



Published in final edited form as:

*Stigma Health*. 2021 May ; 6(2): 184–191. doi:10.1037/sah0000225.

## Use of different strategies to make one's bisexual+ identity visible: Associations with dimensions of identity, minority stress, and health

Brian A. Feinstein<sup>1</sup>, Christina Dyar<sup>1</sup>, J. Samuel Milstone<sup>1</sup>, Jeremy Jabbour<sup>2</sup>, Joanne Davila<sup>3</sup>

<sup>1</sup>Institute for Sexual and Gender Minority Health and Wellbeing, Northwestern University

<sup>2</sup>Department of Psychology, Northwestern University

<sup>3</sup>Department of Psychology, Stony Brook University

### Abstract

Bisexual+ people (i.e., those who are attracted to more than one gender or regardless of gender) use a variety of strategies to make their identity visible to others, but little is known about the extent to which using different strategies is related to other dimensions of identity, minority stress, and health. To address this, we surveyed 715 bi+ people about their use of five different types of visibility strategies (direct communication, indirect communication, community engagement, gender-based visual displays, and public behavioral displays). Results indicated that people who used visibility strategies more often (aggregated across types) reported higher identity centrality and affirmation, and lower internalized bi-illegitimacy and internalized binegativity. However, they also reported more discrimination from heterosexual and gay/lesbian individuals and higher depression and anxiety. When we examined the unique associations between each of the five types of visibility strategies and our other variables, we found different patterns of associations for different strategies. For example, direct communication was uniquely associated with more discrimination from gay/lesbian individuals, while indirect communication, gender-based visual displays, and public behavioral displays were uniquely associated with more discrimination from heterosexual individuals. Only indirect communication was uniquely associated with higher depression and anxiety, while community engagement was uniquely associated with lower anxiety. Finally, public behavioral displays were uniquely associated with more alcohol use problems and a higher likelihood of cigarette use. These findings highlight the importance of examining the specific strategies that people use to make their bi+ identity visible in order to understand their experiences and health.

### Keywords

bisexual; non-monosexual; visibility; minority stress; mental health

---

It is well-documented that bisexual+ people (i.e., those who are attracted to more than one gender or regardless of gender)<sup>1</sup> report mental health and substance use problems at higher

---

Corresponding author: Brian A. Feinstein, Institute for Sexual and Gender Minority Health and Wellbeing, Northwestern University, 625 N. Michigan Ave., Suite 1400, Chicago, IL 60611, brian.feinstein@northwestern.edu, 312-503-6516.

rates than heterosexual people and often at higher rates than gay and lesbian people as well (Ross et al., 2018; Salway et al., 2019). These disparities are due, at least in part, to the unique stressors that bi+ people experience (Feinstein & Dyar, 2017). For example, there are unique stereotypes about bi+ people (e.g., that they are confused about their sexual orientation), and bi+ people experience discrimination from both heterosexual and gay/lesbian people. Further, binary views of sexual orientation perpetuate the myth that bi+ identities are not legitimate (Brewster & Moradi, 2010; Eliason, 1997; Flanders & Hatfield, 2014; Israel & Mohr, 2004; Mohr & Rochlen, 1999; Spalding & Peplau, 1997; Zivony & Lobel, 2014) and, as such, bi+ people face challenges related to invisibility. Recent studies have revealed that many bi+ people want to make their identity visible to others and they use a variety of strategies to do so (Davila et al., 2019). However, important questions remain about the strategies that bi+ people use to make their identity visible and how they relate to other dimensions of identity, minority stress, and health.

Previous research has found that bi+ people experience and are concerned about bi+ invisibility (e.g., Daly, King, & Yeadon-Lee, 2018; Hequembourg & Brailler, 2009; Gonzalez, Ramirez, & Galupo, 2017; Ross, Dobinson, & Eady, 2010). However, being visible as a bi+ person can be challenging. In addition to binary views of sexual orientation perpetuating the myth that bi+ identities are not legitimate, people also tend to make assumptions about sexual orientation based on partner gender (e.g., people in same-gender relationships are assumed to be gay/lesbian, people in different-gender relationships are assumed to be heterosexual), and these assumptions are not valid for bi+ people. Further, while there are specific appearance norms for members of some sexual orientation groups (e.g., lesbian women; Hayfield, Clarke, Halliwell, & Malson, 2013; Huxley, Clarke, & Halliwell, 2013), there are no specific appearance norms for bi+ people. Bi+ people have also described unique challenges related to visibility at the intersection of their sexual and various other identities. For example, bi+ people of color have described feeling disconnected from both their sexual and racial/ethnic identities and communities (Ghabrial, 2019), and feeling as though they cannot express both parts of their identities in a single space (Flanders et al., 2015). Given these challenges, bi+ people have to use different strategies to make their identity visible to others.

Qualitative studies have found that bi+ women use a variety of strategies to make their identity visible. In addition to directly speaking about their identity, they also use visual cues (e.g., androgynous or pride-based attire) and attitudes (e.g., confidence) to communicate their identity (Hartman, 2013; Hartman-Linck, 2014). Further, some bi+ women use different visual cues depending on the gender of their partner (e.g., shifting their appearance to be more feminine when they have a female partner and more masculine when they have a male partner; Daly et al., 2018). Although most research on bi+ visibility has been qualitative, Davila et al. (2019) collected qualitative and quantitative data on bi+ visibility in a sample of 389 bi+ adults. They found that 58% of their participants tried to make their identity visible and they did so using five types of strategies (presented in order of most to least used): (1) direct communication (e.g., telling others in person or on social

---

<sup>1</sup>We use the terms “bisexual+” and “bi+” throughout this article to reflect the range of identity labels that people can use to describe attractions to people of more than one gender or regardless of gender (e.g., bisexual, pansexual, queer, fluid).

media); (2) visual displays (e.g., wearing pride clothing); (3) indirect communication (e.g., discussing LGBT issues); (4) engagement in LGBT-related activities (e.g., going to events, bars, or clubs); and (5) public behavioral displays (e.g., flirting with people of more than one gender).

In addition to examining the types of strategies that bi+ people used to make their identity visible, Davila et al. (2019) also examined factors that differentiated bi+ people who attempted to make their identity visible from those who did not. They found that, compared to people who did not make bi+ visibility attempts, people who made bi+ visibility attempts reported higher levels of identity centrality, identity affirmation, and connection to the LGBT community, and lower levels of internalization of the stereotype that bi+ identities are not legitimate. These findings suggest that people who generally feel better about being bi+ are more likely to attempt to make their identity visible to others. While this study represented an important first step in understanding how making bi+ visibility attempts relates to other dimensions of identity and minority stress, important questions remain.

First, for their quantitative analyses, Davila et al. (2019) measured bi+ visibility attempts by asking people a single question about whether or not they tried to make their identity visible to others (yes/no). By measuring bi+ visibility attempts in this way, they were not able to capture the frequency with which people used different strategies to make their bi+ identity visible. Given that their qualitative analyses revealed five types of strategies that people used to make their bi+ identity visible, it is possible that different strategies are related to dimensions of identity and minority stress in different ways. For example, although they did not find a significant association between making bi+ visibility attempts and experiencing discrimination, it is possible that more direct strategies (e.g., direct communication) are associated with experiencing discrimination, while less direct strategies (e.g., indirect communication) are not because they may not successfully communicate one's sexual orientation to others.

Finally, to our knowledge, no studies have examined the associations between making bi+ visibility attempts and health. Previous research has found that being more open about one's sexual orientation in general is associated with higher levels of depression and substance use among bi+ people (Feinstein, Dyar, & London, 2017; Feinstein et al., 2019). However, using a specific strategy to try to make one's bi+ identity visible is different than generally being open about one's sexual orientation. In fact, Davila et al. (2019) found a medium to large correlation ( $r = .43$ ) between making bi+ visibility attempts and outness in general, suggesting that they are related but distinct constructs. Therefore, it is likely that making bi+ visibility attempts is associated with depression and substance use, but this remains an empirical question and it is possible that different bi+ visibility strategies are related to health in different ways.

In sum, important questions remain about the use of different strategies to make one's bi+ identity visible and their associations with dimensions of identity, minority stress, and health. To address this, we surveyed 715 bi+ people about their use of different strategies to make their bi+ identity visible. Then, we examined their associations with dimensions of identity (centrality and affirmation), minority stress (internalized bi-illegitimacy, internalized

binegativity, anticipated binegativity, discrimination from heterosexual individuals, and discrimination from gay and lesbian individuals), mental health (depression and anxiety), and substance use (alcohol use problems, marijuana use problems, and cigarette use). In general, we hypothesized that people who used bi+ visibility strategies more often would report higher levels of identity centrality and affirmation, as well as lower levels of internalized bi-illegitimacy, internalized binegativity, and anticipated binegativity, but that they would also report experiencing more discrimination. Although Davila et al. (2019) did not find significant associations between making bi+ visibility attempts and several types of minority stress (internalized binegativity, anticipated binegativity, and discrimination), they used a single question to assess whether or not bi+ people tried to make their identity visible to others (yes/no). In contrast, we used a more comprehensive approach to assess how frequently people used different bi-visibility strategies. Finally, given the lack of previous research on different types of bi+ visibility strategies, we did not make specific predictions about their unique associations with our other variables of interest.

## Method

### Procedure

As part of a larger project, participants completed an online survey focused on bi+ identity, minority stress, and health. Paid social media advertisements directed potential participants to an eligibility survey to ensure that they were at least 18 years old, lived in the United States, and reported being attracted to people of more than one gender or regardless of gender. Those who met the eligibility criteria were automatically directed to the consent form and, if they consented to participate, they were automatically directed to the survey. All participants were compensated with a \$10 Amazon gift card. All procedures were approved by the Institutional Review Board.

### Participants

The survey was completed by 777 participants, but 62 were excluded from the analytic sample because: (1) they had duplicate IP addresses, suggesting that the same person may have completed the survey twice ( $n = 14$ ); (2) they failed more than one attention check in the survey ( $n = 25$ ); or (3) they did not report a bi+ identity despite reporting that they were attracted to people of more than one gender or regardless of gender ( $n = 23$ ). Therefore, the analytic sample included 715 participants. Most participants identified as bisexual (49.8%), pansexual (24.6%), or queer (19.2%), while a small proportion of participants (6.4%) reported other identities (e.g., fluid). In regard to gender/sex, 31.6% of participants were cisgender women, 27.0% were cisgender men, 8.7% were transgender women, 3.9% were transgender men, and 28.8% were non-binary. Most participants identified as White (83.1%), while smaller proportions identified as multiracial (8.5%), Black (3.6%), Asian (2.8%), Native American (1.7%), and another race (0.3%). In regard to ethnicity, 11.9% of participants identified as Latinx. Finally, most participants had completed some college or a college degree (84.1%).

## Measures

Given the range of identity labels that people can use to describe attractions to people of more than one gender or regardless of gender (e.g., bisexual, pansexual, queer, fluid), all of the instructions and questions/items included the term “bi+,” which was defined at the beginning of the study.

**Demographics.**—Participants were asked to report their age, race, ethnicity, gender identity, sex assigned at birth, sexual identity, and education level. Of note, gender identity and sex assigned at birth were combined into a single “gender/sex” variable. Participants who reported a gender identity that was different than their sex assigned at birth were included in the “transgender or non-binary” category along with those who specifically identified as such.

**Bi+ visibility strategies.**—Participants’ use of different strategies to make their bi+ identity visible was assessed using 21 items (Davila, Feinstein, Dyar, & Jabbour, 2020). Participants were asked, “How often do you do each of the following to try to make your bi+ identity visible to others?” Each of the 21 items was rated on a 5-point scale (1 = never, 5 = very often). Previous research (Davila et al., 2020) demonstrated that the 21 items loaded on to five factors: (1) direct communication (e.g., “directly tell people that you’re bi+;” 6 items;  $\alpha = .77$ ); (2) indirect communication (e.g., “share topics pertaining to general LGBT issues on social media;” 4 items;  $\alpha = .82$ ); (3) community engagement (e.g., “attend social events or meetings specifically for bi+ people, or advocate specifically for bi+ causes;” 5 items;  $\alpha = .73$ ); (4) gender-based visual displays (e.g., “dress in a way that people will think you’re bi+ [e.g., more masculine, more feminine, more androgynous];” 4 items;  $\alpha = .79$ ); and (5) public behavioral displays (e.g., “show affection to others in a way [e.g., with people of more than one sex/gender] so that people will think you are bi+;” 2 items;  $\alpha = .82$ ).

Subscale scores were created by averaging responses to the respective items for each of the factors. We also created an aggregate measure of the frequency with which people used different bi+ visibility strategies by averaging the five subscale scores. A bifactor model supported the use of a total score in addition to the subscale scores (Rodriguez et al., 2016). Specifically, the bifactor model indicated that a general factor (representing how frequently participants used bi+ visibility strategies in general) explained 24% of the common variance shared among the items. Each specific factor (representing the use of specific types of bi+ visibility strategies) explained an additional 14–17% of the common variance. Subscales also had moderate to strong correlations with each other ( $r = .33$ – $.55$ ). In regard to the validity of the measure, we examined the associations between the total score and the subscale scores with a validated measure of outness (the disclosure subscale from the Nebraska Outness Scale; Meidlinger & Hope, 2014). Outness was significantly associated with the total score ( $r = .45, p < .001$ ) and all of the subscale scores ( $r = .19$ – $.54, p < .001$ ). As expected, the strongest association was between outness and the direction disclosure subscale ( $r = .54, p < .001$ ).

**Bisexual Identity Inventory (BII; Paul, Smith, Mohr, & Ross, 2014).**—The BII was used to assess four dimensions of bi+ identity: (1) internalized bi-illegitimacy, or

internalization of the stereotype that bi+ identities are not legitimate (e.g., “Bi+ individuals are in denial about being gay;” 8 items;  $\alpha = .82$ ); (2) internalized binegativity, or negative feelings toward one’s bi+ identity (e.g., “It’s unfair that I am attracted to people of more than one gender;” 5 items;  $\alpha = .85$ ); (3) anticipated binegativity, or fears of being treated poorly by others because of being bi+ (e.g., “People might not like me if they found out that I am bi+;” 5 items;  $\alpha = .70$ ); and (4) identity affirmation, or pride in one’s bi+ identity (e.g., “I am grateful for my bi+ identity;” 6 items;  $\alpha = .86$ ). Each item was rated on a 7-point scale (1 = strongly disagree, 7 = strongly agree) and averaged to create subscale scores.

**Lesbian, Gay, and Bisexual Identity Scale – Revised (LGBIS-R; Mohr & Kendra, 2011).**—The 4-item identity centrality subscale of the LGBIS-R was used to assess the extent to which being bi+ is central to one’s overall identity. Each item (e.g., “Being bi+ is a very important aspect of my life”) was rated on a 7-point scale (1 = strongly disagree, 7 = strongly agree) and averaged to create the subscale score ( $\alpha = .86$ ).

**Brief Anti-Bisexual Experiences Scale (Brief ABES; Dyar, Feinstein, & Davila, 2019).**—The Brief ABES was used to assess experiences of discrimination from heterosexual and gay/lesbian individuals. The original ABES (Brewster & Moradi, 2010) included 17 items, each of which was presented twice, once referring to experiences with heterosexual individuals and once referring to experiences with gay and lesbian individuals. It assessed three types of discrimination against bi+ people: (1) instability stereotypes (e.g., “People have addressed me being bi+ as if it means that I am simply confused about my sexual orientation”); (2) sexual irresponsibility stereotypes (e.g., “People have assumed that I will cheat in a relationship because I am bi+”); and (3) general hostility (e.g., “Others have treated me negatively because I am bi+”). Dyar et al. (2019) developed and validated a brief version of the ABES, which included 8 of the items (each of which was presented twice). Each item was rated on a 6-point scale (1 = never, 6 = almost all the time) and subscale scores were created by averaging responses related to experiences with heterosexual individuals ( $\alpha = .90$ ) and experiences with gay and lesbian individuals ( $\alpha = .92$ ).

**Patient Health Questionnaire – 8-item version (PHQ-8; Kroenke et al., 2009).**—The PHQ-8 was used to assess depression symptoms over the past two weeks (e.g., “Feeling down, depressed, or hopeless”). Each item was rated on a 4-point scale (1 = not at all, 4 = nearly every day) and responses were averaged to create a total score ( $\alpha = .89$ ).

**Generalized Anxiety Disorder Scale (GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006).**—The GAD-7 was used to assess anxiety symptoms over the past two weeks (e.g., “Feeling nervous, anxious, or on edge”). Each item was rated on a 4-point scale (1 = not at all, 4 = nearly every day) and responses were averaged to create a total score ( $\alpha = .92$ ).

**Alcohol Use Disorders Identification Test (AUDIT; Babor et al., 1993).**—The 10-item AUDIT was used to assess alcohol use problems. Example items include: “How often do you have six or more drinks on one occasion?” and “How often during the past 6 months have you found that you were not able to stop drinking once you started?” Each item

was rated on a different 5-point scale and responses were summed to create a total score ( $\alpha = .81$ ).

**Cannabis Use Disorders Identification Test – Revised (CUDIT-R; Adamson et al., 2010).**—The 8-item CUDIT-R was used to assess marijuana use problems over the past six months. Example items include: “How often did you use marijuana?” and “How often during the past 6 months did you find that you were not able to stop using marijuana once you started?” Similar to the AUDIT, each item was rated on a different 5-point scale and responses were summed to create a total score ( $\alpha = .81$ ).

**Cigarette use.**—One item from Monitoring the Future (Johnston et al., 2018) was used to assess cigarette use. Participants were asked, “How frequently have you smoked cigarettes during the past 30 days?” Response options included: 0 (not at all); 1 (less than one cigarette per day); 2 (one to five cigarettes per day); 3 (about one-half pack per day); 4 (about one pack per day); 5 (about one and one-half packs per day); and 6 (two packs or more per day). Responses were dichotomized for analyses (0 = did not smoke in the past 30 days, 1 = smoked in the past 30 days).

## Data analysis

Due to participant dropout during the survey, 6.0% of data were missing. Full information maximum likelihood was used to handle missing data. Analyses were conducted using Stata version 16.0. We conducted two primary sets of analyses. In the first set, we examined the associations between the aggregate measure of the frequency with which people used different strategies to make their bi+ identity visible and our other variables of interest using linear regression (for most variables), binary logistic regression (for cigarette use), and negative binomial regression (for alcohol and marijuana use problems). In the second set, we examined the unique associations between each of the five types of bi+ visibility strategies and the other variables of interest by including all of the strategies in the regression analyses as simultaneous predictors. We controlled for age, race/ethnicity, gender/sex, and sexual identity in both sets of analyses. To control for Type I error inflation, we used the Benjamini-Hochberg procedure to adjust the  $p$ -values for all analyses.

## Results

Means, standard deviations, and bivariate associations are presented in Table 1.

### Aggregate measure of bi+ visibility strategies

First, we examined the associations between the aggregate measure of bi+ visibility strategies and the other variables of interest (dimensions of identity, minority stress, and health), controlling for relevant demographics (Table 2). Results indicated that people who used bi+ visibility strategies more often reported higher levels of identity affirmation and centrality, and lower levels of internalized bi-illegitimacy and internalized binegativity. They also reported experiencing more discrimination from heterosexual and gay/lesbian individuals and higher levels of depression and anxiety. In contrast, the aggregate measure of

bi+ visibility strategies was not significantly associated with anticipated binegativity or any of the substance use variables.

### **Unique associations for each of the five types of bi+ visibility strategies**

Then, we examined the unique associations between each of the five types of bi+ visibility strategies and the other variables of interest (Table 2).

#### **Associations with dimensions of identity.**

Direct communication was uniquely associated with higher levels of identity centrality and affirmation. Similar to direct communication, community engagement was also uniquely associated with higher levels of identity centrality and affirmation, and gender-based visual displays were also uniquely associated with higher levels of identity centrality, but all of these associations were smaller in size than the associations with direct communication.

#### **Associations with minority stress.**

Direct communication was uniquely associated with lower levels of internalized bi-illegitimacy, internalized binegativity, and anticipated binegativity. While direct and indirect communication were both uniquely associated with lower levels of internalized bi-illegitimacy, public behavioral displays were uniquely associated with higher levels of internalized bi-illegitimacy. Further, while direct communication was uniquely associated with lower levels of anticipated binegativity, indirect communication and gender-based visual displays were uniquely associated with higher levels of anticipated binegativity. Only direct communication was uniquely associated with experiencing more discrimination from gay and lesbian people, while indirect communication, gender-based visual displays, and public behavioral displays were each uniquely associated with experiencing more discrimination from heterosexual people.

#### **Associations with health.**

Only indirect communication was uniquely associated with higher levels of depression and anxiety, while community engagement was uniquely associated with lower levels of anxiety. Further, only public behavioral displays were uniquely associated with higher levels of alcohol use problems and a higher likelihood of cigarette use. In contrast, none of the strategies were significantly associated with marijuana use problems.

### **Discussion**

The goals of current study were to examine how the use of different bi+ visibility strategies were related to other dimensions of identity, minority stress, and health. Whereas previous research has examined some of these associations by asking people if they tried to make their identity visible (Davila et al., 2019), we used a more comprehensive approach in which we asked people how frequently they used 21 different bi+ visibility strategies. By doing so, we were able to examine the extent to which different bi+ visibility strategies were uniquely associated with our other variables of interest.



Several of our findings were consistent with previous research on bi+ visibility attempts (Davila et al., 2019). Specifically, people who used bi+ visibility strategies more often (aggregated across types) reported higher levels of identity centrality and affirmation, and lower levels of internalized bi-illegitimacy. These findings provide additional support for some of the reasons why bi+ people may attempt to make their identity visible (e.g., they are proud to be bi+, it is central to their identity, they have not internalized the stereotype that bi+ identities are not legitimate). That said, given our cross-sectional design, it is also possible that using bi+ visibility strategies more often contributes to feeling better about one's bi+ identity. It will be important for future studies to use longitudinal designs in order to determine the temporality of these associations. In contrast to Davila et al. (2019), we also found that people who used bi+ visibility strategies more often reported lower levels of internalized binegativity and experiencing more discrimination. Given that we used a more comprehensive approach to assess how frequently people used different bi+ visibility strategies, we may have been able to observe associations that were not apparent based on their dichotomous measure.

When we simultaneously examined the five types of bi+ visibility strategies in relation to our other variables of interest, we found different patterns of associations for different strategies. Of the five strategies, direct communication was most often uniquely associated with other dimensions of identity and minority stress. For example, people who used direct communication more often reported higher levels of identity centrality and affirmation, and lower levels of internalized bi-illegitimacy, internalized binegativity, and anticipated binegativity. These findings suggest that people who generally feel better about being bi+ may be more comfortable using direct communication, which is the strategy that most clearly communicates one's sexual orientation to others. Again, it is also possible that using direct communication more often may contribute to feeling better about one's bi+ identity. Although direct communication was most often uniquely associated with other dimensions of identity and minority stress, people who used community engagement strategies and gender-based visual displays more often also reported higher levels of identity affirmation and centrality. As such, people who generally feel better about being bi+ seem to use diverse strategies to make their identity visible.

We also found different patterns of associations between the five types of bi+ visibility strategies and experiencing discrimination from heterosexual versus gay and lesbian individuals. First, indirect communication, gender-based visual displays, and public behavioral displays were each uniquely associated with experiencing more discrimination from heterosexual individuals. Two of these strategies (gender-based visual displays and public behavioral displays) are antithetical to heteronormativity. Specifically, gender-based visual displays (e.g., dressing more masculine, feminine, or androgynous) and public behavioral displays (e.g., showing affection to people of different genders) both go against heteronormative expectations related to expressions of gender and sexuality. While the third strategy (indirect communication) is less obviously heteronormative, the items included sharing topics pertaining to bi+ or LGBT issues on social media, and heterosexual individuals may feel more comfortable expressing binegativity online compared to in-person because of the anonymity of online contexts. While using these bi+ visibility strategies may contribute to experiencing discrimination from heterosexual individuals, it is also possible

that bi+ people who experience discrimination from heterosexual individuals choose to use less direct strategies to make their identity visible, perhaps as a way to “test the waters” (i.e., to see if people are going to be accepting). In contrast, only direct communication was uniquely associated with experiencing more discrimination from gay and lesbian individuals. Direct communication may be particularly likely to elicit binegativity from gay and lesbian individuals because it is the strategy that most clearly communicates one’s bisexual identity to others. In contrast, other strategies may not successfully communicate one’s bisexual identity to gay and lesbian individuals. For example, gay and lesbian individuals may perceive gender-based visual displays and public behavioral displays as indicators of non-heterosexuality in general but not necessarily as indicators of one’s bi+ identity. That said, it is important to acknowledge that all of the bi+ visibility strategies were significantly associated with experiencing more discrimination from both heterosexual and gay/lesbian individuals in bivariate analyses. As such, using bi+ visibility strategies more often is generally associated with experiencing more discrimination from both heterosexual and gay/lesbian individuals, but some specific strategies may be more likely than others to elicit discrimination from one group versus the other.

In some cases, the directions of the associations between using bi+ visibility strategies and our other variables of interest depended on the type of strategy. For example, direct and indirect communication were both uniquely associated with *lower* levels of internalized bi-illegitimacy, while public behavioral displays were uniquely associated with *higher* levels of internalized bi-illegitimacy. People who have internalized the stereotype that bi+ identities are not legitimate may generally be less likely to make bi+ visibility attempts (using direct and indirect communication), but they may be *more* likely to use public behavioral displays as a way to “prove” their sexuality to others. People often question the authenticity of a bi+ person’s identity, especially if the bi+ person does not meet specific criteria (e.g., being equally attracted to men and women; Alarie & Gaudet, 2013). As such, people who have internalized the stereotype that bi+ identities are not legitimate may feel the need to “prove” the authenticity of their bi+ identity through public behavioral displays (e.g., showing affection to people of different genders). As another example, direct communication was associated with *lower* levels of anticipated binegativity, while indirect communication and gender-based visual displays were associated with *higher* levels of anticipated binegativity. Given that direct communication is the strategy that most clearly communicates one’s sexual orientation to others, people who do not anticipate binegativity may be more comfortable using direct communication, whereas people who anticipate binegativity may use indirect communication to “test the waters” before more directly outing themselves as bi+.

We also extended previous research on bi+ visibility attempts by examining their associations with mental health and substance use. At first, we found that people who used bi+ visibility strategies more often (aggregated across types) reported higher levels of depression and anxiety (but not substance use). However, when we simultaneously examined the five types of bi+ visibility strategies in relation to mental health and substance use, we found different patterns of associations for different strategies. Although all of the strategies (with the exception of community engagement) were associated with higher levels of depression and anxiety in bivariate analyses, only indirect communication was uniquely associated with higher levels of depression and anxiety in the multivariable analyses

(i.e., after accounting for the other strategies). As suggested, indirect communication may reflect a cautious attempt to “test the waters” before more directly outing oneself as bi+, which may be particularly likely to contribute to depression and anxiety. In contrast, community engagement was uniquely associated with *lower* levels of anxiety. The community engagement strategies included behaviors such as attending social events or meetings for bi+ people and advocating for bi+ causes. As such, people who used these strategies more often may have been more connected to others who were supportive of their bi+ identity and, as a result, they may have experienced lower levels of anxiety. Finally, using public behavioral displays was uniquely associated with more alcohol use problems and a higher likelihood of cigarette use. It is possible that the contexts in which bi+ people engage in public behavioral displays (e.g., flirting with people of different genders) may be the same as the contexts in which they use alcohol and cigarettes (e.g., bars, clubs). It is also possible that drinking alcohol may reduce internal barriers to public displays of affection. Given that public behavioral displays were also uniquely associated with higher levels of internalized bi-illegitimacy, alcohol and cigarettes may be used to cope with distressing thoughts and feelings related to the internalization of this stereotype. Overall, these findings highlight the importance of examining the specific strategies that people use to make their bi+ identity visible. Although previous studies have found that being more open about one’s sexual orientation in general is associated with more depression and substance use for bi+ people (Feinstein et al., 2017; Feinstein et al., 2019), the current findings suggest that different bi+ visibility strategies may have different consequences for mental health and substance use.

### Limitations

The current study was the first to examine the extent to which different bi+ visibility strategies were uniquely associated with other dimensions of identity, minority stress, and health. However, it had a number of limitations. First, all of our participants were recruited online, and the majority of them identified as White and had completed some college or a college degree. Given that our sample was not a representative one, it is possible that our participants were more likely to make bi+ visibility attempts compared to the broader bi+ population. Second, we used a new measure of bi+ visibility attempts (for additional information about the measure, see Davila et al., 2020), and it will be important to continue to examine its reliability and validity in other samples. Further, we computed total and subscale scores based on the factor structure identified in the bifactor model. By using these scores in our subsequent analyses rather than simultaneously modeling the factor structure of the measure and its associations with other variables of interest, we may have introduced bias into the scores and the associations. Third, given that our data were cross-sectional, we cannot determine the temporality of these associations, many of which may be bi-directional. Finally, previous research (Davila et al., 2020) has found that the use of bi+ visibility strategies differs as a function of gender/sex and sexual identity (but not race/ethnicity and age). Cisgender women and gender minorities engaged in four out of the five bi+ visibility strategies more frequently than cisgender men (direct communication, indirect communication, community engage, and gender-based visual displays), and gender minorities also engaged in direct communication and gender-based visual displays more frequently than cisgender women. In addition, pansexual individuals engaged in direct and

indirect communication more frequently than bisexual individuals and those who used other sexual identity labels, and queer individuals also engaged in direct communication more frequently than those who used other sexual identity labels. Although we controlled for these demographic characteristics in our analyses, it will be important for future research to examine whether engaging in different bi+ visibility strategies has different consequences for subgroups of bi+ individuals.

## Conclusions

Despite these limitations, our study adds to the growing evidence base that supports the importance bi+ visibility. We now know that bi+ individuals use a variety of strategies to make their sexual orientation visible to others (Davila et al., 2019), and the use of different strategies may have different implications for their experiences and health. Perhaps most important, different strategies were associated with experiencing discrimination from heterosexual versus gay/lesbian individuals, and different strategies were also associated with positive versus negative health consequences. These findings add nuance to our understanding of bi+ people's experience related to being open about their sexual orientation, suggesting that the consequences of being visible as a bi+ person depend on the specific strategies used to make one's identity visible.

## Funding:

This research was supported by grants from the American Psychological Foundation and the Sexualities Project at Northwestern. Brian Feinstein's time was supported by a grant from the National Institute on Drug Abuse (K08DA045575). Christina Dyar's time was also supported by a grant from the National Institute on Drug Abuse (K01DA046716). The content is solely the responsibility of the authors and does not necessarily represent the official views of the funding agencies.

## References

- Adamson SJ, Kay-Lambkin FJ, Baker AL, Lewin TJ, Thornton L, Kelly BJ, & Sellman JD (2010). An improved brief measure of cannabis misuse: The Cannabis Use Disorders Identification Test-Revised (CUDIT-R). *Drug and Alcohol Dependence*, 110, 137–143. [PubMed: 20347232]
- Alarie M, & Gaudet S (2013). "I don't know if she is bisexual or if she just wants to get attention": Analyzing the various mechanisms through which emerging adults invisibilize bisexuality. *Journal of Bisexuality*, 13, 191–214.
- Babor TF, Higgins-Biddle JC, Saunders JB, & Monteiro MG (2001). *AUDIT: The Alcohol Use Disorders Identification Test: Guidelines for use in primary health care*. World Health Organization, 2, 41.
- Brewster ME, & Moradi B (2010). Perceived experiences of anti-bisexual prejudice: Instrument development and evaluation. *Journal of Counseling Psychology*, 57, 451–468.
- Daly SJ, King N, & Yeadon-Lee T (2018). 'Femme it up or dress it down': Appearance and bisexual women in monogamous relationships. *Journal of Bisexuality*, 18, 257–277.
- Davila J, Feinstein BA, Dyar C, & Jabbour J (2020). How, when, and why do bisexual+ individuals attempt to make their identity visible? Manuscript submitted for publication.
- Davila J, Jabbour J, Dyar C, & Feinstein B (2019). Bi visibility: Characteristics of those who attempt to make their bisexual identity visible and the strategies they use. *Archives of Sexual Behavior*, 48, 199–211. [PubMed: 30413988]
- Dyar C, Feinstein BA, & Davila J (2019). Development and validation of a brief version of the Anti-Bisexual Experiences Scale. *Archives of Sexual Behavior*, 48, 175–189. [PubMed: 29611021]
- Eliason MJ (1997). The prevalence and nature of biphobia in heterosexual undergraduate students. *Archives of Sexual Behavior*, 26, 317–326. [PubMed: 9146816]

- Feinstein BA, & Dyar C (2017). Bisexuality, minority stress, and health. *Current Sexual Health Reports*, 9, 42–49. [PubMed: 28943815]
- Feinstein BA, Dyar C, Li DH, Whitton SW, Newcomb ME, & Mustanski B (2019). The longitudinal associations between outness and health outcomes among gay/lesbian versus bisexual emerging adults. *Archives of Sexual Behavior*, 48, 1111–1126. [PubMed: 30519838]
- Feinstein BA, Dyar C, & London B (2017). Are outness and community involvement risk or protective factors for alcohol and drug abuse among sexual minority women? *Archives of Sexual Behavior*, 46, 1411–1423. [PubMed: 27473072]
- Flanders CE, & Hatfield E (2014). Social perception of bisexuality. *Psychology & Sexuality*, 5, 232–246.
- Flanders CE, Dobinson C, & Logie C (2015). “I’m never really my full self”: Young bisexual women’s perceptions of their mental health. *Journal of Bisexuality*, 15, 454–480.
- Ghabrial MA (2019). “We can shapeshift and build bridges”: Bisexual women and gender diverse people of color on invisibility and embracing the borderlands. *Journal of Bisexuality*, 19, 169–197.
- Gonzalez K, Ramirez A, & Galupo J (2017). “I was and still am”: Narratives of bisexual marking in the #StillBisexual campaign. *Sexuality & Culture*, 21, 493–515.
- Hartman JE (2013). Creating a bisexual display: making bisexuality visible. *Journal of Bisexuality*, 13, 39–62.
- Hartman-Linck JE (2014). Keeping bisexuality alive: Maintaining bisexual visibility in monogamous relationships. *Journal of Bisexuality*, 14, 177–193.
- Hayfield N, Clarke V, Halliwell E, & Malson H (2013). Visible lesbians and invisible bisexuals: Appearance and visual identities among bisexual women. *Women’s Studies International Forum*, 40, 172–182.
- Hequembourg AL, & Brallier SA (2009). An exploration of sexual minority stress across the lines of gender and sexual identity. *Journal of Homosexuality*, 56, 273–298. [PubMed: 19319738]
- Huxley C, Clarke V, & Halliwell E (2013). Resisting and conforming to the “Lesbian Look”: The importance of appearance norms for lesbian and bisexual women. *Journal of Community and Applied Social Psychology*, 24, 205–219.
- Israel T, & Mohr JJ (2004). Attitudes toward bisexual women and men: Current research, future directions. *Journal of Bisexuality*, 4, 117–134.
- Johnston LD, Miech RA, O’Malley PM, Bachman JG, Schulenberg JE, & Patrick ME (2018). Monitoring the Future national survey results on drug use, 1975–2017: Overview, key findings on adolescent drug use.
- Kroenke K, Strine TW, Spitzer RL, Williams JBW, Berry JT, & Mokdad AH (2009). The PHQ-8 as a measure of current depression in the general population. *Journal of Affective Disorders*, 114, 163–173. [PubMed: 18752852]
- Meidlinger PC, & Hope DA (2014). Differentiating disclosure and concealment in measurement of outness for sexual minorities: The Nebraska Outness Scale. *Psychology of Sexual Orientation and Gender Diversity*, 1, 489–497.
- Mohr JJ, & Kendra MS (2011). Revision and extension of a multidimensional measure of sexual minority identity: The Lesbian, Gay, and Bisexual Identity Scale. *Journal of Counseling Psychology*, 58, 234–245. [PubMed: 21319899]
- Mohr JJ, & Rochlen AB (1999). Measuring attitudes regarding bisexuality in lesbian, gay male, and heterosexual populations. *Journal of Counseling Psychology*, 46, 353–369.
- Paul R, Smith NG, Mohr JJ, & Ross LE (2014). Measuring dimensions of bisexual identity: Initial development of the Bisexual Identity Inventory. *Psychology of Sexual Orientation and Gender Diversity*, 1, 452–460.
- Rodriguez A, Reise SP, & Haviland MG (2016). Evaluating bifactor models: Calculating and interpreting statistical indices. *Psychological Methods*, 21, 137–150. [PubMed: 26523435]
- Ross LE, Dobinson C, & Eady A (2010). Perceived determinants of mental health for bisexual people: A qualitative examination. *American Journal of Public Health*, 100, 496–502. [PubMed: 20075326]
- Ross LE, Salway T, Tarasoff LA, Mackay JM, Hawkins BW, & Fehr CP (2018). Prevalence of depression and anxiety among bisexual people compared to gay, lesbian, and heterosexual

individuals: A systematic review and meta-analysis. *The Journal of Sex Research*, 55, 435–456. [PubMed: 29099625]

Salway T, Ross LE, Fehr CP, Burley J, Asadi S, Hawkins B, & Tarasoff LA (2019). A systematic review and meta-analysis of disparities in the prevalence of suicide ideation and attempt among bisexual populations. *Archives of Sexual Behavior*, 48, 89–111. [PubMed: 29492768]

Spalding LR, & Peplau LA (1997). The unfaithful lover: heterosexuals' perceptions of bisexuals and their relationships. *Psychology of Women Quarterly*, 21, 611–626

Spitzer RL, Kroenke K, Williams JBW, & Löwe B (2006). A brief measure for assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine*, 166, 1092. [PubMed: 16717171]

Zivony A, & Lobel T (2014). The invisible stereotypes of bisexual men. *Archives of Sexual Behavior*, 43, 1165–1176. [PubMed: 24558124]

**Table 1**

Means, standard deviations, and associations between variables of interest

|  | 1      | 2     | 3      | 4      | 5      | 6     | 7      | 8      | 9      | 10     | 11     | 12    | 13   | 14     | 15     | 16     | 17     | 18  |  |
|--|--------|-------|--------|--------|--------|-------|--------|--------|--------|--------|--------|-------|------|--------|--------|--------|--------|-----|--|
| 1. Bi+ visibility strategies (aggregate) | -      |       |        |        |        |       |        |        |        |        |        |       |      |        |        |        |        |     |  |
| 2. Gender-based visual displays          | .70**  | -     |        |        |        |       |        |        |        |        |        |       |      |        |        |        |        |     |  |
| 3. Community engagement                  | .79**  | .43** | -      |        |        |       |        |        |        |        |        |       |      |        |        |        |        |     |  |
| 4. Direct communication                  | .79**  | .40** | .48**  | -      |        |       |        |        |        |        |        |       |      |        |        |        |        |     |  |
| 5. Indirect communication                | .76**  | .36** | .55**  | .50**  | -      |       |        |        |        |        |        |       |      |        |        |        |        |     |  |
| 6. Public behavioral displays            | .58**  | .39** | .36**  | .38**  | .33**  | -     |        |        |        |        |        |       |      |        |        |        |        |     |  |
| 7. Discrimination (heterosexual)         | .35**  | .24*  | .29**  | .25**  | .27**  | .15** | -      |        |        |        |        |       |      |        |        |        |        |     |  |
| 8. Discrimination (gay/lesbian)          | .27**  | .18** | .20**  | .25**  | .19**  | .18** | .65**  | -      |        |        |        |       |      |        |        |        |        |     |  |
| 9. Internalized bilinguinity             | -.11*  | -.06  | -.04   | -.14** | -.14** | .04   | .05    | .09*   | -      |        |        |       |      |        |        |        |        |     |  |
| 10. Anticipated binegativity             | -.08*  | .08   | -.05   | -.23** | -.01   | -.03  | .26**  | .26**  | .17**  | -      |        |       |      |        |        |        |        |     |  |
| 11. Internalized binegativity            | -.22** | -.10* | -.14** | -.28** | -.18** | -.06  | .01    | .05    | .44**  | .38**  | -      |       |      |        |        |        |        |     |  |
| 12. Identity affirmation                 | .50**  | .32** | .38**  | .50**  | .32**  | .26** | .14**  | .11*   | -.29** | -.23** | -.57** | -     |      |        |        |        |        |     |  |
| 13. Identity centrality                  | .51**  | .41** | .39**  | .47**  | .31**  | .21** | .15**  | .14**  | -.19** | -.02   | -.26** | .56** | -    |        |        |        |        |     |  |
| 14. Anxiety                              | .17**  | .16** | .05    | .10*   | .22**  | .13*  | .25**  | .20**  | .03    | .26**  | .09*   | -.01  | .03  | -      |        |        |        |     |  |
| 15. Depression                           | .14**  | .13** | .03    | .11*   | .17**  | .09*  | .21**  | .15**  | .01    | .19**  | .12*   | .001  | .01  | .75**  | -      |        |        |     |  |
| 16. AUDIT (Rate Ratio)                   | 1.01   | .98   | 1.03   | 1.00   | .95    | 1.13* | 1.03   | 1.05   | 1.36** | 1.02   | 1.06   | .98   | 1.00 | 1.16*  | 1.22*  | -      |        |     |  |
| 17. CUDIT (Rate Ratio)                   | 1.12   | 1.11  | 1.00   | 1.11   | 1.04   | 1.03  | 1.03   | 1.04   | 1.26*  | .82**  | 1.05   | 1.05  | .96  | 1.25** | 1.29** | 1.09** | -      |     |  |
| 18. Cigarette Use (Odds Ratio)           | 1.15   | 1.02  | 1.15   | 1.06   | 1.02   | 1.21* | 1.28** | 1.28** | 1.40*  | .85*   | 1.06   | .95   | .89  | 1.31*  | 1.34*  | 1.16** | 1.11** | -   |  |
| <i>Mean</i>                              | 2.85   | 2.39  | 2.52   | 3.16   | 3.35   | 2.66  | 2.72   | 2.23   | 1.23   | 4.15   | 2.17   | 5.73  | 4.11 | 2.46   | 2.29   | 4.08   | 3.25   | .18 |  |
| <i>Standard Deviation</i>                | .67    | .97   | .85    | .80    | 1.00   | 1.06  | 1.45   | 1.05   | .48    | 1.11   | 1.19   | 1.00  | 1.14 | .86    | .79    | 4.43   | 5.31   | .38 |  |

\*  $p < .05$ ;

$p < .001$   
\*\*

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript



**Table 2**  
Associations between bi+ visibility strategies and dimensions of identity, minority stress, and health

|                                     | Separate regression analyses                        |                              |                      |                      |                        | Simultaneous regression analyses |  |  |  |  |
|-------------------------------------|---|------------------------------|----------------------|----------------------|------------------------|----------------------------------|--|--|--|--|
|                                     | Bi+ visibility strategies (aggregated across types) | Gender-based visual displays | Community engagement | Direct communication | Indirect communication | Public behavioral displays       |  |  |  |  |
|                                     | $\beta$   | $\beta$                      | $\beta$              | $\beta$              | $\beta$                | $\beta$                          |  |  |  |  |
| Discrimination (heterosexual)       | .39**   | .17**                        | .09                  | .08                  | .11*                   | .13*                             |  |  |  |  |
| Discrimination (gay/lesbian)        | .29**   | .08                          | .03                  | .16**                | .04                    | .08                              |  |  |  |  |
| Internalized bi-illegitimacy        | -.09*   | -.01                         | .07                  | -.13*                | -.13*                  | .11*                             |  |  |  |  |
| Anticipated binegativity            | -.06  | .22**                        | -.03                 | -.34**               | .12*                   | -.02                             |  |  |  |  |
| Internalized binegativity           | -.19**  | .05                          | .002                 | -.25**               | -.06                   | .04                              |  |  |  |  |
| Identity affirmation                | .50**   | .09                          | .16**                | .38**                | -.01                   | .02                              |  |  |  |  |
| Identity centrality                 | .48**   | .22**                        | .15**                | .31**                | .01                    | -.05                             |  |  |  |  |
| Anxiety                             | .15**   | .07                          | -.13*                | -.05                 | .26**                  | .07                              |  |  |  |  |
| Depression                          | .11*  | .04                          | -.11                 | .002                 | .18**                  | .04                              |  |  |  |  |
| Alcohol use problems (Rate Ratio)   | 1.08  | .49                          | 1.06                 | .99                  | .91                    | 1.18**                           |  |  |  |  |
| Marijuana use problems (Rate Ratio) | 1.10  | 1.10                         | .93                  | 1.07                 | 1.04                   | .98                              |  |  |  |  |
| Cigarette use (Odds Ratio)          | 1.22  | .93                          | 1.17                 | .94                  | .89                    | 1.34*                            |  |  |  |  |

In the simultaneous regression analyses, the five types of bi+ visibility strategies were entered as simultaneous predictors. In the separate regression analyses, the only predictor was bi+ visibility strategies (aggregated across type). All of the analyses controlled for age, sex/gender, sexual identity, and race/ethnicity. All of the coefficients are betas with the exceptions of the coefficients for alcohol and marijuana use problems (which are rate ratios) and cigarette use (which are odds ratios).

\* p < .05;

\*\* p < .001.