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Considerations for Culturally Sensitive Research with Transgender Adults: A Qualitative Analysis

Jennifer M. Staples,

Department of Psychology, University of Washington.

Elizabeth R. Bird,

Department of Psychology, University of Washington.

Tatiana Masters,

School of Social Work, University of Washington.

William H. George

Department of Psychology, University of Washington.

Abstract

Transgender (trans) individuals have historically been left out of research and previous work has often conflated gender identity with sexual orientation. Furthermore, language used in psychology measures is often heteronormative and uses binary gendered language (e.g., him/her). The aim of the current study was to provide empirically derived guidance on conducting culturally sensitive research with transgender participants using qualitative data. We recruited trans individuals age 18–44 to participate in an anonymous, qualitative, national online survey as part of a quantitative study on the relationships among minority stress, sexual behavior, and mental health. The qualitative portion included four open-ended feedback questions. We identified four overarching themes regarding experiences with our survey: 1) Emotional reaction; 2) Insight gained; 3) Being outside the box; and 4) Value of the work. Research with trans adults should be more inclusive of diverse gender identities, sexual identities, and sexual behaviors. Steps in this direction may include soliciting feedback from community members regarding survey language and response options, allowing participants to contextualize their responses using open-ended questions, and clarifying language to distinguish between sexual behavior and sexual identity. A list of seven preliminary guidelines was proposed to aid scientists in conducting culturally sensitive research with trans individuals.

Keywords

ethics/professional issues; sexual minorities; gender identity; qualitative methods; special populations/transgender

Transgender (trans) individuals are at elevated risk of poor health compared to the general population (National Institutes of Health, 2010). Rates of suicide attempts among trans individuals are approximately eight times rates found in the general population (Grant et al., 2011; Marshall, Claes, Bouman, Witcomb, & Arcelus, 2016; Nock et al., 2008). In 2010, trans people were identified in U.S. health priorities as an at-risk population for health-related problems (U.S. Department of Health and Human Services, 2012), and in 2011, the Institute of Medicine recognized the lack of research and clinical attention to gender identity as a critical gap in efforts to reduce health disparities (Centers for Disease Control and Prevention, 2011). In recent years, research that seeks to understand trans physical and mental health disparities and inform prevention and intervention efforts has increased. However, there is a lack of empirically derived practical guidance for how to conduct culturally sensitive research with this population. The present study used qualitative methods to understand trans individuals' experience participating in an online survey that investigated identity characteristics, minority stress, sexual behavior, and health variables. The primary goals of this study were to give our participants a voice and to inform culturally sensitive and inclusive survey research with trans participants.

Gender identity refers to a person's deeply felt, inherent sense of being a man, a woman, or an alternative gender that may or may not correspond to sex assigned at birth (American Psychological Association, 2015). Trans individuals sometimes identify as sexual minorities (e.g., lesbian, gay, bisexual, queer) and sometimes identify as heterosexual. Research that lumps trans individuals and sexual minorities into one category disregards obvious biological, psychosocial, and cultural differences among these subgroups that may contribute to health risk behaviors (Smalley, Warren, & Barefoot, 2016). Transgender is an umbrella term that refers to a diverse group of people who experience incongruence between their gender identity and the gender role assigned by society according to natal sex (Bockting, 2014). In contrast, the term cisgender refers to people whose gender identity and gender expression (the presentation of an individual, including physical appearance, clothing choice, and behaviors that express aspects of gender; American Psychological Association, 2015) align with sex assigned at birth (American Psychological Association, 2015; Tate, Ledbetter, & Youssef, 2012). Some trans individuals strongly identify with the gender binary (male-to-female [MTF] or transwoman, female-to-male [FTM] or transman) and others identify beyond the gender binary (e.g., genderqueer) (American Psychiatric Association, 2011; Bockting, 2014).

Genderism is a cultural conceptualization that suggests gender is a binary and that aspects of one's gender should be inherently linked to one's sex assigned at birth. Because genderism is pervasive in society, trans people cannot avoid being perceived as different. Genderism, therefore, reinforces marginalization of and discrimination toward transgender people (Wolf & Dew, 2012). Anti-discrimination laws in most U.S. cities and states do not protect trans individuals from gender-related discrimination (American Psychiatric Association, 2011) and research suggests that trans people experience elevated rates of stigmatization (e.g., Grant et al., 2011). Both theoretical (Hatzenbeuhler, 2009; Hendricks & Testa, 2012; Meyer, 2003) and empirical (Baams, Beek, Hille, Zevenbergen, & Bos, 2013; Bockting, Miner, Romine, Hamilton, & Coleman, 2013; Grant et al., 2011; Staples et al., under review) work

explicates an association between discrimination and poor health outcomes among trans individuals, including depression and suicidal behavior.

Although some forms of discrimination toward trans individuals are intentional and explicit (e.g., harassment and physical violence), trans individuals are faced with implicit forms of discrimination, or microaggressions, on a daily basis (Chang & Chung, 2015). Microaggressions can be defined as contemporary, subtle, pervasive, and often interpersonal manifestations of discrimination (Sue et al., 2007). Trans participants report experiencing both explicit discrimination and microaggressions by health care providers, including psychologists (Factor & Rothblum, 2008; Grant et al., 2011). Factor and Rothblum (2008) conducted a quantitative study to investigate identity and community among 166 transgender adults. Results showed that many transgender participants expressed distrust and anger toward psychological and psychiatric establishments due to the “degrading and detrimental ‘treatment’” they had received. These participants expressed eagerness to be involved in a research study that was interested in their experiences and had the potential to shape future treatment.

Trans individuals who participate in psychology and other social science research are at risk of experiencing various forms of microaggressions. For example, trans individuals have historically been ignored and left out of research, or have been combined with LGB samples (American Psychological Association, 2015), conflating their gender identity with sexual orientation. Furthermore, few psychology measures have been validated with trans populations and little is known about the impact of existing surveys on trans participants. Information is needed to inform culturally sensitive and inclusive research methodologies with trans participants.

Culturally sensitive research can be defined as research done with a raised consciousness concerning the impact of culture on the group being studied, on the research process itself, and on the researcher (Henderson, Sampselle, Mayes, & Oakley, 1992). Culturally sensitive research incorporates the historical context and cultural experiences of a distinct cultural group (Resnicow et al., 1999). This includes cultural considerations of the research design, choice of instruments, and analyses and interpretations of the data (Henderson et al., 1992). There have been intentional efforts in the past two decades to conduct culturally sensitive research with specific cultural groups – and in particular groups that have historically been discriminated against and exploited through research – including African Americans (Secor-Turner Sieving, Garwick, Spratt, & Duke, 2010), people with communication disorders (Huer & Saenz, 2003), and indigenous populations (Burnette, Sanders, Butcher, & Rand, 2011; Denzin, Lincoln, & Smith, 2008). Qualitative and quantitative research has informed specific guidelines and principles for researchers to conduct culturally sensitive research with these groups. For example, Burnette et al. (2011) conducted a qualitative study with indigenous and non-indigenous researchers and highlighted 22 strategies for cultural sensitivity in research with indigenous populations (e.g., become educated by learning about indigenous history). However, very few specific research guidelines are in place for trans participants (American Psychological Association, 2015).

In 2015, the American Psychological Association Task Force on Gender Identity and Gender Variance released 16 guidelines for psychological practice with trans people based on the existing literature. Guideline 15 states that psychologists should “respect the welfare and rights of [trans] participants in research and strive to represent results accurately and avoid misuse or misrepresentation of findings.” The authors of the American Psychological Association guidelines indicate that trans individuals have often been invisible in research because they have been subsumed within other categories. Furthermore, some research with trans populations has been misused and misinterpreted, resulting in skepticism and reluctance of trans participants to be involved in research. The authors call for more sensitive research to inform practice, offering guidelines such as providing a range of options for capturing demographic information, using a two-step method of assessing gender (first asking for sex assigned at birth, then about gender identity), avoiding generalizing findings from one trans subgroup to the larger trans population, and using collaborative research models such as participatory action research. Although these guidelines are an important first step, they could be further deepened and specified. More research is needed to provide researchers with tangible suggestions for making their research methods with trans participants more sensitive and inclusive.

Present Study Overview

This study aimed to understand trans participants’ experience participating in psychology research and to inform guidelines for culturally sensitive future research with trans populations. It drew on data from a primarily quantitative online study that investigated identity variables, minority stress, sexual behaviors, and health outcomes. Data from the study’s open-ended feedback questions at the end of the survey were used for this analysis. Open-ended questions asked about emotional responses to participating in this research and suggestions for survey construction. Participants identified using a number of gender identity labels (e.g., femme, agender, bigender) and pronouns (e.g., hir/hirs, ne/nem). Therefore, we will be using “they/them/their” pronouns throughout to refer to all participants collectively.

Method

Participants

Approval to conduct this study was received from the University of Washington Institutional Review Board. From 2015–2016, we recruited trans individuals age 18–44 to participate in an anonymous, national online survey. Participants were recruited at an international transgender conference, via online advertisements placed on social media (i.e., Facebook, Instagram, Tumblr, Twitter), and by contacting transgender-related organizations throughout the U.S. To be eligible for the study, individuals had to: 1) live in the U.S., 2) speak and read English fluently, 3) be between the ages of 18–44, and 4) identify as transgender, defined as having a gender identity today that is different from the gender they were assigned at birth.

A total of 396 individuals completed the screening survey and followed a link to an online information statement for informed consent. A total of 325 individuals agreed to participate in the 45-minute online survey, and 247 completed the survey in full. Of those individuals

who completed the survey in full, 178 (72%) participants responded to at least one of the open-ended qualitative feedback questions. Bivariate analyses indicated that there were no significant differences between people who did and did not respond to the qualitative feedback questions in terms of age, race/ethnicity, natal sex, maleness/femaleness, and income. However, there were significant differences in education level between the two groups, with individuals who responded to the qualitative feedback questions having a higher mean education level than individuals who did not respond to the qualitative feedback questions ($t(242) = 2.74, p < .01$). It is important to note that the mean education level for both groups was above 4, indicating at least “some college.”

Detailed demographic data is presented in Table 1. The average age of participants was 28.06 ($SD = 7.06$). There were a greater number of individuals assigned female at birth (66.1%) than male at birth (32.1%). Participants indicated how much they identified with 14 different gender identity options drawn from the National Transgender Discrimination Report (Grant et al., 2011). Participants also reported on their current sexual orientation identity, sexual behavior, and sexual desires as well as their racial identity, relationship status, and household income.

Procedures

This study was part of a larger quantitative study that investigated relationships among minority stress, sexual behavior, and mental health. Interested participants could follow a link to the study website or a link that would take them directly to a brief online screening hosted on Qualtrics, a secure data collection and management program. If participants met eligibility criteria, they could proceed to view the informational statement to complete consent. After consenting, participants proceeded to the online survey, which took approximately 45 minutes to complete. The qualitative portion of the study included four open-ended questions at the end of the survey. Participants had the option to skip any question they did not wish to answer. At survey completion, participants had the chance to enter a raffle for a \$100 Amazon gift card and also had the option to refer friends to the survey for a chance to win an additional \$100 Amazon gift card.

Measures

Survey feedback.—Four open-ended questions were presented to participants: 1) *What was your experience like participating in the Trans* Health Project?* 2) *What did you like about the survey?* 3) *What did you dislike about the survey?* 4) *What suggestions do you have for improving the Trans* Health Project?* Participants could respond in an unlimited number of words.

Analysis

It is important to note that all members of the research team identify as cisgender. To decrease potential bias and microaggressions in the creation of the survey, the first author consulted with multiple individuals who identify as transgender. Additionally, after the first eight responses to the survey, she made modifications based on participant feedback to make the survey more inclusive.

To accomplish our aim of understanding participants' experience participating in our survey, we used a qualitative method based on thematic analysis (Attride-Sterling, 2001; Braun & Clarke, 2006). Thematic analysis seeks to uncover themes/patterns salient in a text and organizes and describes the data in rich detail. We followed Ayres, Kavanagh, and Knafl's (2003) recommendations for a within-and-across case analytic strategy, in which we first summarized the key features of each individual participant's text and then compared the text of all participants to identify common themes. We wrote memos throughout the data analysis process in order to record decisions regarding coding and interpretation.

We utilized an inductive approach, in which the themes we identified were strongly linked to the data themselves (Braun & Clarke, 2006). Because the responses were written directly by the participant, we did not need to transcribe or further process the data prior to performing analyses. We uploaded the data in a Microsoft Excel spreadsheet and, in accordance with the steps proposed by Braun and Clarke (2006), performed the following sequence of analyses (the first author performed steps 1–5 on her own and all authors performed step 6): 1) We read and re-read the data and noted initial ideas; 2) We coded responses to each open-ended question with a brief descriptive label that remained close to the data (e.g., “more nuance in sexuality section”) in a new column. Open-ended responses that included more than one theme were assigned multiple codes in different columns; 3) We reviewed the initial codes and identified potential themes. We collated codes with overlapping themes to form a new overarching theme (e.g., “modify sexual orientation questions”) and a new column in excel; 4) We reviewed and refined the themes to ensure that each theme was distinct and meaningful. We then tested themes against the original codes and the original data extracts, and reworked or discarded any themes that did not appear to form a distinct and coherent pattern (e.g., “validating” was subsumed under “positive experience”); 5) We congregated the themes into core themes and sub-themes (e.g., “positive experience,” “informative,” “inclusive,” and “thorough” represented sub-themes subsumed under a core theme “positive valence”), establishing a thematic network; 6) The second and third authors reviewed the network of themes to increase reliability. Finally, we wrote an analytic narrative to describe the thematic network, including examples of data extracts that signified each theme. This paper represents the product of the final analytic step.

Results

In examining data excerpts across all of the open-ended questions, we identified four overarching themes regarding participants' experiences with our survey: 1) Emotional reaction; 2) Insight gained; 3) Being outside the box; and 4) Value of the work. Most participants reported both aspects they liked and aspects they disliked about the survey, and some participants explicitly highlighted ambivalent reactions to participating in our survey. For example, one participant wrote, “A little triggering answering the questions about sexual abuse, but that's a lot better than if they hadn't been asked at all.” The four overarching themes identified above, and variation within these themes, are described in detail and illustrated with quotes. Words we interpolated to make participants' meaning clearer appear in square brackets.

Emotional Reaction

A number of participants expressed an emotional reaction to participating in our survey. Some participants explicitly used emotion words (e.g., “fear of the questions”) and others alluded to an emotional experience (e.g., “WOW, what a great experience”). Reactions included both positive and negative experiences. Furthermore, some participants expressed mixed emotional reactions (i.e., empathy for the trans community).

Positive emotion reactions.—Many participants responded to the feedback questions with brief, positive remarks, including use of exclamation points that expressed their enthusiasm. They used terms such as “positive,” “awesome,” “pleasant,” “easy and comfortable,” “good,” and “enjoyable.” Several participants expressed their positivity about the survey by saying thank you. One participant wrote, “I like that people care to gather accurate information about us. SO IMPORTANT, thank you.” Several participants emphasized that they were happy to contribute to the greater trans community through their participation in our survey. One participant wrote, “Thank you for giving me an opportunity to help!” Another wrote “glad to be contributing to research!”

Some participants emphasized that the survey questions helped them feel understood and validated as a trans person. One participant wrote that they “felt their experiences and existence as a trans person are validated by things like this survey where I can express some of the things I go through.” Three participants wrote that they liked participating in the survey because they could be “heard.” However, some participants expressed a sense of validation along with painful emotions. One participant wrote, “I like that it is an attempt to make sense of all of this. I am feeling lost, alone, and out of control. This trans-train has left what I thought I was comfortable [with] and [is] heading into the unknown. I can’t stop it, but it’d be easier if I could...I think. The fact that others are also trying to understand this, so that is reassuring to me.” Although this survey clearly brought up painful emotions for this participant, they indicated appreciation that the survey attempted to understand their struggles.

Negative emotional reactions.—Similar to the brief positive remarks, there were brief negative remarks expressed by multiple participants. Participants used words such as “annoying,” “negative,” “obnoxious,” “uncomfortable,” “anxious,” “scary,” and “spooky.”

A number of participants indicated that they experienced some or all of the survey as “triggering” of negative emotions or memories. One participant wrote, “Definitely kind of triggering, especially with all the questions that felt like they sort of aimed to get you to feel shitty (Like, ‘How distressed has this made you?’) And systematically listing a bunch of really stressful stuff.” Other participants alluded to being triggered. For example, one participant said that the survey brought up “bad memories.” Although we included trigger warnings at the start of the survey, some participants suggested adding additional warnings. For example, one participant had a suggestion to “separate the survey into trigger sections so that others who don’t wish to read or answer triggering things can avoid them altogether.”

Several participants used the terms “stressful” or “distressing” to describe their experience participating in the survey. Some participants indicated that it was difficult to make it

through the survey because of their strong emotional reaction: “it made me cry due to the experiences that I have had. I am aware of the complete isolation I am in, compared to the community I came from, at the same time due to the questions, I am reminded of the alienation I experienced there due to my economic [position] and disabilities. It throws me off a bit. I am not sure if I can afford this at this moment.” Furthermore, it is clear that some participants typically avoid thinking about the topics raised in the survey and that it is challenging to face these issues. For example, one participant wrote, “It was very difficult to take this survey. Normally I can block most of this out and just be myself, but that isn’t possible during things like this.” Finally, some participants indicated that although the survey was uncomfortable, they believed it was worth asking the questions because they are “somewhat painful, but necessary.”

Finally, many participants referenced feelings of empathy for other people taking the survey and expressed feeling connected to the trans community. For example, one participant wrote, “seeing some of the responses made me feel like I could connect with someone else like me, knowing that they too may have encountered what I have. I didn’t feel alone and I felt empathy for others and their struggles.” One participant wrote about how some of the survey questions were irrelevant to their experiences, but at the same time increased their empathy for other trans people taking the survey: “On the one hand I am grateful to have had to scroll through three pages of specific self-harm questions as it makes me more aware of my brothers’ and sisters’ suffering. However very few of the questions had any relevance to me.”

Insight Gained

A recurring theme participants emphasized was that the survey helped them think more about their experiences as trans individuals and helped them gain insight into their lives. Several participants indicated that the survey made them think about themselves in new ways and was “eye opening.” For example, one participant wrote, “This survey definitely provided me with some insight into my own emotions and past that I hadn’t previously thought about before.” Another wrote, “really made me think a lot about me in ways I’ve never had.” Some participants indicated that they believed this introspection would benefit them. One participant wrote, “It made me... face some truths about myself, and think about what I can work on to better myself.”

Being Outside the Box

A central overarching theme we identified, with several sub-themes, was the concept of trans participants not fitting comfortably into established “boxes.” This showed up with respect to 1) response options, 2) survey language, and 3) sexuality measures (i.e., sexual behavior and sexual orientation). Overall, a discrepancy emerged between participants who emphasized the survey’s inclusivity versus those who emphasized its exclusivity.

Response options.—A large number of participants commented on the response options available to them throughout the survey, some referring to specific sections and others commenting more broadly. Overall, participants found that the methods for assessing identity were sensitive and inclusive. For example: “I like that it included a lot of questions/

options relevant for nonbinary trans folks.” Other participants specifically expressed appreciation that their identities were included. For example, one participant wrote, “It actually included two-spirit identities. It means so much to me that you thought about us,” and another: “Thank you for including Asexuals in your sexuality options!” Some participants more broadly stated that they believed the response options were inclusive, such as one participant who wrote, “Lots of ways to answer questions (no binary options!)”

However, other participants reacted to response options as being exclusive. One participant summed this sub-theme up, writing: “I felt a lot of the options for answers really don’t tell the whole story.” Several participants explicitly called for more inclusivity of specific identity subgroups in response options. For example, “Make it more inclusive to asexual spectrum, aromantic and non-binary and intersex folks. Especially non-binary folks who don’t see their gender on any kind of ‘spectrum’ or in any way that relates to male/female genders.” Overall, participants expressed a desire for more space to describe their experience. One participant wrote: “Some questions were vague, but moreso the answers. Perhaps there could have been an “other” option to EVERY question.”

Survey language.—Some participants commented positively on the language used throughout the survey. For example, one participant wrote: “The survey feels as though there was intentionality behind its inclusive language,” and another wrote: “Whoever wrote the survey definitely at least partially understood the terminology appropriate for transgender people.” However, other participants disagreed, stating that the survey language was exclusive and even offensive at times: “It is clear that some of the investigators are still making some heteronormative assumptions about the transgender experience...I would suggest thoroughly vetting your questions with a broader set of queer perspectives.”

Sexuality measures.—Numerous participants expressed confusion and dissatisfaction about both the sexual behavior and sexual orientation questions. One participant wrote: “Questions of sex and sexuality were weird/narrow, hard to classify for me.”

Sexual behavior.—Sexual behavior was measured using modified questions created by Dr. William H. George and colleagues (unpublished). Items are referred to as the Sexual Health Questionnaire in the supplementary file. Overall, participants indicated that their experiences were not captured by the questions asked about sexual behavior. Although two participants expressed appreciation that sex partners were divided into male/female/transgender, others had problems with the overarching trans category. For example, one participant wrote: “dividing sex partners into male, female and transgender is confusing. Do you mean cis male and cis female? No genderqueer or intersex options.” Participants also expressed dissatisfaction with the sexual behaviors that were asked about. One participant wrote: “Many questions exclude intersex people based on genitalia...no asexual or autosexual representation, either. Tribbing/frotting/grinding and non-penetrative sex are erased in this survey.” Several participants expressed uncertainty about whether the sexual behavior questions included masturbation. For example: “it is not clear whether the “sexual activity” questions are supposed to include solitary self-stimulation or not.” Finally, a few participants expressed a desire to clarify their safe-sex practices, including one participant who wrote: “I don’t use condoms because both my partner and I are trans men, so they’re

unnecessary. That's not to say that we haven't used safer sex methods in the past or with other people, but condoms are not and never have been useful between us, so I don't like that condoms are the only measure of safer sex considered in this survey."

Sexual Orientation.—Participants overwhelmingly indicated that what they disliked about the survey were the Kinsey Scale (Kinsey, 1948) questions about sexual orientation, which ask respondents to indicate their sexual experiences (*"Select the statement that best describes your sexual experience"*) and sexual desires (*"Select the statement that best describes your sexual desires"*) using a 7-point scale ranging from 0 (*Exclusively Heterosexual*) to 6 (*Exclusively Homosexual*). An additional response option (not typically included) was added that read *"Not applicable (please explain)."* Approximately 31% ($N=55$) of participants endorsed *"Not applicable"* to the question regarding sexual experiences, and 29% ($N=50$) endorsed *"Not applicable"* to the question regarding sexual desires. Participants expressed difficulty fitting their experiences into the scale's response options and expressed negative emotions in response to answering the questions. One participant wrote: "There is no definition of how homosexual and heterosexual relationships are being examined, and whether it is entirely subjective – for instance, if a person is MTF pre-op is sexually active with female-bodied persons, whether MTF or natal female, then is the survey taker encouraged to give their subjective [belief] that it is homosexual?" Another participant wrote: "There were a couple of questions where I had to decide how "homosexual" and "heterosexual" my desires and experience are. This question was pretty bizarre from the perspective of an all-around queer like me. I do not identify as a man or a woman and some of the people I have sex with do not identify as a man or a woman. So words like "homosexual" and "heterosexual" don't feel at all relevant to my experience. So many binaries!" One participant was familiar with the Kinsey Scale: "It looked like [the sexual orientation questions] were based on the Kinsey Scale, which I guess is why you chose to use them, but honestly it's almost impossible to fit those terms to my sexual/relationship experiences (because I've had three sexual partners of three different genders)".

Some participants offered suggestions for how to assess sexual orientation without using the Kinsey Scale: "For the sexual orientation questions, I think it would be more accurate to speak to the physical parts involved....as so much of being transgender is about personal identity (regardless of the physical body one inhabits)....and that can really skew the answer you receive depending on the perspectives one employs both currently and historically."

Value of the Work

We identified three general subthemes pertaining to the value of our survey based on participants' feedback: 1) dared to ask, 2) valuable for the community, and 3) fear of misinterpretation. Multiple participants expressed gratitude that our survey asked important, albeit sensitive, questions that are often ignored about transgender people's identity and health, including questions about suicidality, sexual abuse, and non-suicidal self-injury. For example, one participant wrote: "I like that it asked me down to earth real questions that a lot of people shy away from in everyday life, or don't want to talk about even though they exist (e.g. sexual non-consent)." Similarly, another participant wrote: "It's starting to feel like trans issues are finally getting some attention." One participant alluded to the idea that it

requires courage to ask sensitive questions: “It asked deep questions and the creators were not afraid to do so.” However, one participant disagreed, writing: “Too invasive of questions, it is very tasteless to ask a majority of these questions. Queer people don’t deserve to have their sexual life and mental health dissected and analyzed in this manner.”

One participant’s feedback summed up another subtheme of the research having value to the trans community: “What I like about this survey is that it is going somewhere within the research. It’s not “just a survey,” It’s going to help people, the community, and society as a whole to better understand those who are transgender, etc.” Similar responses indicated that several participants believed our survey was beneficial for the trans community. For example, one participant wrote: “I do like that trans* voices are getting heard and the idea that we as a demographic matter.” Several participants simply expressed that they were glad this survey exists. One participant wrote: “Very heartening to know that these kinds of surveys are out there for Trans people.”

Finally, although some participants recognized the value of our work, others expressed fear of the survey being misinterpreted or misused. One participant expressed concern about the interpretation of their responses: “Some of the questions were confusing, and I’m afraid that these answers might not be as meaningful as you think.” Another participant indicated that they noticed a few grammatical and spelling errors in the survey that raised concerns: “I feel like the people who made the study harbor negative opinions of non-binary genders. Do they actually care or were they told to perform this study? How is the study being used? Who paid and why? I’m a little specious, especially as undergraduate who is conducting research.” Other participants indicated that they felt some topics were over-emphasized. For example, one participant wrote: “I would ask more questions about the non-sexual aspects of being trans. It’s important to cover the sexual aspects, definitely; there’s a distinct problem regarding sexual abuse/coercion and sexual health issues when it comes to the trans community. But it almost seemed like the survey was focused on it more than anything, and it raises red flags to me regarding the oversexualization of trans individuals.”

Discussion

In an effort to support culturally sensitive research, the current study examined trans individuals’ experiences participating in a survey on identity variables, minority stress, sexual behaviors, and health outcomes. Below, we summarize findings and translate them into a preliminary set of guidelines for research with trans individuals.

Participants reported myriad emotional reactions to filling out the survey. They expressed both positive and negative emotional responses, including feeling a connection to the broader trans community, validation of their experiences as a trans person, distress with reminders of negative experiences, and empathy for other trans people. Participants also reported gaining insight into their emotions and experiences.

In line with existing American Psychological Association (2015) culturally sensitive research guidelines, participants reported not fitting into established “boxes.” Key findings here include participants finding the measures of identity to be inclusive but wanting more

open-ended response options overall, feeling that survey questions made heteronormative assumptions, and advocating for a broader investigation of safer sex practices (e.g., encouraging less focus on condom use). The sexual behavior and identity measures were the most highly criticized, with participants pointing out that definitions of terms such as “heterosexual” and “homosexual” are not clear in a context where people are shifting their gender expression and secondary sex characteristics and some individuals do not identify with the gender binary. This feedback is consistent with previous research with sexual minorities, which has highlighted the challenges of measuring sexual orientation in an inclusive and sensitive manner (Epstein & Robertson, 2014; Weinrich, 2014). However, more work is needed to understand the best approaches to measuring sexual orientation among transgender individuals.

Finally, participants provided feedback on the value of the survey. They conveyed the importance of shining a light on trans experiences not typically discussed in the public domain as well as their high hopes that research could aid the trans community. However, some individuals felt the questions were too invasive or feared the misuse or misinterpretation of the survey data, which has been a problem with past research (Namaste, 2000).

From these findings, we have developed a list of seven preliminary guidelines to aid future scientists in conducting culturally sensitive research with trans individuals. These guidelines were developed using data drawn from one research study and should be treated as the start to an iterative process informed by further qualitative and quantitative data.

1. *Provide a clear rationale for your study.* Trans individuals experience skepticism and hesitation to participate in research, not trusting that researchers have their best interests in mind (American Psychological Association, 2015). Indeed, in the present study, some participants reported this concern. Additionally, several participants indicated that the survey was repetitive and focused too heavily on topics such as alcohol use and sexual activity and not enough on topics related to resilience. Recent research using the Health Equity Model does emphasize a need to focus on both resilience and risk in order to aid trans and other disadvantaged populations in reaching their full mental and physical health potential (Fredriksen-Goldsen et al., 2014). Given trans individuals’ pervasive experiences with discrimination (Grant et al., 2011; Schuster, Reisner, & Onorato, 2016), it is important to provide a rationale for focusing on negative experiences while also giving opportunity for participants to express strength and pride. Similarly, it may be helpful to include a statement about the intended uses/implications of the research either at the beginning or the end of the survey.
2. *Consider the emotional impact of sensitive topics in survey creation.* Research often includes questions that have the potential to be emotionally upsetting. As researchers, it is our responsibility to decrease risks to participants. For example, an iterative informed consent process can help by explaining to participants that they can withdraw from the study or skip questions at any point. Some participants made additional suggestions such as clearly organizing the survey by various triggering sections so that participants can choose to skip topics rather

than individual questions. Another participant suggested including members of the trans community in survey construction to aid in identifying triggering questions to include in the consent form as examples.

3. *Do not limit response options.* Participants appreciated having numerous response options, especially pertaining to identity variables. In our sample, 50% of respondents selected multiple sexual orientations (e.g., pansexual and heterosexual), 13% selected multiple relationship statuses (e.g., polyamorous and single), and nearly everyone (91%) selected multiple gender identities other than “transgender” (e.g., genderqueer and androgynous). It is important to allow participants to select multiple options and include open-ended boxes wherever possible. Historically, transgender individuals have been treated as a homogenous group and previous research has indicated that it is important not to assume there is a universal transgender experience (Nadal, Skolnik, & Wong, 2012). Limiting response options may imply that there is limited diversity among transgender individuals. Even if researchers do not intend to analyze qualitative data, this information can provide context for researchers and allow participants to express themselves. However, it is important that any open-ended answers be considered and examined during the data analytic process so that participants’ information does not land on deaf ears. By giving participants space to more fully voice their experiences, researchers are implicitly suggesting that this information is important and will somehow be included in the data analytic process. Failure to at least examine open-ended questions could be considered misleading at best and dishonest at worst. Balancing trans participants’ and researchers’ needs is difficult. It is important that trans individuals are able to accurately express themselves and that trans diversity is represented in research. At the same time, researchers need numerical data for quantitative analyses. Future research should improve the systematic measurement of trans subgroups in a culturally sensitive manner. Researchers should also consider the theoretical importance and empirical evidence for comparing certain groups. That is, perhaps there are additional ways to assess differences among trans subgroups that are less categorical and more continuous or are based on descriptions that trans individuals feel comfortable with. For example, participants might prefer to indicate how much they identify with various labels on a Likert scale. Additionally, future research might use latent class analysis to identify trans subgroups, and then name the classes based on feedback from trans consultants.
4. *Avoid binary gender identity language.* Participants emphasized their dissatisfaction with binary language related to gender identity. Indeed, younger generations are more frequently transcending the gender binary (Grant et al., 2011), and binary language is likely to invalidate non-binary identities and function as a microaggression. Nadal and colleagues (2012) identified the use of incorrect gendered terminology (e.g., using binary pronouns for someone who identifies as non-binary) as a common microaggression experienced by transgender individuals. Measures may need to be modified to include less binary language (e.g., using “their” in place of “his/her”), and members of the

trans community who identify as non-binary should read surveys and provide feedback on survey language. Even the term “transgender” assumes that all trans people are homogenous in their gender identification and sole usage without other response options could miss nuance in gender identification. For example, the “transgender” umbrella can include individuals who identify at many stages of gender transition and/or individuals who do not identify with a gender at all.

5. *Assess sexual behavior (e.g., body parts and health risks of behavior) separately from sexual orientation identity.* Catania, Gibson, Chitwood, and Coates (1990) highlighted several methodological problems in assessing sexual risk behavior among diverse groups, including misunderstandings of sexual terminology. The authors emphasized the importance of using sexual terminology that the target group understands and feels comfortable using, which may require qualitative investigations. In our study, many participants expressed confusion about how to answer questions about sexual partners. It may help to focus on body parts involved and transition status (e.g., has bottom surgery been completed?) instead of focusing on gender identity. However, given potential discomfort with terminology used by cisgender individuals, relying on body part centered language could be distressing for some participants. For example, a trans man who currently has natal female genitalia may feel uncomfortable referring to his genitals as a vulva, as it may feel invalidating to his gender. Future work should ask trans participants about the most sensitive way to ask questions that refer to body parts. One option is for researchers to be clear about the rationale for using certain terms and acknowledge that participants may not prefer the terms used. Furthermore, including a diversity of sexual behaviors will allow for accurate representation of behavior. For example, instead of asking about “penetrative sex,” researchers can specify with what and where the penetration is occurring. Questions can also specify whether sexual acts are given or received. Other types of sexual behaviors to include are tribadism (rubbing vulva on partner’s body), grinding, hand sex, and oral sex. This type of specification will not only be helpful for sexual risk assessment but also be inclusive and sensitive to trans people’s diverse sexual behaviors. Finally, when assessing sexual risk, it is important to not focus on condom use to the exclusion of other safer sex behaviors. Even if an individual has a penis they may not use it for penetration during sexual activity and there are many other safer sex practices such as using barriers and getting tested for sexually transmitted infections that should be examined.
6. *Be specific and thorough when measuring sexual orientation.* The Kinsey Scale (Kinsey, 1948) was used to measure sexual orientation in the current study. Participants uniformly expressed confusion and dislike for the scale’s reliance on binary gender identity as expressed in a heterosexual-to-homosexual spectrum. Researchers have suggested measuring sexual orientation using a three-pronged approach, examining behavior, attraction, and self-labeling (Saewyc et al., 2004). However, disagreement on the construct of sexual orientation results in measurement inconsistency (Saewyc et al., 2004). Some suggestions for

measuring sexual orientation in the trans community apply to all populations. Researchers should consider which information they are interested in, and why, given that these three dimensions of sexual orientation do not show complete concordance (Nield, Magnusson, Brooks, Chapman, & Lapane, 2015). Relying on self-labeling to study sexual orientation in a trans sample creates confusion given that identities can change with gender transition (Mizock & Hopwood, 2016). Additionally, labels that rely on a gender binary (e.g., heterosexual) should be used only in addition to other options (e.g., pansexual). Even with the more thorough three-dimensional approach to measuring sexual orientation, typical response options will not be appropriate for a trans sample. For example, asking whether an individual is attracted to or engages in sexual behavior with “men,” “women,” or “both,” will not capture interests in non-binary individuals. More research is needed to understand the best methods for measuring the sexual orientation of trans individuals, and the field would benefit from the creation of a validated measure.

7. *Involve members of the trans community in research whenever possible.* As previously mentioned, Guideline 15 set forth by the American Psychological Association (2015) suggests including trans individuals in the research process. Community-based participatory research involves collaboration with individuals from the community to give underserved communities a voice in the research process and allow for research that is mutually beneficial to researchers and the community (Minkler & Wallerstein, 2003). Members of the trans community should be involved throughout the data collection, analysis and interpretation processes whenever possible, in order to better inform survey language and prevent potential microaggressions (Sue et al., 2007). For example, trans individuals may help researchers develop new measures rather than adopting existing measures. This is the gold standard when conducting any culturally sensitive research (Betancourt et al., 2009; Kleinman, 1988), but measures have yet to be created using trans samples. Even if language is adapted, questions created for a non-trans population may not have the same meaning or adequately measure a construct in a trans sample. It is important to note that the “trans community” is a heterogeneous population, and recommendations drawn from a sample of trans individuals should not be assumed to represent the trans community at large. Researchers may make efforts to select trans individuals who identify with different trans-subgroups (e.g., MTF, FTM, and nonbinary).

Clinical Implications

Recent efforts have been made to develop culturally sensitive clinical practice guidelines with trans people (e.g., American Psychological Association, 2015; Coleman et al., 2011), and trainings were emerging that focus on transgender care (e.g., CARDEA: Training, Organization Development and Research). The presented guidelines will not only inform research but may also be useful for clinical intake forms and interview questions.

Limitations

Results from the current study are limited by the anonymous, online method employed. First, we recruited a convenience sample of trans adults and cannot determine its representation of the trans community overall. Future work should examine thematic patterns seen in the responses between groups with different identity characteristics. Culturally sensitive research focusing on individuals who identify as FTM, for example, may look different than culturally sensitive research focusing on individuals who identify as genderqueer or nonbinary. Second, due to the online nature of our survey, the study included only internet users. As a result, we are less likely to reach rural, low SES, and homeless individuals, possibly biasing the sample. Furthermore, there was no opportunity for follow-up interviews with participants to clarify responses or gather additional information. However, our methodology has notable strengths, including access to a geographically diverse sample and anonymity, which may have allowed for more honest responses to sensitive questions.

Our sample overall was highly educated (with the largest group having at least some college) and participants who responded to the qualitative feedback questions were overall significantly more educated than participants who did not respond to the feedback questions. Furthermore, our sample was potentially under-representative of racial/ethnic minority participants, although the sample was diverse in terms of income. Additionally, findings do not represent individuals outside the age range of the study, and as with any qualitative study, may not represent individuals' experiences that were not examined in the study. Finally, the trans community evolves over time, including transgender-related terminology and identity labels (Bockting et al., 2014). Therefore, these guidelines will need to continue to be edited and refined.

Conclusion

This study was one of the first to inquire about trans participants' experiences participating in social science research. Results may inform future culturally sensitive research with trans participants. The guidelines outlined here provide initial recommendations based on a single anonymous survey, and should be expanded upon with future research utilizing diverse methodologies. As social scientists, it is our ethical responsibility to make extra efforts to be sensitive and inclusive when working with marginalized populations. The first step in achieving this goal is to inquire about and listen to our participants' experiences taking part in our research.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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References

- American Psychiatric Association (2011). Answers to your questions About transgender people, gender identity, and gender expression. Washington, DC: Author Retrieved from www.apa.org/topics/sexuality/transgender.pdf.
- American Psychological Association. (2015). Guidelines for psychological practice with transgender and gender nonconforming people. Retrieved from <http://www.apa.org/practice/guidelines/transgender.pdf>
- Attride-Stirling J (2001). Thematic networks: An analytic tool for qualitative research. *Qualitative Research*, 1, 385–405.
- Ayres L, Kavanaugh K, & Knafl KA (2003). Within-case and across-case approaches to qualitative data analysis. *Qualitative Health Research*, 13, 871–83. [PubMed: 12891720]
- Baams L, Beek T, Hille H, Zevenbergen FC, & Bos HMW (2013). Gender nonconformity, perceived stigmatization, and psychological well-being in Dutch sexual minority youth and young adults: A mediation analysis. *Archives of Sexual Behavior*, 42, 765–773. [PubMed: 23358856]
- Betancourt T, Bass J, Borisova I, Neugebauer R, Speelman L, Onyango G...Bolton P (2009). Assessing local instrument reliability and validity: A field-based example from northern Uganda. *Social Psychiatry and Psychiatric Epidemiology*, 44, 685–692. [PubMed: 19165403]
- Bockting W, Miner MH, Swinburne Romine R, Hamilton A, & Coleman E (2013). Stigma, mental health, and resilience in an online sample of the US transgender population. *The American Journal of Public Health*, 103, 943–951. [PubMed: 23488522]
- Bockting WO (2014). Transgender identity development In Tolman DL, Diamond LM, Bauermeister JA, George WH, Pfaus JG, & Ward ML (Eds). *APA handbook of sexuality and psychology*. (pp. 739–758). Washington, DC, US: American Psychological Association.
- Braun V, & Clarke V (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101.
- Burnette CE, Sanders S, Butcher HK, & Matt Salois E (2011). Illuminating the lived experiences of research with indigenous communities. *Journal of Ethnic and Cultural Diversity in Social Work*, 20, 275–296.
- CARDEA: Training, Organization Development and Research. Providing Culturally Proficient Services to Transgender and Gender Nonconforming People. Retrieved from <http://www.cardeaservices.org/training/providing-culturally-proficient-services-to-transgender-and-gender-nonconforming-people.html>
- Catania JA, Gibson DR, Chitwood DD, & Coates TJ (1990). Methodological problems in AIDS behavioral research: Influences on measurement error and participation bias in studies on sexual behavior. *Psychological Bulletin*, 108, 339–362. [PubMed: 2270232]
- Centers for Disease Control and Prevention. (2011, 1 14). Rationale for regular reporting on health disparities and inequalities: United States. *Morbidity and Mortality Weekly Report*. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/su6001a2.htm>
- Chang TK, & Chung YB (2015). Transgender microaggressions: Complexity of the heterogeneity of transgender identities. *Journal of LGBT Issues in Counseling*, 9, 217–234.
- Coleman E, Bockting W, Botzer M, Cohen-Kettensis P, DeCuypere G, Feldman J...Zucker K (2011). Standards of care for the health of transsexual, transgender, and gender-nonconforming people, version 7. *International Journal of Transgenderism*, 13, 165–232.
- Epstein R, & Robertson RE (2014). How to measure sexual orientation range and why it's worth measuring. *Journal of Bisexuality*, 14, 391–403.
- Factor R, & Rothblum E (2008). Exploring gender identity and community among three groups of transgender individuals in the United States: MTFs, FTMs, and genderqueers. *Health Sociology Review*, 17, 235–253.
- Fredriksen-Goldsen KI, Simoni JM, Kim H, Lehavot K, Walters KL, Yang J...Muraco A (2014). The health equity promotion model: Reconceptualization of lesbian, gay, bisexual, and transgender (LGBT) health disparities. *American Journal of Orthopsychiatry*, 84, 653–663. [PubMed: 25545433]

- Grant JM, Mottet LA, Tanis J, Harrison T, Herman JL, & Keisling M (2011). Injustice at every turn: A report of the national transgender discrimination survey. Washington: National Center for Transgender Equality and National Gay and Lesbian Task Force.
- Hatzenbuehler ML (2009). How does sexual minority stigma “get under the skin”? A psychological mediation framework. *Psychological Bulletin*, 135, 707–730. [PubMed: 19702379]
- Henderson DJ, Sampsel C, Mayes F, & Oakley D (1992). Toward culturally sensitive research in a multicultural society. *Health Care for Women International*, 13, 339–350. [PubMed: 1478896]
- Hendricks ML, & Testa RJ (2012). A conceptual framework for clinical work with transgender and gender nonconforming clients: An adaptation of the minority stress model. *Professional Psychology: Research and Practice*, 43, 460–467.
- Huer MB, & Saenz TI (2003). Challenges and strategies for conducting survey and focus group research with culturally diverse groups. *American Journal of Speech-Language Pathology*, 12, 209–220. [PubMed: 12828534]
- Kinsey AC (1948). *Sexual behavior in the human male*. Philadelphia: W.B. Saunders; Bloomington: Indiana U. Press.
- Kleinman A (1988). *Rethinking psychiatry: From cultural category to personal experience*. New York, NY: Free Press.
- Marshall E, Claes L, Bouman WP, Witcomb GL, & Arcelus J (2016). Non-suicidal self-injury and suicidality in trans people: A systematic review of the literature. *International Review of Psychiatry*, 28, 58–69. [PubMed: 26329283]
- Meyer IH (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychology of Sexual Orientation and Gender Diversity*, 1, 3–26.
- Minkler M, & Wallerstein N (2003). Introduction to community based participatory research In Minkler M & Wallerstein N (Eds.), *Community based participatory research for health* (pp. 3–26). San Francisco, CA: Jossey-Bass.
- Mizock L, & Hopwood R (2016). Conflation and interdependence in the intersection of gender and sexuality among transgender individuals. *Psychology of Sexual Orientation and Gender Diversity*, 3, 93–103.
- Nadal KL, Skolnik A, & Wong Y (2012). Interpersonal and systemic microaggressions towards transgender people: Implications for counseling. *Journal of LGBT Issues in Counseling*, 6, 55–82.
- Namaste VK (2000). *Invisible lives: The erasure of transsexual and transgendered people*. Chicago, IL: University of Chicago.
- National Institutes of Health. (2010). *Biennial report of the Director, National Institutes of Health, Fiscal Years 2008 & 2009* (Vol. 1). Washington, DC: U.S. Government Printing Office.
- Nield J, Magnusson B, Brooks C, Chapman D, & Lapane KL (2015). Sexual discordance and sexual partnering among heterosexual women. *Archives of Sexual Behavior*, 44, 885–895. [PubMed: 24718674]
- Nock MK, Borges G, Bromet EJ, Alonso J, Angermeyer M, Beautrais A, ... Williams D (2008). Cross-national prevalence and risk factors for suicidal ideation, plans, and attempts. *The British Journal of Psychiatry*, 192, 98–105. [PubMed: 18245022]
- Resnicow K, Baranowski T, Ahluwalia JS, & Braithwaite RL (1999). Cultural sensitivity in public health: Defined and demystified. *Ethnicity and Disease*, 9, 10–21. [PubMed: 10355471]
- Saewyc EM, Bauer GR, Skay CL, Bearinger LH, Resnick MD, Reis E, Murphy A (2004). Measuring sexual orientation in adolescent health surveys: Evaluation of eight school-based surveys. *Journal of Adolescent Health*, 35, 345.e1–345.e15.
- Secor-Turner M, Sieving R, Garwick A, Spratt R, & Duke N (2010). Culturally sensitive community engaged research with African American young women: Lessons learned. *Journal of Community Health Nursing*, 27, 160–172. [PubMed: 20694878]
- Schuster MA, Reisner SL, & Onorato SE (2016). Beyond bathrooms- meeting the health needs of transgender people. *The New England Journal of Medicine*, 37, 101–103.
- Smalley KB, Warren JC, & Barefoot KN (2016). Differences in health risk behaviors across understudied LGBT subgroups. *Health Psychology*, 35, 103–114. [PubMed: 26375040]

- Staples JM, George WH, Bryan AEB, & Neilson EC The role of minority stress in suicidality and non-suicidal self-injury among transgender adults. Manuscript Under Review.
- Sue DW, Capodilupo CM, Torino GC, Bucceri JM, Holder AMB, Nadal KL, & Esquilin M (2007). Racial microaggressions in everyday life. Implications for Clinical Practice, 62, 271–286.
- Tate CC, Ledbetter JN, & Youssef CP (2012). A two-question method for assessing gender categories in the social and medical sciences. Journal of Sex Research, 50, 767–776. [PubMed: 22989000]
- U.S. Department of Health and Human Services. (2012). Healthy People 2020 objectives. Retrieved from <http://www.healthypeople.gov/2020/topicsobjectives2020/default.aspx>
- Weinrich JD (2014). Multidimensional measurement of sexual orientation: Ideal. Journal of Bisexuality, 14, 544–556.
- Wolf EC, & Dew BJ (2012). Understanding risk factors contributing to substance use among MTF transgender persons. Journal of LGBT Issues in Counseling, 6, 237–256.

Table 1.

Demographic Characteristics of a sample (n = 178) of self-identified trans individuals

	Mean (SD) or proportion endorsed*
Age	27.90 (7.01)
Biological Sex	
Male	33.1
Female	65.7
Intersex	1.1
Gender Identity	
Transgender	97.2
Transsexual	67.5
FTM	61.4
MTF	31.6
Intersex	12.4
Gender nonconforming	57.5
Genderqueer	50.0
Androgynous	47.1
Feminine Male	32.0
Masculine female/butch	22.0
Third gender	23.1
Cross dresser	13.9
Drag performer	7.5
Two-spirit	23.5
Race and ethnicity	
Asian or Pacific Islander	2.3
Hispanic or Latino	6.3
Black or African American	.6
American Indian or Alaska	.6
White/Caucasian	72.7
Other	1.1
Multiracial or Mixed Race	16.5
Sexual Orientation	
Asexual	18.0
Bisexual	30.9
Gay	14.6
Heterosexual	21.9
Lesbian	12.9
Pansexual	32.6
Same-gender attracted	11.8
Queer	41.6
Other	11.8
Income per year	

Mean (SD) or proportion endorsed*	
\$0.00	6.1
Less than \$10,999	18.9
\$11,000–20,999	22.0
\$21,000–30,999	18.9
\$31,000–40,999	12.8
\$41,000–50,999	6.4
More than \$51,000	15.3
Relationship Status	
Single (not dating)	37.6
Dating (not serious)	6.2
Dating monogomously	27.5
Married/Partnered	18.0
Separated/Divorced	2.2
Polyamorous	15.2
Other	7.3

* Note: Since participants could endorse multiple responses, proportions in each category may total more than 100%.