). The list option intends to remove the knowledge barrier needed to share if one is unfamiliar with gender pronouns. An abundance of research on choice architecture has found that one of the best ways to encourage a behavior is to make it easy

(Münscher et al., 2016; Thaler & Sunstein, 2008). By simplifying a choice, increasing convenience, and removing any barriers, people are more likely to engage in a behavior. Regarding the list option, the choice to share is less effortful, requires less knowledge, and is more convenient compared to the control and text box nudge conditions. It is hypothesized that the list nudge will result in greater rates of pronoun sharing since the list of options reduces the amount of effort required to share when compared to manually typing out one's pronouns.

*Hypothesis 1*: Participants in the nudge conditions will be more likely to share pronouns than participants in the control (no nudge) condition.

*Hypothesis 2*: Participants in the list nudge condition will be more likely to share pronouns than participants in the text box nudge condition.

**Limitations of Nudges**

While nudges have proven to be a useful tool to facilitate behavior change, there are limitations when using nudge theory. "Nudgeability", a term coined by de Ridder and colleagues (2022), are the specific conditions under which people are suspected to be susceptible to the influence of nudges. These authors found nudge effects are not impacted by levels of transparency but are moderated by people's preexisting preferences for a choice, such that people cannot be nudged into doing something they do not want to do. People are unlikely to be affected by nudges if they have clear preferences that are in opposition or support of the nudge (Johnson & Goldstein, 2003). People are not affected by nudges that promote a behavior they would engage in regardless of the nudge's presence or when the nudge pushes a behavior that opposes one's preferences, resulting in the nudge being ignored. As an illustration, an opt-out default nudge intervention study aimed to automatically channel a portion of a person's tax refunds into a savings account demonstrated ineffectiveness when participants had pre-existing plans to spend

their tax refunds (Bronchetti et al., 2013). In a separate investigation, a nudge involving the relocation of whole-wheat bread to a more visible and accessible position at a grocery store exhibited ineffectiveness, likely attributable to consumers adhering to habitual purchasing patterns and sticking with their preferred bread (de Wijk et al., 2016). In both of the above studies, the explanation of preexisting preferences causing the nudges to fail was inferred post hoc.

In the context of pronoun sharing, various factors likely influence one's choice to share pronouns. One factor may be knowledge—cisgender people (i.e., people whose gender matches their sex assigned at birth) may not share their pronouns because they are unaware of what pronouns are and how to use them. This knowledge gap can be partially addressed by providing a list of options. By providing options participants can make inferences about what pronouns are even if they are unfamiliar. Other barriers that may be more difficult to address include beliefs on gender and sex, religious beliefs, resistance to social change, and perceived riskiness of the behavior. Such individual differences and beliefs are likely to limit the impact of nudges. The present investigation examines beliefs on sex and gender and ally identity as potential variables that may impact the effectiveness of nudge interventions.

### *Gender Beliefs*

Beliefs on sex and gender likely relate to pronoun behaviors. Cisnormativity is the assumption that cisgender identities (peoples whose gender matches their sex assigned at birth) are normal and TGD identities are abnormal (Zimman, 2018). Cisnormativity operates on the belief that gender is binary (i.e., man or woman). Within the United States, 60% of adults hold cisnormative beliefs and think that whether a person is a man or a woman is determined by their sex assigned at birth (Pew Research Center, 2022). The explicit sharing of gender pronouns

challenges cisnormative gender beliefs as it disputes the idea that gender is binary, can be inferred based on looks, and is determined by the sex assigned at birth (Butler 1999; Youdell 2005). It is likely that people who have a cisnormative view of gender are less likely to engage in pronoun sharing since this behavior does not align with this view of gender.

According to cognitive dissonance theory psychological discomfort or tension arises when an individual is confronted with a contradictory belief (Festinger, 1957). In the case of pronouns, cognitive and emotional tension may occur when pronoun information is requested since pronoun sharing is a trans normative behavior that does not align with cisnormative behavioral norms. For people who hold cisnormative beliefs, engaging in pronoun sharing is likely incongruent with their beliefs and values. Cognitive dissonance theory would suggest that this lack of congruence can create an aversive tension (Festinger, 1957).

Cognitive dissonance theory suggests that when there are conflicting cognitions people are motivated to reduce the incongruency by changing their beliefs, attitudes, or behaviors or by rationalizing and justifying the discrepancy (Festinger & Carlsmith, 1959). To alleviate the discomfort caused by dissonance people may adjust their belief system (Festinger & Carlsmith, 1959) and take on a trans normative outlook or add new cognitions to justify or support their cisnormative belief system. Justifications of cisnormativity may include beliefs that TGD people are abnormal, confused, or mentally ill. While these justifications are misconceptions and incorrect, they can reduce the feelings of dissonance and reinforce cisnormativity. Given that pronoun sharing does not align with a cisnormative view on gender, people who believe gender is based on sex assigned at birth may be less likely to engage in pronoun sharing regardless of condition thus weakening the impact of the nudge manipulations.

*Hypothesis 3*: Cisnormative gender beliefs will be negatively related to pronoun sharing.

*Hypothesis 4*: Cisnormative gender beliefs will moderate the effect of the experimental conditions on pronoun sharing such that beliefs will weaken the effect of the experimental manipulations on pronoun sharing.

### *Ally Identity*

People who self-identity as allies, seek to provide support to people who hold marginalized identities. Allies are typically members of at least one dominant social group such as male, white, able bodied, straight, or other socially privileged groups (Broido, 2000). *Allyship* is when action is taken by allies to support and advocate for stigmatized groups or identities. The kind and frequency of behaviors to reduce oppression can vary among individuals. Current literature suggests that there is a distinct psychological process individuals undergo as they develop their ally identities (Martinez et al., 2024). As allies develop, they engage in numerous behaviors to learn how to best support stigmatized targets. While the path to ally identity development may not be linear and the same for all persons there is commonly thought to be five stages: apathy, dissonance, learning, stumbling, and integrating. Allies progress and grow stronger in their identity by learning and engaging in prosocial behaviors over time always seeking to reduce mistreatment. Being that there is no one right way to become an ally or be an ally, there may be individual differences in the kinds of behaviors people engage in who identify as an ally. These differences may be due to stage of development the person is or be related to the group they are seeking to support since different oppressed groups have different social needs and require different mechanism for support. Given that allyship is effortful and requires one to be open, supportive, aware of oppression, and have knowledge and skill required to provide support; some people may be high in allyship while others may not. People high in allyship that seek to support gender minorities try to bolster gender equality.

TGD allies seek to advocate for gender minorities to achieve the same rights, opportunities, and access to resources as cisgender individuals. This includes protection from discrimination, access to appropriate healthcare, legal recognition of their gender identity, and the right to live and express themselves freely and safely. Over the last decade there has been a large movement among LGBTQ-allies to support transgender people by using the proper labels to affirm and support those with TGD gender identities (Zimman, 2018). Language has been a fundamental way in which allies have sought to support TGD people in their everyday lives, since gender identity goes beyond sole physical expression of gender. An example of gender inclusive allyship is normalizing pronoun behaviors since proper names and titles can be affirming and seen as supportive for gender nonconforming persons (Huffman et al., 2021). Experts have researched and argued that gender inclusive practices can create affirming workspaces for TGD people (Brown et al., 2020; Case et al., 2009; Knutson et al., 2022; MacNamara et al., 2017; Mennicke & Cutler-Seeber, 2016). Both by using pronouns and titles specified by TGD people and by sharing one's own pronouns allies can create affirming work environments. Pronoun sharing can be seen as a way to disrupt the assumption that gender expression, sex, pronouns, and identity must align (Dembroff & Wodak, 2018; Morgenroth & Ryan, 2021; Wentling, 2015). Due to the potential positive outcomes pronoun sharing can have, this TGD equity behavior is becoming more common among allies trying to support marginalized gender identities. It is suspected in this study that allyship is positively related to pronoun sharing regardless of condition.

Since people high in allyship already have a strong predisposition to engage in unprompted behaviors that support gender minorities, they will likely not be affected by the presence of a nudge. People high in allyship are likely to share their pronouns in the absence of a

nudge, making the nudge irrelevant. This is because nudges do not impact behavior that people plan to engage in, regardless of the nudge's presence (de Ridder et al., 2022). For example, researchers found that people with stronger pro-environmental attitudes were more likely to be impacted by a nudge that promoted sustainable products (Taube & Vetter, 2019). However, a follow-up study revealed that people with stronger pro-environmental attitudes were less likely to choose a non-sustainable product even when nudged, meaning the group higher in pro-environmental attitudes selected the "greener" option regardless of the nudge in each study (Taube & Vetter, 2019). Another separate investigation revealed that individuals' selection between a small, medium, and large soda was primarily influenced by their degree of thirst (leading to relatively larger serving choices) and their degree of health consciousness (leading to relatively smaller serving choices), irrespective of the existence of a nudge (Venema et al., 2019). Theotokis and Manganari (2015) also demonstrated the superfluousness of a nudge in circumstances where participants already harbor strong inclinations toward the nudged behavior. Specifically, their research found the impact of a default nudge aimed at encouraging towel reuse was notably diminished among individuals who already exhibited a high level of environmental consciousness. In this case, the nudge had minimal influence on behavior since environmentally conscious participants intended to reuse their towels regardless, compared to individuals with lower environmental concerns.

The above examples describe situations where people have clear preferences, causing the strength of the nudge to vary. Ambivalent people who lack preexisting predilections or are in doubt about what decision to make will likely be the most affected by a nudge. People who engage in behavior regardless of a nudge's presence can strengthen or weaken the effectiveness of a nudge. A nudge will not affect those with strong, clear preferences. In the case of the current

study, people who are neutral towards gender minorities were suspected to be most affected by the nudge manipulations. Alternatively, participants who strongly identify as a TGD ally were suspected to be more likely to share when nudged, likely increasing the strength of the nudge. However, participants low in TGD identities may still be influenced by the nudge since being low in allyship does not necessarily mean that someone is opposed to TGD identities.

*Hypothesis 5*: TGD allyship identity will be positively related to pronoun sharing.

*Hypothesis 6*: TGD allyship identity will moderate the effect of the experimental conditions on pronoun sharing such that TGD allyship identity will weaken the effect of the experimental manipulation on pronoun sharing. Specifically, the effect of the experimental manipulation will be weaker for those reporting a high level of allyship.

# METHOD

## Participants

Participants in this study were recruited online via Prolific, an online survey platform that has been found to yield high-quality data (Peer et al., 2022). Individuals who met the inclusion criteria were invited to partake in the study. Specifically, participants needed to be over 18, fluent in English, cisgender (gender matches their sex assigned at birth)[1], and reside in the United States. A total of 330 participants took part in the survey. After data cleaning a final sample of 318 participants remained ($N$ = 103 in the control condition, $N$ = 104 in the text box nudge condition, and $N$ = 111 in the list nudge condition). A total of 12 participants were removed due to insufficient effort. Insufficient effort was determined by taking an average of less than two seconds on items within each scale, writing a nonsensical email response, and failing to list creativity specialist or a similar title when creating their email signature. If participants failed two or more of these criteria, they were removed entirely from the study due to lack of effort. An a priori power analysis indicated that the desired sample size for this study was 241 ($a$ = 0.05, $B$ = 0.8, w = 0.2, df = 2)[2].

There was variation in completion rates among the participants. A total of 318 participants completed the main task (i.e., was exposed to the experimental manipulations and completed the dependent variable); however, 29 participants failed to answer all self-report or demographic questions. Thus a total of 289 participants completed the entire study. Post hoc and sensitivity analyses confirmed that attrition was not significantly related to condition and results did not change when including or excluding the 29 participants who did not complete the self-

[1] Only cisgender participants will be included in this study because we are interested in how this population responds to nudges.
[2] Nudges have been found to have a median effect size of 0.21 across a variety of contexts and categories (Hummel & Maedche, 2019).

report items. Thus, we decided to retain the full sample of 318 where possible; however, analyses involving self-report items will include a smaller sample.

Of those who answered the demographic questions, 172 (63%) identified as female, 92 (36%) as male, and one person preferred not to answer. In terms of race and ethnicity, 203 (69%) identified as White/European American, 53 (18%) as Black or African American, 14 (5%) as Asian or Asian American, 8 (3%) as American Indian, Alaska Native, and/or Indigenous, 7 (2%) as Latino/a/x or Spanish Origin, 3 (1%) as Bi/Multi-racial, 2 (1%) as Southeast Asian, 2 (1%) as Arab American, Middle Eastern or North African, and one person preferred not to answer. Age ranged from 18 to 80 ($M = 43$, $SD = 13$). None of the sample identified as transgender while two people declined to answer. A majority ($N = 282$ (96%)) of the sample identified as heterosexual, while a small portion of the sample identified as gay ($N = 1$), asexual ($N = 6$), demisexual ($N = 2$), bisexual ($N = 1$), pansexual/queer ($N = 1$) and one participant chose not to disclose their sexuality. In terms of educational attainment, 2 (1%) completed some high school, 36 (12%) completed high school, 55 (19%) endorsed some college, 27 (9%) earned an Associate's degree, 111 (38%) a Bachelor's degree, 53 (18%) a Master's degree, and 10 (3%) earned a doctorate.

**Design and Procedure**

This study utilized an experimental design which was carried out in a survey format on Qualtrics. Participants were randomly assigned to one of three conditions: control, text box nudge, and list nudge. The survey was administered at a single time point and took an average of 9 minutes to complete. Participants were financially compensated $1.50 for their time per Prolific's fair payment standards. The survey had six parts: (1) introduction, (2) main task, (3) distractor task, (4) self-report, (5) demographics, and (6) debrief. To reduce demand effects individual difference measures were administered after the main task was complete. The order of

the self-report scales was randomized between participants and all items within each scale were randomized, when possible, to reduce order effects.

This study utilized deception and participants believed they were completing a marketing task. Participants were asked to pretend they were recently hired as a creativity specialist for a leading marketing firm. In their new role, they were told they would be creating a marketing slogan. As a new hire, they were tasked to set up their email signature. To protect participant's anonymity, they used their initials in place of their names in the email signature. Each participant was randomly assigned to one of three experimental conditions: control, text box nudge, and list nudge. In the control condition, participants were presented with three textboxes labeled: initials, role at company, and any other information (optional). In the text box nudge conditions, participants were presented with three textboxes labeled: initials, role at company, and pronouns (optional). In the list nudge condition, there were two textboxes, one for their initials and one for their role at the company and a third question labeled "pronouns (optional)" with a list of pronouns for them to select from as well as the option to not disclose. Once the email signature was created, participants wrote a marketing slogan for a fictitious company. They were tasked to send their ideas to their colleagues via email where the email signature they created auto-populated. Please see Appendix A for study materials including manipulations. Once the main task was complete participants completed self-report measures and demographic information (see Appendix B).

**Measures**

Table 1 contains the descriptive statistics and correlations for the study variables.

***Demographics***. Demographics were collected regarding age, sex, transgender identity, sexual identity, racial heritage, and education.

**Table 1**

*Descriptive Statistics and Correlations for Study Variables*

| | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Sex | 0.64 | 0.48 | | | | | | | |
| 2. Age | 42.69 | 13.06 | 0.09 [-.03, .20] | | | | | | |
| 3. Education | 4.39 | 1.41 | 0.03 [-.09, .14] | -0.03 [-.15, .80] | | | | | |
| 4. Condition | 0.68 | 0.47 | -0.05 [-.16, .07] | -0.01 [-.12, .11] | 0.04 [-.08, .15] | | | | |
| 5. Cisgender Beliefs | 0.44 | 0.50 | 0.01 [-.10, .12] | 0.03 [-.08, .14] | 0.03 [-.08, .15] | 0.05 [-.07, .16] | | | |
| 6. Ally Identity | 22.61 | 6.75 | 0.01 [-.10, .13] | -0.04 [-.16, .08] | 0.09 [-.03, .20] | 0.07 [-.05, .18] | 0.58*** [.50, .65] | 0.91 | |
| 7. Knowledge | 15.26 | 3.36 | 0.03 [-.08, .15] | -0.11* [-.22, .00] | 0.17* [.05, .28] | 0.01 [-.11, .12] | 0.31*** [.20, .41] | 0.49*** [.39, .57] | 0.72 |
| 8. Pronoun Sharing | 0.42 | 0.49 | -0.02 [-.14, .10] | -0.08 [-.19, .04] | -0.01 [-.12, .10] | 0.59*** [.51, .66] | 0.20*** [.08, .30] | 0.21*** [.10, .32] | 0.18** [.06, .29] |

*Note. N* = 289-318; Sex: 0 = male, 1 = female; Education: 1= some high school, 2 = high school, 3 = some college, 4 = Associate's degree, 5 = Bachelor's degree, 6 = Master's degree, 7 = doctorate degree. Condition: 0 = control condition; 1 = nudge conditions; Cisgender beliefs: 0 = cisnormative; 1 = transinclusive; Pronoun sharing; 0 = no; 1 = yes; numbers in square brackets represent 95% confidence intervals. The Confidence interval is a plausible range of population correlations that could have cause the sample correlation (Cumming, 2014); numbers on the diagonal represent coefficient alpha.

* $p < .05$, ** $p < .01$, *** $p < .001$

***Pronoun Behavior***. Pronoun behaviors were measured behaviorally using a binary classification. Responses were evaluated, and answers were coded based on yes/no criteria. A yes will indicate that pronouns were shared, while a no meant pronouns were not shared. Participants who entered text that was not pronouns were recorded as a no. To be considered pronouns, the text had to be either she/her, he/him, they/them, or combinations of these.

***Perceived Knowledge and Ability.*** Participants were asked about their knowledge of pronouns and their ability to use pronouns. This measure consists of four items that were written specifically for this study and was inspired by insights generated from a Pew Research Center survey (Pew Research Center, 2019). One item was used to assess knowledge (e.g., How much, if anything, have you heard about people preferring that others use gender neutral pronouns such as "they" instead of "he" or "she" when referring to them?) with response options of a lot, a little and nothing at all. Three items measured ability (e.g., I feel I could successfully share my pronouns when introducing myself) using a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). The items are meant to assess one's knowledge of and perceived ability to use and share pronouns. These items were used in exploratory analyses to investigate if providing a list of pronouns aids people who have minimal pronoun knowledge. The alpha coefficient for this measure was $\alpha = .72$, meeting the standard of acceptability set for internal consistency (Boyd et al., 2014).

***Gender and Sex Beliefs.*** Participants were asked about their beliefs on gender and sex and selected a statement that aligned best with their personal beliefs (Pew Research Center, 2022). The options were "Whether someone is a man or a woman is determined by the sex they were assigned at birth" or "Someone can be a man or a woman even if that is different from the sex they were assigned at birth". Participants selected one of the two statements. Participants

indicating that gender is based on sex assigned at birth is consistent with a cisnormative view of gender.

***Ally Identity***. The openness and support subscale from the Ally Identity Measure (Jones et al., 2014) was used to measure gender minority ally engagement. The original items were modified for the purpose of this study by replacing the phrase "sexual minority" with "gender minority". Participants responded to this seven-item self-report measure using a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*) and endorsed behaviors and attitudes towards gender minorities (e.g., "I have taken a public stand on important issues facing gender minority people"). Consistent with the original scale development, the items were summed for an overall index of ally identity. Higher scores indicate a higher degree to which people identify as allies and engage in behaviors that support the gender minorities along with being open to learning more about gender minorities. The adapted measure had acceptable reliability ($\alpha$ =.91).

***Explanation for Decision.*** Once participants completed the study, they were given the opportunity to fill in an open text box and share what factors influenced their pronoun sharing behavior (e.g. "Please tell us about what factors influenced your decision to share or not share your preferred pronouns in your email signature.") This question was presented right before the debrief and the qualitative data collected was used in exploratory analyses to better understand participants' decision-making processes.

# RESULTS

The objective of the present study was to determine if nudges can be used as allyship interventions. Specifically, the goal of this study was to test if nudges can increase pronoun sharing behaviors and to determine if ally identity and beliefs on sex and gender effect the strength of a nudge. The analyses for this study involved a series of logistic regressions to examine the effects of the experimental conditions on the binary dependent variable, pronoun sharing. The independent variable consists of three experimental conditions: (1) control, (2) text box nudge, and (3) list nudge. I also investigated two predictor variables as potential moderators: beliefs on sex and gender (binary) and allyship identity scores (continuous). Allyship identity scores were calculated by summing self-reported items, while beliefs on sex and gender was assessed as a binary measure.

As stated above, there was missing data for 29 participants in this study. Although all participants completed the main task, some participants ($n$ = 24) did not complete any of the self-report measures and a small number of participants ($n$ = 5) did not complete the Ally Identity Measure. Because all participants completed the main task, analyses examining the effect of condition on pronoun sharing were able to be conducted on the full sample ($N$ = 318). A sensitivity analysis was conducted to compare the results with the sample of 318 to the sample of 289 that excluded those with missing data. Results were similar and I thus retained analyses using the full sample of 318 where possible. Additionally, it was not possible to examine timing information as an indicator of insufficient effort responding for the participants who did not complete the self-report items; however, none of the 29 participants who had missing data failed the attention check in the main task suggesting that insufficient effort responding was unlikely to impact the results of our experimental manipulation for those participants. Taken together,

analyses that examine the effect of the experimental manipulations include the full sample of 318 participants; however, analyses that include self-report items utilized a subset of this larger sample due to missing data.

**Table 2**

*Pronoun Sharing Frequency by Condition*

| | | Yes | | No | |
|---|---|---|---|---|---|
| | Total *N* | *N* | % | *N* | % |
| Control | 103 | 0 | 0 | 103 | 100 |
| Text Box Nudge | 104 | 38 | 36.5 | 66 | 63.5 |
| List Nudge | 111 | 96 | 86.5 | 15 | 13.5 |

Hypothesis 1 predicted that participants in the nudge experimental conditions would be more likely to share pronouns than people in the control condition. Indeed, 62.3% of participants in the experimental conditions shared their pronouns compared to 0 participants in the control condition (see Table 2). Because the control condition had a base rate of zero, we did not conduct the planned analyses because conducting a logistic regression when one condition has a base rate of zero creates a perfect separation meaning there is a perfect linear relationship between the predictor and criterion creating challenges for maximum likelihood estimation. Thus, I used a method known as Firth's bias-reduced logistic regression (Firth, 1993) to address problems with maximum likelihood estimation that arises when logistic regression fails to converge as can be the case with perfect separation. This analysis was conducted using the 'logistf' package in R (Heinze et al., 2023). To conduct this analysis, contrast coding was used—the two nudge conditions were coded as 1 and the control condition was coded as -2 to compare the control condition to the average of the two nudge conditions. Pronoun sharing was coded as 1 (yes) or 0 (no). The results of the biased-reduced logistic regression model contained 318

participants and correctly predicted 75% of the cases ($X^2(1) = 143.11$, $p < .001$, Nagelkerke $R^2 = .50$). If a participant was nudged to share their pronouns, they were 7 times more likely to share than those in the control condition who did not experience a nudge ($B = 1.94$, $Wald(1) = 26.89$, $p < .001$, OR = 6.99, 95% CI = [1.29, 3.56]). Taken together, Hypothesis 1 received strong support—nudging can be an effective tool to promote sharing pronouns.

Hypothesis 2 predicted that the list nudge would be more effective than the text box nudge and was analyzed using a logistic regression ($N = 318$). This analysis was conducted using the 'base' package in R (R Core Team, 2024). Contrast codes were generated for each variable in this analysis so the analysis could be conducted—the control condition was coded as 0, the text box nudge condition was coded as -1, and the list condition was coded as 1 to compare the two nudge conditions. Pronoun sharing was coded as 1 (yes) or 0 (no). The regression model correctly predicted 83.3% of the cases ($X^2(1) = 371.86$, $p < .001$, Nagelkerke $R^2 = .37$). In support of Hypothesis 2, if a participant was in the list nudge condition they were 3 times more likely to share their pronouns than those in the text box nudge condition (B = 1.18, $Wald(1) = 10.66$, $p < .001$, OR = 3.24, 95% CI = [2.37, 4.51]). This finding is consistent with past nudge literature (Münscher et al., 2016) that suggests the easier you make a behavior to engage in, the more likely people are to enact that behavior. In this case, the list nudge made sharing pronouns easier than needing to manually type out one's pronouns.

To investigate Hypothesis 3, which predicted cisnormative gender beliefs would be negatively related to pronoun sharing a Phi correlation analysis was conducted to examine the association between these two binary variables. This analysis was conducted using the 'psych' package in R (Revelle, 2024). The results of the analysis are displayed in a 2x2 contingency table shown in Table 3. The sample used in this analysis contained 294 participants. The analysis

yielded a significant result suggesting that gender beliefs are related to pronoun sharing behaviors such that those who hold cisnormative gender views are less likely to share their pronouns ($\Phi = .20$, $p < .001$). Alternatively, those who believe gender is not based on sex assigned at birth were more likely to share their pronouns. Thus, Hypothesis 3 received support suggesting that gender beliefs have a meaningful relationship with pronoun sharing behaviors.

**Table 3**

*Contingency Table Showing the Relation between Gender Beliefs and Pronouns Behavior*

| | Belief | | |
|---|---|---|---|
| Behavior | Cisnormative | Transinclusive | Total |
| Pronouns not shared | 109 | 91 | 170 |
| Pronouns Shared | 55 | 69 | 124 |
| Total | 164 | 130 | 294 |

*Note*. Cisnormative participants selected the response option "Whether someone is a man or a woman is determined by the sex they were assigned at birth". Transinclusive participants selected the response option "Someone can be a man or a woman even if that is different from the sex they were assigned at birth".

Hypothesis 4 explored the moderating effect of cisnormative gender beliefs on the relationship between the experimental conditions and pronoun sharing. This analysis was conducted using the 'logistf' package in R (Heinze et al., 2023). Contrast codes were generated for each variable in this analysis so the analysis could be conducted— the two nudge conditions were coded as 1 and the control condition was coded as -2 to compare the control condition to the average of the two nudge conditions. Pronoun sharing was coded as 1 (yes) or 0 (no). Gender beliefs were coded as 1 (transinclusive) or 0 (cisnormative). An interaction term between the experimental conditions and cisnormative beliefs was included in the logistic regression model to test this moderation effect. Specifically, a product term was created between cisnormative beliefs and a contrast between the control condition and the two nudge conditions. The moderated logistic regression conducted to examine whether gender beliefs influenced the relationship

between experimental condition and pronoun behavior did not support Hypothesis 4. The overall model was statistically significant and explained 14% of the variance in pronoun sharing behavior, $X^2((3, N = 294) = 137.30, p < .001$, Nagelkerke $R^2 = .13$), correctly classifying 70% of the cases. These results indicate that the predictor variable of experimental conditions significantly improved the model fit. The main effect of experimental group was statistically significant ($B = 1.58$, $SE = .48$, $p < .001$), suggesting that experimental group and exposure to a nudge was a significant predictor of pronoun sharing behavior. The main effect of gender belief was not significant ($B = .83$, $SE = .70$, $p = .27$). The interaction effect between experimental condition and gender beliefs was not statistically significant ($B = -.23$, $SE = .68$, $p = .72$), indicating that gender beliefs did not significantly moderate the relationship between experimental condition and pronoun behavior. This result suggests that gender beliefs did not diminish the effectiveness of the nudge. People who had cisnormative views of gender were still able to be nudged to share their pronouns.

To investigate Hypothesis 5, which posited that TGD ally identity would be positively related to pronoun sharing, a point-biserial correlation analysis was conducted. This analysis was conducted using the 'psych' package in R (Revelle, 2024). To generate a score for TGD ally identity, the sum of the seven items from the Ally Identity Measure (Jones et al., 2014) Openness and Support subscales were combined. Participants who failed to answer any of the items on the scale were excluded. The average ally identity score was moderate ($M = 23$, $SD = 7$). The correlation analysis specifically determined if higher summed scores were significantly related to pronoun sharing. The results indicated that those who were more open and supportive towards gender minorities were significantly more likely to share their pronouns ($N = 262$, $r = .21$, $p < .001$) providing support for Hypothesis 5.

Hypothesis 6 proposes that TGD ally identity will moderate the effect of the experimental conditions on pronoun sharing. This hypothesis was tested using the 'logistf' package in R (Heinze et al., 2023). Contrast codes were generated for variables in this analysis so the analysis could be conducted— the two nudge conditions were coded as 1 and the control condition was coded as -2 to compare the control condition to the average of the two nudge conditions. Pronoun sharing was coded as 1 (yes) or 0 (no). Ally identity was a continuous variable. A product term was created between TGD ally identity and a contrast between the control condition and the two nudge conditions. It was hypothesized that the effect of the nudges on pronoun sharing would have been weaker for those reporting high levels of ally identity but stronger for those reporting low levels of ally identity. This was assessed by examining the interaction terms to determine if the strength of the experimental manipulation varies with levels of ally identity. This hypothesis was not supported. The overall model explained 19% of the variance and was statistically significant, $X^2((3, N = 289) = 134.23, p < .001$, Nagelkerke $R^2 = .19)$, correctly classified 69% of cases. These results indicate that the predictor variable of experimental conditions significantly improved the model fit. The main effect of experimental group ($B = .64$, $SE = .93$, $p = .55$), main effect of ally identity ($B = .04$, $SE = .05$, $p = .53$), and the interaction term ($B = .05$, $SE = .05$, $p = .50$) were all nonsignificant. Consequently, these results suggest that ally identity did not moderate the relationship between experimental condition and pronoun sharing, and Hypothesis 6 was not supported.

**Exploratory Analysis**

To determine if the moderator variables of ally identity and gender beliefs moderated the relationship between nudge conditions and pronoun sharing two separate logistic regressions were conducted. The first analysis investigated whether gender beliefs moderated the

relationship between nudge conditions and pronoun sharing. The analysis used the ‘base’ (R Core Team, 2024), ‘broom’ (Robinson et al., 2024), and ‘rcompanion’ (Mangiafico, 2024) packages in R. Contrast codes were generated for each variable in this analysis so the analysis could be conducted— the control condition was coded as 0, the text box nudge condition was coded as -1, and the list condition was coded as 1 to compare the two nudge conditions. Pronoun sharing was coded as 1 (yes) or 0 (no). Gender beliefs were coded as 1 (transinclusive) or 0 (cisnormative). An interaction term between the experimental conditions and cisnormative beliefs was included in the logistic regression model to test this moderation effect. Specifically, a product term was created between cisnormative beliefs and a contrast between the two nudge conditions. The overall model was statistically significant, $X^2(3) = 101.48$, $p < .001$, Nagelkerke $R^2 = .38$), explaining 38% of the overall variance and correctly classifying 64% of cases. The main effect of experimental group was statistically significant ($B = 1.40$, $SE = .26$, $p < .001$), suggesting that participants in the list nudge condition were more likely to share pronouns. The main effect of gender belief was also significant ($B = .87$, $SE = .27$, $p = .001$) suggesting that those with a transinclusive gender belief were more likely to share. The interaction effect between experimental condition and gender beliefs was not statistically significant ($B = -.42$, $SE = .35$, $p = .23$), indicating that gender beliefs did not significantly moderate the relationship between the two nudge conditions and pronoun behavior.

I also conducted an exploratory analysis investigating whether TGD ally identity moderated the relationship between nudge conditions and pronoun sharing. The analysis used the ‘base’ (R Core Team, 2024), ‘broom’ (Robinson et al., 2024), and ‘rcompanion’ (Mangiafico, 2024) packages in R. Contrast codes were generated for each variable in this analysis so the analysis could be conducted— the control condition was coded as 0, the text box nudge

condition was coded as -1, and the list condition was coded as 1 to compare the two nudge conditions. Pronoun sharing was coded as 1 (yes) or 0 (no). Ally identity was a continuous variable, with higher values representing a higher level of ally identity. An interaction term between the experimental conditions and ally identity was included in the logistic regression model to test this moderation effect. Specifically, a product term was created between ally identity and a contrast between the two nudge conditions. The overall model was statistically significant, $X^2(3) = 109.82$, $p = .001$, Nagelkerke $R^2 = .41$), accounting for 41% of the variance and correctly classifying 69% of the cases. The main effect of experimental group was statistically significant ($B = 1.89$, $SE = .70$, $p = .01$), suggesting that participants in the list nudge condition were more likely to share pronouns. The main effect of ally identity was also significant ($B = .08$, $SE = .02$, $p < .001$) suggesting that those with higher ally identity were more likely to share. The interaction effect between experimental condition and ally identity was not statistically significant ($B = -.03$, $SE = .03$, $p = .30$), indicating that ally identity did not significantly moderate the relationship between the two nudge conditions and pronoun behavior.

A knowledge and ability measure of pronouns was also included in this study as an exploratory measure. Participants were asked about their knowledge of pronouns and their ability to use pronouns. The measure consists of four items that were written specifically for this study. One item was used to assess knowledge, and three other items measured one's ability to share and use pronouns. Only one item on the knowledge and ability scale measured pronoun sharing behavior while the other three items measured pronoun usage. Because this study is most interested in pronoun sharing, only the item measuring sharing was used in exploratory logistic regression analysis. This analysis was conducted using the 'base' package in R (R Core Team, 2024). To conduct this analysis, contrast coding was used—the control condition was coded as 0,

the text box nudge condition was coded as -1, and the list condition was coded as 1 to compare the two nudge conditions. Pronoun sharing was coded as 1 (yes) or 0 (no). Ability was entered as a predictor in the model and variables were continuous ranging from one to five, with five indicating the strongest endorsement of one's ability to successfully share pronouns. An interaction term between the experimental conditions and ability to share was included in the logistic regression model to test this moderation effect. The results of the logistic regression model contained 294 participants and correctly predicted 75% of the cases and accounted for 36% of the overall variance ($X^2(3) = 95.60$, $p < .001$, Nagelkerke $R^2 = .36$). The main effect of condition ($B = 1.26$, $SE = .63$, $p = .05$), and ability to share ($B = .26$, $SE = .12$, $p = .03$) were both significant. The interaction between condition and ability to share was nonsignificant ($B = -.01$, $SE = .16$, $p = .94$). These results suggest that ability to share pronouns did not moderate the relationship between experimental condition and pronoun sharing.

# DISCUSSION

Pronoun sharing and usage has become more popular, and these practices are becoming increasingly common in the workplace. Research has suggested that pronouns can signal identity safety cues to LGBTQ+ people (Johnson et al., 2021) and have other positive outcomes (Drechny, 2021; Huffman et al., 2008; Trau, 2015). This study aimed to design and test a possible intervention that could be used to increase rates of pronoun sharing since it has been linked to positive outcomes in the workplace for gender minorities. This study explored whether nudges would increase pronoun sharing rates among cisgender people.

Ultimately, the findings suggest that nudges are an effective allyship intervention for promoting pronoun sharing. Results found that a nudge that provided a list of pronoun options was the most successful strategy compared to offering participants an open text box for pronouns or no nudge at all. The results also revealed that individuals with a strong ally identity, identifying as open and supportive toward gender minorities, were more likely to share their pronouns. In contrast, individuals who believed gender is determined by sex assigned at birth were less likely to share. These individual differences, however, did not moderate the effectiveness of the nudges, indicating that nudges can promote allyship behavior even among people with pre-existing beliefs or preferences.

First, the effectiveness of nudges was assessed to ensure that nudges are an effective intervention tool for social issues. The results supported Hypothesis 1, which posited that participants in the nudge conditions would be more likely to share pronouns than participants in the control (no nudge) condition. This result reinforces the core argument of this paper that nudges can be a powerful strategy for encouraging TGD inclusive behaviors, as it was shown to significantly increase rates of pronoun sharing. Examination of the data revealed that not a single

person in the control condition shared their pronouns. The open text box did not go unnoticed by participants in the control group, however, some participants ($N = 13$) shared inspirational quotes, degree or certificate accreditations, or other information that is not uncommon to be found in email signatures. This interesting finding demonstrates the power of a nudge.

Although a nudge alone made a meaningful difference in pronoun sharing behavior, results found that the type of nudge can also contribute to meaningful differences. Hypothesis 2 predicted that participants in the list nudge condition would be more likely to share pronouns than participants in the text box nudge condition. This prediction was supported. Participants provided with a list of common pronouns to select from were more likely to share their pronouns than participants provided with just an open text box reserved for pronoun information. This result is consistent with other choice architecture literature suggesting that reducing "friction" in the decision process increases the likelihood of a behavior being engaged in (Thaler & Sunstein, 2008). Friction is thought to be anything that makes carrying out a particular behavior more difficult or effortful. In this study, providing participants with a list of common options made sharing pronouns easier. By having a list of options, participants could make inferences and not need background knowledge as to what pronouns are, reducing the knowledge and ability barriers that may prevent sharing. This finding should be used to inform organizations currently soliciting employee pronoun information. Organizations currently trying to support TGD inclusion by normalizing pronouns should seek to provide a list of options when encouraging people to share while always including the option to decline to answer or self-identify. Having a list will likely optimize the effectiveness of pronoun nudges.

As suspected, ally identity and cisnormative beliefs were related to pronoun sharing behavior. Hypothesis 3 and Hypothesis 5 were supported in this study, indicating that individual

differences are related to pronoun sharing. People who believed that gender is based on sex assigned at birth were less likely to share their pronouns than those who did not view gender as a fixed identity. By contrast, people who reported higher levels of ally identity were more likely to share their pronouns than those with low levels. These results indicate that some personal beliefs are related to pronoun behaviors.

Hypothesis 4 and Hypothesis 6 postulated that individual differences would moderate the effectiveness of nudges. It was presumed that those who believed that gender was based on sex assigned at birth would likely weaken the strength of the nudge and not engage in the behavior regardless of the nudge's presence. Alternatively, it was assumed that people who were high in ally identity would share their pronouns regardless of the nudge's presence. Interestingly, neither of these hypotheses were supported. This finding contradicts existing literature that suggests the strength of a nudge is dependent on existing beliefs (de Ridder et al., 2022). One reason for this inconsistency may be that past nudge studies did not investigate emerging social issues. Another reason may simply be that the experimental conditions created a strong situation that reduced the influence of these individual differences. Future research is needed to understand when beliefs may impact the effectiveness of nudges for promoting diversity and inclusion efforts.

There are two meaningful takeaways from these failed hypotheses. The first is that nudges can influence the behaviors of those who hold belief systems that do not align with pronoun sharing. People who may not have an understanding of the social construct of gender or who oppose the idea that gender can be fluid are still potentially able to be nudged (at least under experimental conditions). The benefit of this is that nudges can result in more people sharing their pronouns in general, regardless of personal gender beliefs. The danger of this may be that these people may feel misled, tricked, or pressured into sharing their pronouns. There is a chance

that someone who opposes gender fluidity may not know what pronouns are and what pronouns are for. If a person shares their pronouns as the result of a nudge and later learns that pronouns are primarily intended to support TGD people, they may feel upset that they acted in a way that is not in line with their worldview. Alternatively, those who feel pressured to share pronouns may experience cognitive dissonance. For this reason, it is worth investigating other forms of nudges or whether increasing the transparency of a pronoun nudge (e.g., by including a definition of pronouns) results in similar findings.

The second meaningful takeaway is that people who are in support of TGD identities and actively seek to uplift TGD people may still forget to share their pronouns. This could be because allyship is a developmental process that, in general, is effortful and requires a conscious effort (Martinez et al., 2024). Put simply, it takes additional effort and cognitive awareness to always remember to share pronouns when introducing oneself or creating an online profile. When people high in ally identity are presented with the opportunity to share pronouns, they may forget if they are unconsciously making decisions or engaging in efficient and fast thinking, commonly referred to as system one thinking in the choice architecture literature (Kahneman, 2017). The benefit of a nudge as a pronoun sharing intervention is that it has the potential to "slow" people down and trigger deliberate and conscious effort, also known as system two thinking. The nudge in this study acted as a subtle reminder to those high in ally identity that this is a potential opportunity to engage in TGD inclusive behavior.

**Limitations and Future Directions**

This study had several limitations, mainly concerned with the sample, demand effects, design, and psychometric properties of measures. The participants in this sample were generated using a convenience sample, which resulted in elevated rates of female-identifying and white

participants not representative of the national demographic in the United States. Demand effects were likely present, as indicated by qualitative exploratory data, with some participants reporting that they shared pronouns simply because they were asked and it was a question in the study. Due to privacy concerns, participants were not able to enter their full names when completing the main task of creating an email signature. This limitation harms the ecological validity of the study, as it is uncommon only to put initials in an email signature. This limitation, along with the fact that participants may not have believed they would be sending emails, may have resulted in people behaving differently than they would have if they were truly creating an email signature for their job.

In terms of measurement limitations, given that limited research exists on pronouns and the majority of the research is specifically related to transgender well-being and trans experiences, there were limited psychometrically sound scales that could be used in this study. The single-item measure used to collect beliefs on sex and gender was dichotomous and did not allow detailed information to be collected on gender beliefs. This item failed to capture the range of beliefs associated with gender and sex. For example, some people may fall somewhere in the middle on the social issue of gender being binary or socially constructed or not hold strong opinions. It is also possible that the item was misunderstood by some participants. These nuances were not captured in the one item scale used. Thus, future research should look to develop a scale that more accurately captures individual beliefs on sex and gender.

Similarly, the scale used to measure knowledge and ability related to pronoun sharing has not undergone psychometric testing. The scale was created for the purposes of this study to be used as an exploratory variable. In hindsight, the knowledge item should have asked about general familiarity with pronouns rather than explicitly asking about knowledge of gender

neutral pronouns. Additionally, the present study was focused on pronoun sharing rather than usage; however, many of the items asked about knowledge and ability to *use* pronouns rather than *share* pronouns. Future researchers would be apt to develop a scale that more accurately measures knowledge and ability related to pronouns with sub-scales intended to explicitly measure sharing and usage. This scale could be used to inform diversity training efforts in organizations and allow companies to understand deficits in knowledge within their organization. It could also be a helpful tool for researchers interested in whether these two forms of allyship behaviors have different antecedents and outcomes.

This study documents for the first time that nudges are a potentially effective tool to increase TGD inclusion behaviors. For future research, exploring whether repeated or varied nudges can sustain or further increase pronoun sharing over time would be valuable. This line of research could offer deeper insights into behavioral change and allyship development assisted by nudges over time. Additionally, examining how other factors such as organizational culture, peer norms, leadership support, or other individual differences (e.g., relationships with LGBTQ+ people, and attitudes toward gender diversity) moderate the effectiveness of nudges would help refine and target interventions. For example, studies could investigate if nudging during social interactions differs from nudging on social or technological platforms, for instance, the leader of a meeting encouraging pronoun sharing versus the leader of a group initiating sharing in a group chat. Studies could also further develop this intervention which primarily targeted intrapersonal barriers to pronoun sharing by integrating elements that further reduce interpersonal barriers to pronoun sharing. Interpersonal barriers could be reduced by researching how to increase perceptions of sincerity in pronoun sharing and adding an element to the intervention that creates an opportunity for people to learn how to support TGD beyond pronoun sharing. In addition to

TGD inclusive behaviors, future studies should continue investigating what types of nudges are most effective in the diversity and inclusion space. Nudges and principles of choice architecture more broadly can be used to aid in increasing other diversity-inclusive behaviors within the work setting.

Lastly, the author would like to caution readers to avoid viewing nudging pronouns as a quick fix for diversity issues. While the findings of this study suggest that organizations could significantly increase rates of pronoun sharing by simply introducing nudges at critical decisions and sharing points when sharing can occur, these practices should be a part of a holistic effort to increase gender minority inclusion in the workplace. Pronouns alone are not enough to support gender minorities at work. Organizations should focus on offering resources to TGD identities, educating cisgender employees on TGD identities, and ensuring that policies and culture align with TGD-inclusive practices. If pronoun practices are implemented without efforts to educate employees and improve TGD work experiences and well-being in other ways, TGD people could potentially experience adverse reactions to pronouns, feel forced to disclose a concealable identity, view pronoun sharing as virtue signaling rather than norm support, or experience other negative emotions. Due to the possible under-researched consequences of pronoun sharing in organizations that lack proper support for TGD members, organizations should be thoughtful in how and when pronoun sharing is introduced and used. Pronoun sharing is just one behavior that can be used to normalize and support TGD identities, but pronoun sharing alone is not enough to craft a TGD safe and supportive workspace.

# CONCLUSION

This study sought to investigate if nudges could be used to increase rates of pronoun sharing. The results suggest that nudges are a useful allyship intervention tool to increase rates of pronoun sharing. Specifically, providing a list of pronoun options was the most effective nudge strategy compared to providing participants with the option to manually type out their pronouns. Results also indicated that individual differences are related to pronoun sharing behaviors. People who were high in ally identity and self-identified as being open and supportive towards gender minorities were more likely to share their pronouns. People who believed that gender is based on sex assigned at birth were less likely to share their pronouns. These individual differences were not found to moderate the effectiveness of nudges, suggesting that nudges are a useful tool for increasing allyship behavior even in people who have existing preferences or beliefs. These results can inform organizational practices, mainly supporting the integration of nudges during critical decision points that could naturally prompt pronoun sharing to increase the normalization of this inclusive behavior.

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# APPENDIX A. STUDY MATERIALS

**Nudge Pronouns Thesis**

---

**Start of Block: Consent**

Q24 Insert consent form

**End of Block: Consent**

---

**Start of Block: Introduction**

Q50 Please provide your Prolific ID:

_____

---

Page Break

Q51 **Welcome to AtoZ Marketing!**

We are a leading marketing firm known for its commitment to cutting edge marketing. We specialize in marketing campaigns for products that create positive change in the world.

In your new role as Creativity Specialist, you will come up with innovative marketing strategies for our clients.

**In a moment you will be sending an email to provide feedback on marketing material for a new client.**

**End of Block: Introduction**

---

**Start of Block: Create an Email Signature Control**

Q49 In your new role as Creativity Specialist, you will send several emails a day to collaborate on innovative marketing strategies.

The next step in your onboarding process will be to create an email signature.

Please answer the following questions, the information you provide will be used to create your email signature which will appear at the bottom of all the emails you send.

---

Q15 Initials (For anonymity, please do not use your full name)

_____

Q52 Role at AtoZ Marketing

_____

Q53 Any other information (optional)

_____

Page Break

Q88 Please respond to the email below and suggest creative marketing slogans.

Q83 Hello ${Q15/ChoiceTextEntryValue},

Welcome to AtoZ marketing!

We want your help suggesting catchy slogans for our client, Bright Future Learning. Bright Future Learning specializes in creating engaging and interactive online educational platforms for students of all ages. Their mission is to make learning accessible, fun, and effective by using the latest technology and educational research.

Slogan Guidelines: Slogans should be concise, memorable, and reflect our brand values. Aim for a length of 3 to 8 words. Consider what makes Bright Future Learning unique and how the company stands out from competitors.

Feel free to submit multiple slogans if you have more than one great idea.

Sincerely,
Jamie

Q84 Please write an email response.

_____

_____

_____

_____

_____

Q85 Respectfully,
${Q15/ChoiceTextEntryValue}
${Q52/ChoiceTextEntryValue}
${Q53/ChoiceTextEntryValue}

**End of Block: Create an Email Signature Control**

**Start of Block: Create an Email Signature Text Box Nudge**

Q54 In your new role as Creativity Specialist, most of the communicating you do with clients and team members will be over email.

The next step in your onboarding process will be to create an email signature.

Please answer the following questions, the information you provide will be used to create your email signature which will appear at the bottom of all the emails you send.

Q55 Initials (For anonymity, please do not use your full name)

_____

Q56 Role at AtoZ Marketing

_____

Q57 Pronouns (optional)

_____

Page Break

Q87 Please respond to the email below and suggest creative marketing slogans.

Q62 Hello ${Q55/ChoiceTextEntryValue},

Welcome to AtoZ marketing! We want your help suggesting catchy slogans for our client, Bright Future Learning. Bright Future Learning specializes in creating engaging and interactive online educational platforms for students of all ages. Their mission is to make learning accessible, fun, and effective by using the latest technology and educational research.

Slogan Guidelines: Slogans should be concise, memorable, and reflect our brand values. Aim for a length of 3 to 8 words. Consider what makes Bright Future Learning unique and how the company stands out from competitors.

Feel free to submit multiple slogans if you have more than one great idea.

Sincerely,
Jamie

Q78 Please write an email response.

_____

_____

_____

_____

_____

Q77 Respectfully,
${Q55/ChoiceTextEntryValue}

${Q56/ChoiceTextEntryValue}
${Q57/ChoiceTextEntryValue}

**End of Block: Create an Email Signature Text Box Nudge**

---

**Start of Block: Create an Email Signature List Nudge**

Q58 In your new role as Creativity Specialist, most of the communicating you do with clients and team members will be over email.

The next step in your onboarding process will be to create an email signature.

Please answer the following questions, the information you provide will be used to create your email signature which will appear at the bottom of all the emails you send.

---

Q59 Initials (For anonymity, please do not use your full name)

_____

---

Q60 Role at AtoZ Marketing

_____

---

Q61 Pronouns (optional)

- ○ He/Him (4)
- ○ She/Her (5)
- ○ They/Them (6)
- ○ Prefer to self-identify (7) _____
- ○ Prefer not to answer (8)

---

Page Break

Q86 Please respond to the email below and suggest creative marketing slogans.

Q79 Hello ${Q59/ChoiceTextEntryValue},

Welcome to AtoZ marketing! We want your help suggesting catchy slogans for our client, Bright Future Learning. Bright Future Learning specializes in creating engaging and interactive online educational platforms for students of all ages. Their mission is to make learning accessible, fun, and effective by using the latest technology and educational research.

Slogan Guidelines: Slogans should be concise, memorable, and reflect our brand values. Aim for a length of 3 to 8 words. Consider what makes Bright Future Learning unique and how the company stands out from competitors.

Feel free to submit multiple slogans if you have more than one great idea.

Sincerely,
Jamie

Q80 Please write an email response.

_____

_____

_____

_____

_____

Q81 Respectfully,
${Q59/ChoiceTextEntryValue}
${Q60/ChoiceTextEntryValue}
${Q61/ChoiceGroup/SelectedChoices}

**End of Block: Create an Email Signature List Nudge**

**Start of Block: Self-report**

Q18 Thank you for sharing information about yourself. We would like to keep getting to know more about you. Please answer the questions honestly based on your own perceptions.

---

Q19 Please select which statement aligns with your beliefs, even if neither is exactly right

- ○ Whether someone is a man or a woman is determined by the sex they were assigned at birth. (1)
- ○ Someone can be a man or a woman even if that is different from the sex they were assigned at birth. (2)

---

Q47 Please take a moment to read each question and indicate the appropriate response that captures the degree to which you agree with the statement. Please answer each item as it pertains to you right now. Please try to respond to every item.

Throughout the survey, the phrase *Gender Minority* is meant to be all encompassing of all gender minority groups and individuals (for example: transgender, non-binary, genderqueer, genderfluid, two-spirit, gender nonconforming, and others not listed).

The acronym *LGBTQ* represent the identities of Gay, Lesbian, Bisexual, Transgender, Questioning, and Queer people.

| | Strongly Disagree (1) | Disagree (2) | Neither Disagree nor Agree (3) | Agree (4) | Strongly Agree (5) |
|---|---|---|---|---|---|
| If I see discrimination against a gender minority person or group occur, I actively work to confront it. (6) | ○ | ○ | ○ | ○ | ○ |
| I have taken a public stand on important issues facing gender minority people. (8) | ○ | ○ | ○ | ○ | ○ |
| I regularly engage in conversations with gender minority people. (10) | ○ | ○ | ○ | ○ | ○ |
| I try to increase my knowledge about gender minority groups. (11) | ○ | ○ | ○ | ○ | ○ |
| I am open to learning about the experiences of gender minority people from someone who identifies as an LGBTQ person. (15) | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| I have engaged in efforts to promote more widespread acceptance of gender minority people. (18) | ○ | ○ | ○ | ○ | ○ |
| I am comfortable with knowing that, in being an ally to gender minority individuals, people may assume I am a LGBTQ minority person. (21) | ○ | ○ | ○ | ○ | ○ |

Q69 Please take a moment to read each question, and indicate the appropriate response that captures the degree to which you agree with the statement. Please answer each item as it pertains to you right now. You can work quickly; your first feeling is generally best.

| | Strongly Disagree (1) | Disagree (2) | Neither Disagree nor Agree (3) | Agree (4) | Strongly Agree (5) |
|---|---|---|---|---|---|
| I feel I know how to use pronouns. (1) | ○ | ○ | ○ | ○ | ○ |
| I feel I could successfully share my pronouns when introducing myself. (2) | ○ | ○ | ○ | ○ | ○ |
| I feel confident in my ability to use gender-neutral pronouns such as “they” instead of “he” or “she” to refer to someone when asked to. (3) | ○ | ○ | ○ | ○ | ○ |
| I have heard about people preferring that others use gender neutral pronouns such as “they” instead of “he” or “she” when referring to them. (4) | ○ | ○ | ○ | ○ | ○ |

**End of Block: Self-report**

**Start of Block: Demographic Information**

Q1 What is your age in years? (e.g. 24, 56)

_____

Q2 What is your sex?

- ○ Male (1)
- ○ Female (2)
- ○ Prefer to self-identify (3) _____
- ○ Prefer not to say (4)

Q3 Do you identity as transgender?

- ○ Yes (1)
- ○ No (2)
- ○ Prefer not to answer (3)

Q4 How do you describe your sexual identity?

- ☐ Asexual (1)
- ☐ Bisexual (2)
- ☐ Gay (3)
- ☐ Lesbian (4)
- ☐ Pansexual/Queer (5)
- ☐ Straight/Heterosexual (6)
- ☐ Prefer to self identity (7) _____
- ☐ Prefer not to answer (8)

Q5 What is your racial heritage? Please select all that apply.

- ☐ American Indian, Alaska Native, and/or Indigenous (1)
- ☐ Arab American, Middle Eastern, or North African (7)
- ☐ Asian or Asian American (2)
- ☐ Black or African American (3)
- ☐ Bi/Multi-racial (4)
- ☐ Latino/a/x or Spanish Origin (5)
- ☐ Native Hawaiian or Other Pacific Islander (8)
- ☐ Southeast Asian (9)
- ☐ White/ European American (10)
- ☐ Not listed (11)
- ☐ Prefer not to answer (6)

Q6 What is the highest educational degree you have attained?

- ○ Some high school (1)
- ○ High school / GED (2)
- ○ Some college (3)
- ○ Associate degree (4)
- ○ Bachelor's degree (5)
- ○ Master's degree (6)
- ○ Doctorate / PhD (7)
- ○ Prefer not to say (8)

**End of Block: Demographic Information**

---

**Start of Block: Open**

Q23 Please tell us about what factors influenced your decision to share or not share your preferred pronouns in your email signature.

_____

_____

_____

_____

_____

**End of Block: Open**

---

# APPENDIX B. MEASURES

## Pronoun Knowledge Skills and Abilities

Instructions:

Participants will respond to the first question by selecting one of three response options. (a lot, a little, nothing at all)

1. How much, if anything, have you heard about people preferring that others use gender neutral pronouns such as “they” instead of “he” or “she” when referring to them? (Knowledge)

Participants will respond to the remaining questions using a 5-point Likert-scale. (Strongly Disagree-Strongly Agree)

2. I feel I know how to use pronouns. (Skill)
3. I feel I could successfully share my pronouns when introducing myself. (Ability)
4. I feel confident in my ability to use gender-neutral pronouns such as “they” instead of “he” or “she” to refer to someone when asked to. (Ability)

## Gender and Sex Beliefs (Pew Research Center, 2022)

Instructions: Select which statement aligns with your beliefs, even if neither is exactly right?

- Whether someone is a man or a woman is determined by the sex they were assigned at birth.
- Someone can be a man or a woman even if that is different from the sex they were assigned at birth.

## Ally Identity Measure (Jones et al., 2014) Openness and Support Subscale

Instructions: Please take a moment to read each question and indicate the appropriate response that captures the degree to which you agree with the statement. Please answer each item as it pertains to you right now. Please try to respond to every item.

Throughout the survey, the phrase Gender Minority is meant to be all encompassing of all gender minority groups and individuals (for example: transgender, non-binary, genderqueer, genderfluid, two-spirit, gender nonconforming, and others not listed).

The acronym LGBTQ represent the identities of Gay, Lesbian, Bisexual, Transgender, Questioning, and Queer people.

1. If I see discrimination against a sexual minority person or group occur, I actively work to confront it.
2. I have taken a public stand on important issues facing sexual minority people.
3. I regularly engage in conversations with sexual minority people.
4. I try to increase my knowledge about sexual minority groups.
5. I am open to learning about the experiences of sexual minority people from someone who identifies as an LGBTQ person.
6. I have engaged in efforts to promote more widespread acceptance of sexual minority people.
7. I am comfortable with knowing that, in being an ally to sexual minority individuals, people may assume I am a LGBTQ minority person.

Response Option: All questions are on a 5-point Likert scale, ranging from Strongly Disagree, Disagree, Neither Disagree nor Agree, Agree and Strongly Agree.
Scoring: Total scores range from 7 to 35. Higher scores indicate a higher ally identity levels.