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Non-Verbal Pride Expressions as a Predictor of LGBTQ Health

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by

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Abstract

Pride is a self-conscious, positive emotion that has been assessed in a wide range of populations and with a variety of pre-validated measures. Research has shown that the presence of pride can function as a potential resilience factor against minority based stress and has been linked to increased emotional well being, life satisfaction, and self-esteem. However, a majority of this research relies upon self-report questionnaires as opposed to observational data. To evaluate the predictive power of non-verbal pride behaviors, a group of LGBTQ+ individuals (n=125) were asked during a recorded interview to describe an experience where they felt prideful about their identity. Participants were also asked to complete a series of self-report questionnaires related to identity-based pride, social connectivity, and physical health. Using a non-verbal pride behavioral coding system, a team of 4 researchers evaluated pride behaviors during the interviews with strong reliability (α =.76-.89). While measures of both non-verbal and self-reported independently observed the presence of pride, a multitrait-multimethod analysis revealed no significant correlations between non-verbal behavioral pride and any of the selected self-report questionnaires. Results indicated that different methods for evaluating pride will not always detect pride in the same individuals, as a participant can show non-verbal pride behaviors without self-reporting feelings or experiences of pride, or vice versa. This supports the need for multi-method pride assessments in future behavioral research, particularly as a means to evaluate self-conscious expressions.

Non-Verbal Pride Expressions as a Predictor of LGBTQ Health

Gender non-conforming and LGBTQ young adults have been historically marginalized in the United States and experience health disparities as a result of structural and socio-cultural stigma that cisgender and heterosexual people do not. The unique effects of stigma as it relates to LGBTQ health has been explored in work such as the Minority Stress Model (Meyer, 2003) as well as a growing body of research detailing relevant stigma related processes and potential resilience factors (Perrin, et al., 2020). Minority specific stressors can be either proximal or distal. Proximal stressors include internal or subjective experiences such as feelings of guilt or shame from internalized homophobia whereas distal stressors refer to external forms of discrimination such as bullying, physical assaults, or laws barring access to essential services. Unlike general stressors in daily life (e.g. paying bills), a minority specific stressor occurs directly as a result a person's minority status. Whether acute or chronic, accumulated experiences of minority stress increase vulnerability to negative physical health outcomes (Wright & Wegner, 2012) and have been linked with higher incidences of mental disorders/distress among LGBTQ people including depression, anxiety, substance use disorders, and suicide (Hatzenbuehler, 2009).

The experience of minority stress is not felt equally by all individuals within a given community and the extent to which an individual's physical or psychological health is impacted can be mediated by the presence of resilience factors that help buffer against the threats associated with minority stress (Breslow et al., 2015). Meyer (2015) defines resilience as "the quality of being able to survive and thrive in the face of adversity" (p.50) and a resilience factor is an experience, condition, or process that can promote resilience. Crucially, resilience implies a level of success in adapting to or resisting negative circumstances that a person is facing as

opposed to something that is generally positive regardless of context. For instance, while drinking a certain amount of water each day might be considered healthy overall, it is not specifically responsive to the experience of minority stress. Resilience factors are also separate from coping mechanisms because resilience is always directly tied to the impact on health outcomes, while coping refers to a response that is ambivalent to the results of the behavior (Meyer, 2015). Although considerable research has been done to describe a wide variety of resilience factors and to explore their relationship to disparate health outcomes, work focusing on the development of interventions designed to promote or enhance resilience specifically are relatively new (e.g., Pachankis, 2019).

One resilience factor that has been identified consistently as a positive indicator of LGBTQ+ health is pride. Pride can be defined as a feeling of pleasure or satisfaction associated with recognition of one's personal achievements, innate capacities, or self-worth (Williams & DeStano, 2008). Expressions of pride have been strongly linked with established measures of self-esteem, extraversion, conscientiousness, positive affect, proactive coping, and self-efficacy (Dickens & Robins, 2020). Research has also shown that pride has a negative association with various forms of psychological distress such as neuroticism, social anxiety, and depression (Rendina et al., 2019). While there is limited work on pride that has dealt specifically with LGBTQ+ populations, there are distinct experiences of pride related to gender and sexual identity that can be protective factors against discrimination and suicidal ideation (Matsuno & Israel, 2018). Identity based pride has been identified as consistently associated directly and indirectly with mental health and positive health behaviors (Perrin, et al., 2020). Further, a positive appraisal of one's identity has been linked with increased social connectivity, life satisfaction, and mental well-being (Fredriksen-Goldsen, et al. 2017). The observed impact of

identity-based pride on social connectivity has been posited as an explanation for pride's role in positive mental health outcomes, as social support can be a protective factor against psychological distress (Pflum et al., 2015), suicidality (Ryan, Russell, Huebner, Diaz, & Sanchez, 2010) and substance use (Rothman, Sullivan, Keyes, & Boehmer, 2012). Further, Perrin et al., (2020), suggests that the health-protective effects of social connectivity and community consciousness function through identity pride and that feelings of self-worth related to one's identity are of particular significance for marginalized people as a means of resisting internalized stigma.

To date, a majority of studies on pride have relied exclusively on self-report measures. While there are many self-report measures of pride that have proven to be reliable, valid, and reliably associated with a range of health outcomes, there are limitations to self-report measures of pride particularly because it is considered a "self-conscious" emotion and therefore requires a degree of introspection and social consideration that other emotions might not (Dickens and Robins, 2020). Importantly, the term "self-conscious" does not necessarily imply that the person is conscious of or actively considering their emotional state. Instead, their feelings might be processed or experienced subconsciously, without specific awareness of their source. For example, someone who does not realize that they are blushing when they have been embarrassed. Self-conscious emotions are likely to be acknowledged when individuals direct their attention towards self-representations and evaluate the extent to which emotion-eliciting experiences are consistent with their understanding of their personal and social goals (Tracy et al., 2007). However, to reliably self-report a self-conscious emotion such as pride, an individual must first be aware of the emotion, then be able to distinguish that emotion from a set of similar positive affective emotions such as happiness, and finally be willing and comfortable enough to disclose

these feelings to the researchers. Unfortunately, research suggests that these conditions are not easily met simultaneously. Previous studies have shown that participants with no pre-existing language for their emotional experiences are likely to confuse self-conscious emotions from one another (Tagney & Tracy, 2012). People also tend to be less willing to openly discuss feelings of pride and shame (Zammuner, 1996), potentially due to the perceived social implications of the assessment and the attendant effects that can have on a person's self-worth. That emotions can be implicitly felt without conscious awareness problematizes the observed relationships between pride and existing self-report measures (Tracy and Matsumoto, 2008).

However, regardless of the degree of self-consciousness, pride is not just experienced internally. It has discrete external expressions that occur spontaneously on the face and body. Pride has been observed developmentally in children as early as 2.5 years old and children are able to recognize the presence of pride by age 4. Higher level cognitive understandings of pride appear to occur around ages 7 to 9 (Lagattuta & Thompson, 2007). These non-verbalized expressions of pride have been observed cross culturally with reliably recognizable features. Commonly observed features of the pride expression are an expanded posture, tilting the head back, a slight smile, and thrusting arms in the air, though not all nonverbal pride expressions will contain all of these associated gestures (Tracy & Robins, 2007). Meaningful expressions of pride are likely to combine a handful of prototypical gestures with secondary movements, requiring an evaluation of both face and body movements to confirm observations. Notably, compared to other positive emotions such as happiness that can be reliably observed only with the face, observations of pride seem to require a more complex analyses of facial and bodily movements, with body movements even sometimes proving to be more reliable than facial expression for the purposes of predicting pride (App et al, 2011).

To date, Tracy and Robins (2007) are responsible for the creation of the most widely used methodology for recording nonverbal expressions of pride. Variations on their coding system have been used to recognize and study the expression of pride across multiple age groups, in the congenitally blind, in isolated communities in Burkina Faso, and among Olympic athletes from a geographically diverse set of nations (Tracy & Robins, 2008). Taken together, the body of research suggests that individual feelings of pride are, to a certain extent, innate, as opposed to culturally mediated, implying that the function and development of pride in individuals is not a socially learned process. Still, a commonly cited limitation of these nonverbal studies of pride is that they have no additional self-report measures to compare data against, meaning there is not much known about the relationship between self-reported pride measures and nonverbal assessments (Else-Quest et al., 2012) And though there are a few studies that have begun to use nonverbal measures of pride as a predictor of positive health outcomes, most still use self-report measures of pride exclusively (Dickens & Robins, 2020). There have also not been any studies that test the reliability of established nonverbal expressions of pride within the LGBTQ community.

In observing the recorded behavior of LGBTQ adults while they discuss experiences of identity pride, this study seeks to assess four hypotheses related to non-verbal pride expressions in a sample of U.S. LGBTQ adults. The first is that the recounting of positive experiences related to one's LGBTQ identity will be reliably associated with the observation of non-verbal behavioral expressions of pride. Second, non-verbal measures of pride will be positively correlated with self-report measures of pride. Third, behavioral pride expressions will be positively associated with measures of social connectivity. And finally, that non-verbal

behavioral pride expressions will be positively associated with measures of physical health/health promoting behaviors.

Methods

Participants

This study uses data collected by researchers at the Gender Based Violence Lab at Hunter College led by Dr. Danielle Berke in partnership with researchers from the University of Maine at the Emotion, Pain, and Interpersonal Communication Lab led by Dr. Mollie Ruben. The total sample size for the study was n = 125. Data collection began in October 2019 and ended in October 2021. To determine eligibility, participants were asked to complete a brief questionnaire asking for relevant information and demographic data. Participants were required to be at least 18 years old and fluent in English. Participants also had to identify as lesbian, gay, bisexual, be attracted to more than one gender and/or identify as trans gender or gender diverse. In the interest of having a more geographically representative sample, participants were recruited from one rural setting (University of Maine) and one urban setting (Hunter College). Participants were recruited via social media websites, LGBTQ local listservers, and flyers posted in the community, as well as at in person events by researchers at Hunter College and the University of Maine. Researchers also used snowball sampling and asked community members to pass along flyers and information about the study to friends and acquaintances they thought might be interested in participating.

Procedures

This study used a mixed methods, quasi-experimental design comprised of self-report surveys and observational analysis of recorded interviews. Participants were asked to conduct interviews with a researcher that was recorded on video or via Zoom. To start each interview, a

baseline prompt question was given, asking participants to describe the events of their week. The remainder of the interview consisted of two prompts. One where participants were asked to speak about a time they were made to feel badly about their LGBTQ identity and another where they felt good or positive about it. Video interviews were conducted via Zoom with a researcher at either the University of Maine or Hunter College. Participants were introduced to the researcher and given time to get comfortable with the environment before being asked the designated prompts. This allowed space for the researcher to make sure the interview was set up properly and for baseline non-verbal behavioral information to be collected. The participants were encouraged to speak on the prompts for three to five minutes each. After the interviews, the participant was administered a self-report questionnaire battery. The survey measurers were conducted online using the device of the participant's choice and took around 30 minutes to complete.

Measures

Non-Verbal Pride

To assess non-verbal pride expressions during the recorded interviews, the study used the validated pride behavioral coding scheme initially developed by (Tracy & Robins, 2007) and then built upon by (Tracy &Matsumoto, 2008). The coding scheme involves rating the intensity of behaviors related to head, arm and body positioning from 0 to 5, with 0 meaning that no behaviors were present and 5 indicating "extreme intensity." In the interest of reliability, a minimum of two research assistants were asked to code each interview in order to compare their scores. Inter-rater reliability was calculated for each gesture using cronbach's alpha to describe the overall performance of the coding team, as multiple coders evaluated each video and gesture.

Coders were asked to provide scores for a total of fifteen gestures based on a 10 second clip of each prompted response. To better focus exclusively on non-verbal behaviors, instructions were given to watch the clips without the audio on. A pride score for each participant was then calculated for each prompt by taking the average scores of the five gestures that had previously been identified as pride related by the validated pride coding scheme. Those five gestures were: smiling, head tilted back, arms out from body, torso leaning back, and chest expanded

Self-Reported Identity Based Pride

For the purposes of evaluating self-reported identity based pride, participants were asked to complete the Lesbian, Gay, Bisexual Idenity Scale (LGBIS; Mohr & Kenra, 2011), Revised Internalized Homophobia Scale (Herek et al., 2009), and Internalized Transphobia Subscale of the Gender Minority Stress and Resilience Scale (Testa et al., 2015).

The LGBIS looks at seven dimensions of lesbian, gay, and bisexual identity that clinical and theoretical literature have discussed as being related to health outcomes and health seeking behaviors. For the purposes of this project, we used the Identity Affirmation Subscale, which contains 3 items related to identity based pride (eg. "I am proud to be LGB"). Items are rated on a 6-point Likert scale ranging from 1 "Disagree strongly" to 6 "Agree strongly." In this study, 125 participants completed the LGBIS. The value for cronbach's alpha for the sample was α = .85.

The Internalized Homophobia Scale (IHS-R; Herek et al., 2015) functions as a covariate in this study and assess levels of rejection sensitivity, hypervigilance, and perceived discrimination related to gender and sexual minority status that are likely to predict expressions of identity pride, as well as physical and mental health outcomes. The IHS-R contains 5 items scored on a 5-point Likert scale, ranging from 1 "disagree strongly" to 5 "agree strongly". It

contains sample items such as "I have tried to stop being attracted to those of the same sex in general." In this study, 125 participants completed the IHS-R. The value for cronbach's alpha for the sample was α = .854.

The Internalized Transphobia Subscale of the Gender Minority Stress and Resilience Scale (GMSR; Testa et al., 2015) assesses internalized stigma related to one's gender identity for trans and gender non-conforming people. It contains 8 items scored on a 5-point Likert scale, ranging from 1 "Strongly disagree" to 5 "Strongly agree". In this study, 29 participants completed the IHS-R. The value for cronbach's alpha for the sample was α = .839.

Social Connectivity

To determine the health outcomes that were most likely to be related to expressions of identity pride, measures were chosen from a recently published meta-analyses on widely documented health disparities among LGBTQ people (IOM, 2011). This work identified social connectivity as a protective factor putatively related to health behaviors and identity pride. For a community driven measurement related to gender and sexual minority status, the LGBTQ Community Belonging Subscale (CBel; Riggle, Mohr, et al., 2014) was chosen to evaluate participant's self evaluation of their feelings of belonging within the LGBTQ community (eg. "I feel included in the LGBTQ community"). The subscale includes five items rated on a 7-point Likert scale ranging from 1 "Disagree Strongly" to 7 "Agree Strongly". In this study, 77 participants completed the CBel. The value for cronbach's alpha for the sample was α = .88.

Participants completed the Social and Emotional Loneliness Scale for Adults Short Form (SELSA-SF; Cramer, Ofosu, & Barry, 2000) as a measure of self-reported feelings of isolation. It contains 15 items scored on a 7-point Likert scale, ranging from 1 "disagree strongly disagree" to 7" agree strongly". Examples of items include "I have friends whom I can talk to about the

pressures in my life" and "I feel part of my family." ". In this study, 76 participants completed the SELSA-SF. The value for cronbach's alpha for the sample was $\alpha = .089$, which was considered unreliable for the purposes of data analysis.

In addition, the Interpersonal Needs Questionnaire (INQ; Van Orden, 2009) was used. The INQ is a measure of a person's sense of belonging as well as perceived burdensomeness (e.g.. "Others care about me"). It also contains 15 items scored on a 7-point Likert scale, ranging from 1 "not at all true for me" to 7" very true for me". In this study, 77 participants completed the INQ. The value for cronbach's alpha for the sample was $\alpha = .3$, which was considered unreliable for the purposes of data analysis.

Physical Health

The physical health of the participants was assessed using the RAND 12-Item Short Form Health Survey (RAND; Ware et al., 1996), the International Physical Activity Questionnaire (IPQ; Craig et al., 2003) and the Alcohol, Smoking, and Substance Involvement Screening Test V3.0 (WHO ASSIST Working Group, 2002). The RAND survey is designed to measure a person's subjective evaluations of their mental and physical health, asking questions such as "how would you say your health is" and "how much time during the past 4 weeks did you have a lot of energy?" ". In this study, 123 participants completed the RAND. The value for cronbach's alpha for the sample was $\alpha = .933$.

As a further measure of health behaviors, the Alcohol, Smoking, and Substance Involvement Screening Test V3.0 (WHO ASSIST Working Group, 2002) provides information about participant's overall substance use. Sample items include "have you ever tried and failed to control, cut down, or stop using" and "has anyone else ever expressed concern for your use of substances." Items were rated on a 3-point scale with 1 being "no," 2 being "yes, in the past 3

months" and 3 being "yes, but not in the past 3 months." In this study, 125 participants completed the ASSIST. The value for cronbach's alpha for the sample was $\alpha = .637$. The IPQ was given to participants in order to collect baseline information on actual health promoting behaviors that participants are engaged in (e.g.. "How many times in the last 7 days did you spend doing vigorous activities such as weight-lifting or biking?). " In this study, 77 participants completed the IPQ. The value for cronbach's alpha for the sample was $\alpha = .016$, which was considered unreliable for the purposes of data analysis.

Results

Using video-recorded interview data from the pride specific prompt (n = 125), the five items selected for the non-verbal pride behavioral coding scheme (i.e. smiling, head back, arms out, torso out, and chest expanded) were assessed by calculating inter-rater reliability for 20% of total videos (32 total), which were coded by all 4 coders on the team. The results indicate that each of the reliability scores for the behaviors was high with a range from .76-.89. An individual item assessment confirmed that reliability would not have been improved with the removal of any of the included behaviors. This is consistent with the hypothesis that the recounting of positive experiences related to one's LGBTQ identity would be reliably associated with non-verbal behavioral expressions of pride. The mean non-verbal pride score for the positive experience prompt was 1.66 with a standard deviation of .75.

Contrary to initial predictions, a bivariate correlation analysis revealed no significant relationships between non-verbal pride and any of the selected self-report measures for identity-based pride, social connectivity, or physical health (see Table 1). According to a multi-trait, multi-method analysis (Campbell and Fiske, 1959) there was significant correlation between the ITS and the other two identity based self-report pride measures. This pattern of findings is

consistent with the established parameters for MTMM analysis, indicating an acceptable level of construct validity. There were also significant correlations among the following self-report measures: IHS, ITS, and the CBel. As there were no observable significant relationships between non-verbal pride and the self-report measures, the results of this study are inconclusive as to whether or not non-verbal expressions of pride may be predictive of the mental and physical health of LGBTQ populations.

Discussion

The present study sought to explore the predictive power of non-verbal pride expressions on the mental and physical health of LGTBQ+ adults. Notably, the results indicate that the non-verbal pride behavioral coding system is a reliable method for assessing pride expressions in an exclusively LGBTQ+ population, confirming the primary hypothesis that recounting positive experiences of ones LGBTQ+ identity would be reliably associated with observations of non-verbal behavioral pride. As one of the only studies utilizing these methods to specifically observe non-verbal pride behaviors among sexual and gender minorities, the results further expand the set of scenarios and populations in which the non-verbal pride behavioral coding system has been implemented reliably. The recounting of personal experiences to reliably evoke pride expressions also represents a novel technique for assessing non-verbal pride behavior, as many past studies have relied on photographs or videos collected retroactively from public competition events such the Olympics. Having reliable, multi-method tools to evaluate the presence of pride is especially important for LGBTQ+ populations, as pride generally and identity pride in particular is known to have a significant positive impact on associated measures of long term mental and physical health (Perrin, et al., 2020).

While the results of the present study support the reliability of the use of the non-verbal pride behavioral system in discrete LGBTQ+ populations, there were no significant correlations observed between the non-verbal pride behavioral scores and any of the selected self-report measures related to identity-based pride, social connectivity, or physical well-being. This means that the data does not support the predictions made in hypothesis 2, 3 or 4, as they all pertained to positive relationships between the non-verbal pride scores and the self-report surveys. The absence of evidence for a significant correlation between the behavioral coding system and the full array of self-report measures assessed has several potential explanations, although future research is needed to understand the precise cause of the pattern of findings identified herein. Positive associations between our self-report measure of social connectivity and self-report surveys of pride are consistent with prior research describing the function of social connection as a potential mediator for identity based pride (Austin & Goodman, 2017). That there are significant correlations between several of the self-report surveys and not between any of them and the non-verbal pride coding may be an indicator of method convergence among the self-report surveys.

Finding both the non-verbal pride coding system and the self-report measures to be independently reliable despite any significant correlations suggests that there may be meaningful differences between these forms of pride expression. It also lends credence to the theory that the outcomes of self-report measures for self-conscious emotions such as pride can be highly sensitive due to considerations of social desirability, comfort with disclosure, or the ability to distinguish between related positive affects (Zammuner, 1996; Else-Quest et al., 2012; Robins et al., 2007). If one of the strengths of the non-verbal behavioral coding system is, in fact, its ability to assess unconscious expressions that bypass people's reactive and/or conscious efforts to

moderate their pride response, then there is reason to believe that people who test highly for non-verbal pride may not register positively on self-report surveys or vice versa. Though the current research is unable to make this assessment, it is conceivable based on these results that unconscious experiences of pride have distinct qualities, correlates, and clinical implications from the consciously experienced pride that people willingly choose to report in self-report surveys. That this study was conducted among a population of gender and sexual minorities only increases the likelihood that considerations of social acceptability and internalized resistance could be an influencing factor on conscious pride responses due to the higher levels of stigma and violence that LGBTQ+ people experience relative to the general public. This threat to the validity of self-report measures adds to the argument for including additional measures for self-conscious emotions such as pride that are not bound to the sensitivity shortcomings of self-report surveys. While self-reported pride measures have proven their reliability in previous studies and the specificity that the survey questions can conveniently offer without consuming large amounts of resources has clear utility, this does not necessarily make them sufficient for a holistic assessment of individual pride experiences.

Based on the current results, however, non-verbal pride measures may not be sufficient either. In their analysis of the non-verbal pride coding system, Tracy and Robins (2007) argue that there does not appear to be a substantial difference in non-verbal pride expressions based on the nature or source of the pride. This means that the non-verbal pride coding system is not independently capable of establishing the presence of identity based pride directly. With no reported significant correlations between non-verbal pride expressions and the selected identity based pride self-report measures, the non-verbal behavioral results must be considered only in terms of pride in general, as there is no significant basis within the results to claim that that

correlation is identity specific. Though the assessed prompt asked participants to evoke positive experiences of their identity, the interviews did not contain questions that compared these to recollections of non-identity based pride, so it is possible that some participants may show higher or lower levels of pride overall, regardless of their identity. The results of the study also do not present any significant evidence for whether non-verbal pride expressions would be predictive of self-reported measures of social connectivity or physical well-being, associations which have been made in prior research using self-reported measures of pride. This does not immediately imply that unconscious or non-verbal expressions of pride have no relationship with long term health measures. Instead, due to the strong overall reliability and established record of these measures, the discrepancies between the current self-report results and prior research warrants further investigation and may speak to some of the limitations inherent to the present study design.

Limitations

Data collection for this project was substantially impacted by the start of the COVID pandemic in March 2020 and results must be considered accordingly. Shifting to remote work required that the protocols for the interview portions of the study be adapted from in-person, on-campus meetings with a fixed camera set up to online, video chats over Zoom with participants having to find a suitable location in their own homes. This increased the probability of experiencing technical complications and/or unforeseen interruptions (e.g. pets walking into view). There were instances where videos could not be evaluated due to poor recording conditions. In one example, the lighting was too dark to see much more than the participant's silhouette. In other instances, participant's camera angles cut them off at the chest, preventing coders from being able to evaluate key non-verbal factors such as arm position. There is also the

potential for the home environment in and of itself to have an impact on a person's behavioral responses, depending on the relative safety and comfort they have in their living situation. When considered alongside the analysis regarding self-conscious emotions, it's possible that being in a familiar environment and/or having proximity to strong social pressures such as close relatives can influence the perceived acceptability of a person's pride expression.

For measures of physical activity, it's reasonable to suggest that participants behaviors were severely disrupted by the requirements of pandemic life and, indeed, the results for the physical health questionnaires had considerable amounts of error-variance. Responses were vague and varied widely in spread, resulting in prohibitively low reliability scores. In another example of the pandemic's potential influence, the geographic diversity of the study sample meant that the safety conditions of the participants in New York City, particularly early on, may have been significantly different from the participants reporting from rural Maine. As the exact impact of these changes are difficult to fully evaluate at the time of this writing, ideally the results of this study would be replicated under more stable conditions where the lives of the participants and research were not radically impacted by the effects of prolonged isolation.

Future Directions

To better understand the observed differences between the results of the non-verbal pride behavioral coding system and the self-report surveys, subsequent research into pride would benefit from further diversifying the methods used to evaluate its presence or expression. The sensitivity of self-report data to inhibitory effects associated with self-conscious emotions remains a concern and it would be valuable to compare the pattern of associations between the non-verbal behavioral assessment of pride used in this study correlates to the pattern of associations produced by other non-verbal behavioral measures. Physical health, for example,

could be evaluated through collected biospecimens, such as blood samples, as opposed to the chosen self-report surveys that rely on more subjective forms of self-appraisal. It's possible that measures which do not rely on self-report will show stronger correlation with the non-verbal pride measure due to balance of method variance and the lack of opportunity for self-conscious appraisal. Additionally, attempts should be made to isolate the factors that might influence someone to present non-verbal pride, but not necessarily self-report. To do this, attention should be given to control for the environmental and social pressures that the participant may be influenced by in their self-report surveys. It may be valuable to survey participants in environments where current social pressure and/or stigma for LGBTQ+ is known to be particularly high. This would increase the incentive for participants to mask their prideful feelings or behavior during self-report surveys whereas the non-verbal assessments may still register unconscious pride expressions. Alternatively, in the opposite direction, participants could be given controlled incentives to overstate their self-reported feelings of pride, perhaps due to perceived social desirability. The goal in either case would be to provoke conscious manipulations of pride behavior without compromising the potential for unconscious, non-verbal assessment.

Further efforts may also be made to evaluate the role of identity pride versus pride overall for the purposes of non-verbal behavioral assessment. It remains to be seen how the non-verbal expressions of pride observed in the participants from this study compare to other prideful moments in their life. The strength of non-verbal pride expressions may be mediated by the nature or source of the pride (e.g. identity based pride), or there may be additional factors that have more universal effects on a person's behavioral pride displays, such as life satisfaction. These questions could be explored by using a larger set of interview prompts that include

questions pertaining to disparate aspects of pride. Observations of interviews could also be supplemented by additional scenarios that present participants with novel sources of pride. For example, conducting a within group comparison between non-verbal observations from interviews and non-verbal observations after completing an achievement-based task like a game or sports activity would allow for stronger inferences to be made about the factors influencing participant's pride responses. Prompting participants by administering an unexpected affirmation or compliment may also have relevant, observable pride effects. Since the current results point towards an increased need for measures of pride that target unconscious expression, any reliable methods for provoking an observable pride response would be a welcome expansion to the range of scenarios in which pride can be assessed. Doing so can help clarify the role of the various types of pride as they pertain to non-verbal expression as well as shed light on the factors that most readily determine the form, texture, and observability of a person's pride response.

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Table 1

Multitrait-Multimethod Matrix of Non-Verbal and Self-Reported Pride Measures

		(M1)Non-Verbal Pride				(M2) Identity Pride			(M3) Social			(M4) Health		
		(T1) Prompt 1	(T2) Prompt 2	(T3) Prompt 3	(T4) Overall	(T1) LGBIS	(T2) IHS	(T3) ITS	(T1) Selsa	(T2) CBel	(T3) INQ	(T1) RAND	(T2) PA	(T3) ASSIST
(M1)Non-Verbal Pride	(T1) Neutral Prompt	(0.76-0.89)												
	(T2)Shame Prompt	.366**	(0.76-0.89)											
	(T3)Pride Prompt	.356**	.219*	(0.76-0.89)										
	(T4)Overall	.792**	.706**	.712**	(0.76-0.89)									
(M2) Identity Pride	(T1)LGBIS	-0.057	0.02	-0.097	-0.064	(.85)								
	(T2)IHS	-0.052	0.029	0.066	0.019	-0.036	(0.854)							
	(T3)ITS	-0.156	-0.112	-0.183	-0.19	.472**	.472**	(0.839)						
(M3) Social	(T1) Selsa	-0.183	-0.109	0.061	-0.11	-0.08	-0.059	-0.199	—					
	(T2)CBel	0.008	-0.089	0.124	0.019	0.031	-0.361**	-0.581**	.289**	(.88)				
	(T3)INQ	-0.114	-0.093	-0.064	-0.121	0.144	-0.211	-0.084	.361**	-0.027	—			
(M4) Health	(T1) RAND	-0.042	-.188*	-0.133	-0.165	0.011	-0.069	.439*	-0.013	-0.047	0.151	(0.933)		
	(T2) PA	0.031	0.021	0.014	0.03	0.078	0.18	0.183	0.088	0.016	-0.055	0.078	—	
	(T3) ASSIST	-0.037	-0.068	-0.103	-0.093	0.116	0	0.137	-0.068	-0.064	0.166	-0.125	0.126	(0.637)