




Social Media as a Recruitment Strategy with Transgender-Identified Individuals: Using an Ethical Lens to Direct Methodology

Journal of Transcultural Nursing
1–12
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DOI: 10.1177/10436596221101928
journals.sagepub.com/home/tcn


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Abstract

Introduction: Researchers are limited when using traditional recruitment methods to access hidden and vulnerable populations, including transgender persons. Social media platforms such as Facebook can provide access to the transgender population and facilitate recruitment of a representative sample. There is little regulatory guidance for using social media as a recruitment strategy. **Methodology:** This article presents recruitment recommendations based on a study that generated a diverse sample of transgender-identified persons using Facebook as the sole recruitment method. **Results:** Despite taking precautions, computer bots penetrated the initial survey. A second survey distribution collected data from a diverse sample of transgender-identified individuals. **Discussion:** Researchers should design social media recruitment methods with attention to privacy and transparency. Thus, using social media platforms such as Facebook to recruit transgender participants that otherwise would be challenging to reach is a viable and ethically sound alternative to traditional recruitment methods.

Keywords

ethics, gay, lesbian, LGBTQ health, methodology, sample, recruitment, social media, transgender

Introduction and Literature Review

Limitations in Traditional Recruitment Strategies in Reaching Transgender Persons

The transgender population accounts for an estimated 0.1% to 0.5% of the general population in the United States (Keatley et al., 2015). However, lack of consistent data collection using standardized tools, and the diversity as well as often invisible nature of the transgender population, limits definitive knowledge of the size of the national transgender population (Keatley et al., 2015). The elusiveness of data capture in these persons also contributes to a lack of understanding of the population's demographics. Because these individuals possess unique risk factors and are vulnerable to health disparities, including increased risk for human immunodeficiency virus (HIV) infection, sexually transmitted diseases (STDs), domestic violence, substance abuse, and mental health disorders, nurse scientists and other scholars are contributing to the small but growing body of critical inquiry focused on this population. Traditional recruitment methods targeting transgender individuals have included posting of flyers and advertisements in newspapers, utilizing

lesbian, gay, bisexual, transgender, queer, questioning, intersexual, asexual (LGBTQIA2S+¹), websites, radio, as well as television broadcasts (Whitaker et al., 2017). In addition, researchers have recruited samples by use of standardized mail, electronic communication to professionals connected with potential participants, or by directly emailing potential participants through listservs (Whitaker et al., 2017). Unfortunately, challenges with these traditional methods of recruitment have limited access to transgender samples, which has contributed to the constant threat of generalizability of findings as a limitation in this research.

Consequently, researchers have begun to employ contemporary recruitment strategies to help facilitate recruitment of a diverse transgender sample. In addition, the ongoing COVID-19 has increased challenges to research recruitment

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related to local and national guidelines that limit face-to-face gathering. For example, many conferences which encourage attendance by transgender persons (e.g., Gay and Lesbian Medical Association 2019 and 2020 Conferences) have migrated to virtual attendance to be compliant with social distancing guidelines. Thus, social media can offer greater access to the transgender population through LGBTQIA2S+ and transgender social media pages and transgender specific social media groups. While the objective of this article is to examine the advantages, disadvantages, limitations, and ethical recommendations of using Facebook as a social media recruitment method, the work presented here is part of a larger study evaluating resilience, sense of coherence, and health perception in a sample of transgender-identified individuals (see Bush, 2021). In addition, the theoretical concepts found within the Salutogenic Health Model (Antonovsky, 1979, 1996) served as a driver for the overall larger study. This theory pertains to salutogenesis (i.e., health creation), resources that can facilitate health, and explain individual differences in health and pathogenesis. This model has been used as a theoretical underpinning in other studies within the transgender population. While a comprehensive discussion is beyond this exposition, the reader is encouraged to seek additional information regarding its utilization in transgender health science research (Breidenstein, 2019; Breidenstein et al., 2019; Veldorale-Griffin & Darling, 2016).

Studies with adult transgender samples tend to use a blend of both traditional and contemporary recruitment strategies (Table 1). Traditional methods of recruitment have utilized flyers, electronic advertisements, or direct communication with potential participants. For example, researchers have posted flyers in locations frequented by LGBTQ or transgender individuals. Brennan et al. (2017) posted paper flyers in LGBT-related community organizations and health care providers' offices (Brennan et al., 2017; Yamanis et al., 2018). Another strategy was to distribute flyers at community events (Puckett et al., 2019). LGBT or transgender professional organizations have featured electronic advertisements for research participation opportunities (Bockting et al., 2013; MacDonnell & Grigorovich, 2012). Investigators have also sent electronic research invites to potential participants through listservs (Freese et al., 2018; MacDonnell & Grigorovich, 2012; McDowell et al., 2019; Moody & Smith, 2013; Testa et al., 2014). Finally, direct communication with potential participants at LGBTQ or transgender community events and conferences has provided researchers with recruitment opportunities (Bauermeister et al., 2016; Cook et al., 2013; Jackman et al., 2018; Reisner et al., 2013; Yamanis et al., 2018). Many studies have also used an integrated approach, using several of these recruitment strategies.

Most researchers supplemented traditional recruitment methods with collaboration with community organizations, peer-to-peer referrals, and contemporary recruitment methods. Two widely used supplemental recruitment strategies included collaboration and peer-to-peer word of

mouth. In the review of literature conducted for this work, collaboration was a crucial component that provided access to the transgender population (Aaron & Rostosky, 2018; Akhtar & Bilour, 2020; Bauermeister et al., 2016; Brennan et al., 2017; Chakrapani et al., 2017; Cook et al., 2013; Crosby et al., 2016; Dimant et al., 2019; Fredriksen-Goldsen et al., 2014; Glick et al., 2019; Hwahng et al., 2019; Lacombe-Duncan et al., 2020; MacDonnell & Grigorovich, 2012; Perez-Brumer et al., 2017; Puckett et al., 2019; Remien et al., 2015; Scandurra et al., 2018; Sok et al., 2020; Yang et al., 2016). Recruitment strategies were facilitated by connection with LGBTQ or transgender community support groups, professional networks, or outreach organizations (e.g., HIV organizations). For example, Scandurra et al. (2018) collaborated with transgender rights organizations, which in turn disseminated the survey to their contacts.

Similarly, community leaders or organizational outreach workers were enlisted as research support staff to help recruit potential participants in a study conducted by Perez-Brumer and colleagues (2017). Peer-to-peer word of mouth recruitment has been another cited recruitment strategy; and some researchers motivated enrolled participants to refer peers through incentivization. For example, Logie et al. (2017) gave participants five coupons to invite other potential participants and received approximately US\$4 in compensation. Safety and security concerns have also been cited by authors using traditional approaches to recruit transgender persons in geographic settings where transgender persons are less accepted. For example, Logie et al. (2017) emphasized protection of anonymity as an absolute necessity for participants in their Jamaican-based study.

Using of Social Media Platforms for Research Recruitment of Transgender-Identified Adults

Contemporary recruitment for studies requiring recruitment of transgender persons have turned to wider use of Internet-based strategies. These might include use of electronic advertisements or direct posts on social media platforms. Examples include Facebook, Instagram, Twitter, and Tumblr. The most cited social media platform was Facebook (Bauermeister et al., 2016; Dimant et al., 2019; Etengoff & Rodriguez, 2020; Freese et al., 2018; Jackman et al., 2018; Miller-Perusse et al., 2019; Puckett et al., 2019; Reisner et al., 2020; Salk et al., 2020; Scandurra et al., 2018; Wirtz et al., 2019). Most studies do not describe specific details of social media posts. However, a study using electronic advertisements directing potential participants to a study Website has been published by Miller-Perusse and associates (2019). Like traditional recruitment methods, privacy and security precautions using social media with the transgender population have also been identified. Researchers have included privacy and safety statements prompting participants to consider their current location and persons

Table 1. Recruitment Strategies Used in Studies With Transgender-Identified Samples.

Authors	Sample and setting	Recruitment methods	Discussion of ethical or privacy guidelines used in social media recruitment
Aaron & Rostosky (2018)	N = 25 trans adults; age 19–64; 88% White 12% Native American Central Appalachia	Recruited from local trans support group; word of mouth sharing by participants	N/A
Akhtar & Bilour (2020)	N = 100 trans adults; age 19–50 Pakistan	Recruitment from contact with support groups through social media	N/A
Bariola et al. (2015)	N = 169 trans adults; age 18–77; 72.2% trans women; 27.8% trans men Australia	Not described	N/A
Bauermeister et al. (2016)	N = 26 trans; N = 123 cisgender males; mean age 22.57 years; 81.9% Black or African American; 11.4% Latino; mixed race 6.7% Detroit, Michigan	Recruited online and in-person; Web advertisements posted in chat groups and Facebook; in-person recruitment through gay bars, clubs, and community events visited by the target population and by staff of community partner agencies	None described
Bockting et al. (2013)	N = 1093 trans adults; 57.5% male to female; 42.5% female to male; age 18–70; mean age 33.01; 79.4% White the United States	Recruited through transgender community websites, online mailing lists, journals, and forums	N/A
Breidenstein et al. (2019)	N = 158 trans women Germany	Recruited through mail; participants who had received gender assignment surgery at clinic during designated time frame were sent a mail invite	N/A
Brennan et al. (2017)	N = 83 trans adults, 41% trans women, 29% trans men, 31% other gender nonconforming; age 19–70 years, 44% 19–24 years; 84.3% white, 8.4% multiracial, 7.2% Hispanic, 52% hormones for gender affirmation Nebraska and other Midwestern states	Recruited through paper flyers for the survey placed in local LGBT-related organizations and health care offices of providers; verbal recruitment by research team members with clinical practices; web advertisement on social media and listservs of Nebraska LGBT organizations	None described
Chakrapani et al. (2017)	N = 300 trans adults; mean age 29.7; 63% from urban areas, 37% semi-urban areas India	Recruited through community-based organizations in rural and urban areas that offer HIV prevention services	N/A
Cook et al. (2013)	N = 353 Black gay and bisexual men; n = 141 gender nonconforming; n = 197 cisgender men; age 16–49 Africa	Recruited through LGBT organizations, support groups, counseling centers, friendship networks, at the Gay and Lesbian Pride March, and on the Web	N/A
Crosby et al. (2016)	N = 77 Black trans adults, age 18–65, mean age 34.5; 62.3% reported HIV positive; 35.1% reported last HIV test negative Atlanta, GA	Recruited through community-based outreach strategies; venues serving trans women and word of mouth	N/A
Dimant et al. (2019)	N = 37; 61% queer, 17% lesbian, 14% bisexual, 11% gay, 8% pansexual, 6% asexual or demisexual; 81% white, 6% African-American, 8% Asian-American, 6% Latinx, 8% multiracial; age range 23–70, median age 32.2 The United States	Recruited by LGBTQ health professional groups; conferences (GLMA: Health Professionals Advancing LGBTQ Equality, Philadelphia Trans Wellness Conference); listservs; social media (Facebook, Twitter)	None described
Edwards et al. (2019)	N = 106 trans adults; age 18–65, mean age 39.17; 77.4% white, 41.5% single, 25.5% living with partner, 13.2% married, 10.4% dating, 3.8% divorced Western State The United States	Recruited at a local community center during initial interview for clinical services.	N/A
Etengoff & Rodriguez (2020)	N = 15 trans Muslim adults, mean age 29.7; n = 12 trans men; n = 2 trans women Indonesia, the United States, France, England, Philippines, Egypt	Recruited through organizational outreach, Facebook, and Twitter	Discussed use of online survey to incorporate culturally sensitive Islamic values (privacy, honor, cultural disclosure)
Fredriksen-Goldsen et al. (2014)	N = 174 trans adults; 79.07% White The United States	Recruited through collaboration with community-based organizations; each agency distributed print and electronic surveys to individuals on their agency's contact list	N/A
Freese et al. (2018)	N = 316 trans adults; age 18–73, mean age 32.5, 79.4% assigned female at birth, 76.3% White, 89.2% had at least some college or college degrees The United States	Recruited through posted electronic flyers on online message boards, listservs, and social networking sites that attracted a trans audience; also posted the study link to social networking groups (Yahoo and Facebook)	None described
Glick et al. (2019)	N = 17 transgender nonconforming adults; age 23–39; one participant was 70 y/o; n = 10 White or White/Hispanic; n = 7 Black or African American or African Indigenous; half lower or working class; half middle class; more than half had some college or attended trade school New Orleans The United States	Recruited through partner organizations, trans advocacy and support groups, personal networks of participants, and research staff	N/A
Hwahng et al. (2019)	N = 13 low-income male to female trans Latina adults; age 22–50; average age 38 y/o New York City The United States	Recruited from trans support groups, support group coordinators helped recruit potential participants	N/A

(continued)

Table I. (continued)

Authors	Sample and setting	Recruitment methods	Discussion of ethical or privacy guidelines used in social media recruitment
Jackman et al. (2018)	N = 332 trans participants; age 16–87, mean age 34.56; 50.3% trans feminine, 49.7% trans masculine, 44.1% Non-Hispanic White, 21.9% Hispanic, 15.2% African American, 18.8% Other, 58.2% = \$23,999 annual income, 79% some college or college degrees The United States	Recruited using venue-based sampling; venues were bars/clubs, non-bar establishments, outdoor events, community groups, online (Facebook), transgender-specific clinical care sites, and word of mouth	None described
Lacombe-Duncan et al. (2020)	N = 54 trans adult women; mean age 41; 51.9% heterosexual; 37% Indigenous; 9.3% African, Caribbean, or Black; 35.2% white; mostly single (79.6%); 90.6% had annual income <\$20,000 Canada	Recruited through online networks; venue-based recruitment through AIDS service organizations, HIV clinics, and community organizations	N/A
Lee et al. (2020)	N = 453 sexual and gender minority (SGM) adults, n = 26 trans adults, randomly recruited from national tobacco survey, approx. 70% had some college or college degree; mean age 35.6, 74% age 18–44, age 18–65+, 67.5% White, 20.8% Black, stratified sample by age groups The United States	Recruited through dual-frame random-digit dialing tobacco survey of the noninstitutionalized U.S. adult population	N/A
Lelutiu-Weinberger et al. (2020)	N = 17,188 participants, a subset from 2015 United States Transgender Survey; 54% trans women, 46 trans men; age 18–65+, 78% age 18–44; 83% white, 3% black, 5% Latino, 86% some college or college degree The United States	Secondary data analysis	N/A
Logie et al. (2017)	N = 137 adult trans women; age 18–44, mean age 24.0, 25.2% HIV positive Jamaica	Recruited through word of mouth through peer research assistants and participants; PRAs were HIV outreach workers	N/A
Logie et al. (2020)	N = 871; n = 97 trans women, n = 569 cisgender sexual minority men, n = 205 cisgender sexual minority women; age 15–55, mean age 25.51 Jamaica	Recruited through word of mouth through peer research assistants and participants; PRAs were HIV outreach workers	N/A
MacDonnell & Grigorovich (2012)	N = 4 trans adult men, who were health care providers; age 20s to 50s Canada	Recruited through web advertisements on professional and LGBTQ networks, online listservs, connection with researchers' professional networks	N/A
McDowell et al. (2019)	N = 150 transmasculine adults; 76.7% binary gender identity, 74.7% white, 25.3% person of color; mean age 27.5 years; 72% had age 21–30; age range 21–50 The United States	Recruited through flyers, medical provider and staff referrals, community outreach and listserv posts, social media (not specified), word of mouth	None described
Miller-Perusse et al. (2019)	N = 202; 40.6% trans men, 18.3% trans women, 41.1% non-binary; 14.4% homosexual/gay, 23.8% bisexual, 47.0% queer/pansexual, 14.8% other (heterosexual/straight, asexual, demisexual, polysexual, sexually fluid, questioning/unsure); 66.8% white, 33.2% non-white; age range 15–24, 32.7% age 15–17, 46.5% age 18–21, 20.8% age 22–24 The United States	Recruited by advertisements/posts on social media websites: Facebook, Instagram, Twitter, Tumblr, and Craigslist; Advertisements/posts included photos representing a spectrum of transgender and gender variant persons; advertisements/posts directing interested individuals to study's Website	None described
Moody & Smith (2013)	N = 133 trans adults; age range 18–75; 82.2% white; 77% had some college or college degree; 59.4% had annual income <\$30,000; 75.2% lived in urban area Canada	Recruited through emails sent through LGBT and trans Listservs/organizations	N/A
Perez-Brumer et al. (2017)	N = 48 trans adult women; age 18–44 Peru	Recruited by created task force comprised socially connected trans women, who were community leaders; the task force recruited the sample	N/A
Puckett et al. (2019)	N = 695 trans individuals; age 16–73; mean age 25.52; 75.7% White; 75% <\$30,000 annual income; 72% some college or college degree The United States	Recruited through Facebook, Twitter, Tumblr, other social media sites; trans-related community organizations; flyers at community events.	None described
Reicherzer & Spillman (2012)	N = 3 Mexican trans women; age 30s to 40s Texas The United States	Recruited by contact with informants to the nightclub scene, who had trans women entertainers; the researcher was given contact information for the first participant; word-of-mouth by the first participant generated the second participant; the third participant was encountered at a social event	N/A
Reisner et al. (2013)	N = 73 trans men for quantitative; n = 19 trans men for qualitative; mean age 32.0, age range 18–62; 72.6% white; 27.4% racial minority; 91% had some college or college degree, 15.1% no health insurance; 74% used hormones for gender affirmation; 50.7% used top surgery for gender affirmation; 5.5% used bottom surgery for gender affirmation-demographics are for quantitative sample; did not collect demographics for qualitative sample The United States	Recruited by hosting a booth at a trans health conference and active engagement to passersby; a trans health workshop at the conference was used to ask workshop attendees to respond to qualitative questions	N/A

(continued)

Table 1. (continued)

Authors	Sample and setting	Recruitment methods	Discussion of ethical or privacy guidelines used in social media recruitment
Reback et al. (2020)	Proposed sample will be $N = 250$ high risk trans youth; ages 15–24; study is in process The United States	Recruited through social media sites and web applications	None described
Reisner et al. (2020)	$N = 41$; mean age 41.1, age range 21–70; 34.1% white, 34.1% black, 4.9% Asian, multiracial 26.8%, Hispanic/Latina 26.8% The United States	Recruited by social media (Facebook); Craigslist; word-of-mouth from participants, research staff, and clinics	None described
Remien et al. (2015)	$N = 80$; four groups; last group was adult trans women; mean age 32; age range 23–49; 75% Black; 40% Hispanic New York City The United States	Recruited through community-based organizations, the Internet, and word-of-mouth recommendations	N/A
Salk et al. (2020)	$N = 3,318$; mean age 15.9, $n = 1,369$ cisgender, $n = 1,938$ transgender, $n = 986$ trans male, $n = 132$ trans female, $n = 723$ non-binary; 65% white, 5% black, 9% Hispanic, 4% Asian/Pacific Islander, 1% American Indian, 15% Multiracial The United States	Recruited by Facebook and Instagram advertisements	Advertisement included privacy and safety verbiage that prompted participant to complete the survey in a private area and also included other privacy prompts (who will be around in the next 30 min, concerns of revealing personal information to a person who may be in the area in the next 30 min)
Scandurra et al. (2018)	$N = 149$ trans or gender nonconforming Italian adults; age 18–63, mean age 33.18; $n = 75$ male to female; $n = 74$ female to male; 98% white; 28.9% college education Italy	Recruited from social media (Facebook); connection with trans rights organizations that disseminated the survey to contacts	None described
Sok et al. (2020)	$N = 1,375$ trans women; mean age 25.8 Cambodia	Recruited by peer-based social recruitment; connection with community-based organizations, who each chose four seed participants to refer other participants	None described
Testa et al. (2014)	$N = 3,087$ trans adults; four gender groups (i.e., male to female, female to male, female to different gender/FTDG, male to different gender/MTDG); age 18–53+; approximately 80% white Represented all 50 U.S. states	Recruited through trans-related listserv, online support groups, persons with personal profiles on trans website, public figures in the trans community	N/A
Torres et al. (2015)	$N = 11$ providers of trans youth; $n = 2$ psychiatrists, $n = 1$ behavioral health clinicians, $n = 1$ nurse, $n = 1$ epidemiologist, $n = 1$ advocacy expert, $n = 4$ trained community educators, from the entire sample $n = 5$ identified as trans Boston The United States	Not described	N/A
Valente et al. (2020)	$N = 330$ transgender and gender non-binary identified individuals; age 16–87, mean age 34.4, stratified by age groups; 43.6% white; $n = 169$ trans feminine, $n = 161$ trans masculine New York City, San Francisco, and Atlanta The United States	Recruited by venue-based sampling; venues included public spaces, commercial institutions, community events and groups, social media, trans explicit healthcare clinics; word of mouth	None described
Wagaman et al. (2019)	$N = 85$ trans and gender expansive youth and young adults; age 13–24; did not collect race/ethnicity The United States	Recruited from 4-day overnight leadership program	N/A
Wirtz et al. (2019)	$N = 795$ trans women; mean age 35; 45% Black, 28% Hispanic/Latinx Study is in process	Recruited by peer referrals, social media (Facebook and Reddit), and dating applications; clinic referral; gender-affirming community conferences; electronic study flyers	None described
Yamanis et al. (2018)	$N = 38$ Latina/Hispanic adult trans women; age range 22–50; 24% had some college or college degree Washington, D.C. The United States	Recruited through HIV, LGBTQ, trans events, venues, and activities; flyers and study information distributed to community centers and community-based organizations	N/A
Yang et al. (2016)	$N = 209$ Chinese trans women; mean age 26.7, age range 18–45 China	Recruited through community-based organizations, grassroots support groups, community outreach; word of mouth by participants	N/A

Note. LGBT = lesbian, gay, bisexual, and transgender; LGBTQ = lesbian, gay, bisexual, transgender, and queer or questioning.

(who may be in their vicinity in the next 30 min) before beginning the survey (see Salk et al., 2020). In addition, parental consent waivers to ensure study participation did not illicit stigmatization and rejection from family has been

initiated (Salk et al., 2020). Additional studies seeking to enroll transgender youth indicated social media as their sole successful recruitment method (Miller-Perusse et al., 2019; Salk et al., 2020).

Methods

Using Facebook as a Recruitment Strategy

This study (Bush, 2021) utilized a quantitative design with a survey comprising measures for resilience, sense of coherence, health perception, and sociodemographic questions. Data were collected for 1 month. Participants were recruited from two sources. First, community group leaders at a regional LGBTQ community center were contacted to establish a partnership. Due to the COVID-19 pandemic, there were no opportunities to attend face-to-face support meetings at this location. Permission was requested from the community support group leaders to post on the groups' Facebook pages; these posts were pre-constructed and approved by the University of Central Florida institutional review board (IRB). A professional Facebook page served as a source of recruitment. This Facebook's social media Web address was shared on the LGBTQ community center's support groups' social media pages. However, as many LGBTQ and transgender social media pages were set to a private setting, it was necessary to send an initial private message to the group moderator to request permission to share a research recruitment post. Generally, group moderators reviewed the posts prior to the post to the group's Facebook page. Potential participants were included if they identified as transgender male (FTM), transgender female (MTF), gender nonconforming, or gender queer. In addition, participants had to indicate they were ≥ 18 years of age, were competent in reading the English language, and were a Florida resident. Participants were excluded if unable to independently consent. The final sample size was $N = 56$. Compared to traditional methods of research recruitment, using social media as a sole recruitment strategy had several notable advantages, disadvantages, and limitations.

Results

Advantages

A sample of 56 transgender-identified adult individuals were recruited for this study using Facebook as the sole recruitment method. The main advantages of using Facebook to recruit a transgender sample for this study were (1) improved access to transgender persons, (2) no financial costs, and (3) an expedited recruitment process. Facebook, as one of several public social media platforms, allows anyone to create a free user profile. A user can search for LGBTQIA2S+ or transgender groups on Facebook. Facebook groups can be set as public or private by the group's administrator (Facebook, 2021b). Private groups offer more protection for members as groups post and the participating members list is restricted to only enrolled group members (Facebook, 2021b). Most of the LGBTQ and transgender groups in this study were set as private groups, which may offer a sense of

comfort and security to these groups' members, who may feel stigmatized and experience subsequent stress related to their transgender identity (Meyer, 2015). This study did not utilize any paid research advertisements on Facebook. Instead, the primary method of recruitment was direct posts to LGBTQ and transgender Facebook pages that directed potential participants back to the study's Facebook professional profile page; both Facebook recruitment strategies required no financial cost. Finally, using Facebook as a recruitment method expedited the recruitment process. Because Facebook is an online interface that allows users access from any location, need for physical facility planning, and face-to-face sample recruitment methods (e.g., creating and handing out flyers, meeting with key informants face-to-face, and ability for asynchronous interaction), these time-consuming processes are eliminated. Facebook posts are immediate and user viewing is dependent on when the user logs onto the Facebook platform as well as their notification settings. Group members may set their Facebook group notifications so that they are alerted to new posts when logging into Facebook (Facebook, 2021a). Therefore, it is possible that LGBTQIA2S+ and transgender Facebook group members are notified of research recruitment posts immediately. Alternatively, users may only see the research post when they visit the specific group if they declined Facebook notifications.

Disadvantages and Limitations

The main disadvantages of using Facebook as the sole recruitment method were the inability to reach potential participants with limited or no Internet access and privacy risk. For example, one of the goals of this study was to explore differences in urban compared to rural participants. However, only one participant indicated a rural residence. Perhaps, integration of traditional methods could help recruitment of participants living in areas that are more rural. For example, when safer, combining Facebook recruitment with attending face-to-face support groups in both urban and rural areas could help generate more rural representation.

There were no known privacy breaches of participants' information in this study. The survey was anonymous and therefore did not collect any participants' names or other identifying information. After completing the survey, participants had the option to provide an email address in an external link, not associated with survey responses, to receive a \$5 Amazon gift card for participation. Despite utilizing electronic survey safety features (e.g., preventing survey indexing in Web searches), computer bots compromised the initial electronic survey. Following initial survey link distribution, two survey suspicions prompted survey and data investigation. First, in less than 24 hr, there were significantly more responses to the survey than projected. Second, the requests for the \$5 compensation for completing the survey exceeded

the actual participants who completed the survey. In the responses corresponding to this initial link, some free text responses were either non-English wording or random assembly of non-English characters. Due to survey compromise suspicion, data collection was stopped and the initial survey link was closed. These privacy risks along with mitigation strategies are further discussed below.

Discussion

Lack of routine gender identity information limits health care providers' understanding of the size and demography of the national transgender population (Reisner et al., 2016). Researchers tend to use a comprehensive approach by using both traditional and modern recruitment methods when recruiting a transgender sample. Examples of traditional recruitment methods include distribution of paper and electronic flyers or advertisements, while modern methods include using social media to distribute the like. Although no known studies have indicated sole use of social media to recruit an adult transgender sample, sample diversity from this study was comparable to sample diversity from the largest national transgender survey (James et al., 2016). This national study gathered a sample of 27,715 participants across all 50 states as well as the District of Columbia, American Samoa, Guam, Puerto Rico, and U.S. military bases overseas (James et al., 2016). The recruitment methods for this survey included LGBTQ and transgender organizations, support groups, health centers, and online communities, who shared the survey with their organizational contacts and members through email and social media channels (James et al., 2016). See Table 2 for a comparison of the demographics of this national adult transgender sample and this study.

Advantages

The main advantages of using Facebook to recruit an adult transgender sample in this study included access to the hidden transgender population, no financial costs, and an accelerated recruitment process. IRB-approved social media posts were shared to LGBTQ and transgender social media support group pages. There was no cost associated with these recruitment posts. This study faced recruitment challenges related to COVID-19 that limited availability of live recruitment opportunities (e.g., conferences and face-to-face support group meetings). Using social media alleviated these face-to-face limitations. Facebook was the sole method of recruitment and successfully generated a diverse sample of adult transgender-identified individuals comparable to the largest national transgender survey (James et al., 2016).

Using social media to recruit a sample can provide access to hidden populations, specific demographics, or rare medical conditions (Bender et al., 2017; Gelinias et al., 2017;

Whitaker et al., 2017). In addition, recruiting research samples from Facebook is associated with decreased costs and expedites the recruitment process, whereas traditional methods can be slower and more expensive (Whitaker et al., 2017). Social media users can share research advertisements and posts, which can subsequently facilitate recruitment (Bender et al., 2017). Social media can be a viable alternative to traditional methods of recruitment of an adult transgender sample, especially when researchers lack opportunities for live interaction with potential participants.

Disadvantages and Limitations

The main disadvantage of using Facebook as a recruitment method was the inability to reach prospective participants with limited/no Internet access and privacy risk. Whitaker et al. (2017) reinforced this disadvantage in a systematic review of using Facebook for recruitment of health research participants. Although this study was a racially diverse sample, the participants were predominantly White. Whitaker et al. (2017) indicated Facebook may result in an overrepresentation of samples characterized by younger ages, persons of White race, and females (Whitaker et al., 2017). This study was characterized by a sample who mostly indicated a gender identity of transgender female, with at least some college; a quarter of the sample had incomes at or below poverty level. To this end, education and income are also overrepresented in Facebook samples for health research (Whitaker et al., 2017). However, higher education and incomes are also overrepresented in traditional methods, as persons with more education may be more likely to participate in research (Whitaker et al., 2017).

Privacy risk was another potential disadvantage of using Facebook in this study. While there were no known privacy breaches to participants, there was undoubtedly a possibility for their occurrence. Strategies to mitigate privacy risk in this study were attaining IRB approval of social media posts and obtaining administrator/moderator of research posts prior to posting on the group's social media page. Third party marketing organizations may track social media users when they click on research advertisements (Bender et al., 2017; Curtis, 2014). Some of this risk can be mitigated by adjusting security settings on personal computers, smart phones, and tablets.

Additional privacy risk can arise if participants or potential participants share research advertisements (Curtis, 2014; Gelinias et al., 2017). For example, social media users may share social media recruitment posts. In turn, potential participants may "like" or comment on the post (Facebook, 2021c). Potential participants, who "like" or share comments with sensitive information, may not realize or comprehend personal privacy risk. First, post viewers may interpret the individual's study eligibility or identification with study's focus. Second, the individual may not recognize the

Table 2. Comparison of Demographics From a National Transgender Survey (James et al., 2016).

Demographic category	Percentage of respondents from James et al. (2016)	Percentage of respondents from this study
Sample size	N = 27,715	N = 56
Gender identity		
Transgender women	33%	51.8%
Transgender men	29%	25%
Non-binary people	35%	N/A
Race and ethnicity		
white	62.2%	85.7%
Latino/a	16.6%	7.1%
black	12.6%	3.6%
Asian	5.1%	1.8%
Multiracial	2.5%	N/A
Middle Eastern	0.4%	N/A
Age		
Age range ^a	18–87 years	18–71 years
Age group 18–24 years	42%	21.8%
Age group 25–44 years	42%	47.3%
Age group 46–64 years	14%	25.5%
Age group 65 and above	2%	3.6%
Income		
Poverty level ^b	29%	25.0%
Educational level		
No high school or equivalent	2%	7.1%
High school diploma	11%	14.3%
Some college	40%	30.4%
Associate degree	9%	17.9%
Baccalaureate degree	2%	19.6%
Graduate degree	13%	10.7%

Note. For a particular subcategory not collected in this study a non-applicable representation (“N/A”) was indicated.

^aOne participant indicated “38,200” as an age. This entry was not included and was coded to erroneous (“888”) for data analysis.

^bThe poverty-level determination for this study was determined by the 2021 poverty guidelines for an annual income representing a one person household of \$12,880 (U.S. Department of Health and Human Services, 2021). It is important to note the participants were not asked if this was a single income or household income. One participant indicated “not too much” as an annual income. This entry was not included and was coded to erroneous (“888”) for data analysis.

visibility of his, her, or their comments to others social media users, especially if the person shares sensitive information. Bender et al. (2017) recommends researchers provide participants with privacy risks associated with social media platforms.

Finally, researchers should be cognizant of the potential for survey compromise through computer bots. After the need to disable the initial survey link related to computer bot detection, a new unique survey link was distributed with careful attention to increased security efforts in this study. For example, the initial link was shared directly to trans and LGBTQ Facebook groups. However, the second link could only be accessed through the primary investigator’s professional Facebook page or sent through a private message at a participant’s request. Simone (2019) recommends several tactics to guard and identify bots. Some of these recommendations include using open-ended questions and scrutinizing unusual responses, examining time stamps for impossible

dates/times and speed survey completion times, and providing unique survey links to each participant (Simone, 2019).

Social Media Ethical Guidelines

Researchers should also use social media recruitment methods in an ethically sound manner. Given there is little regulatory guidance to oversee social media recruitment, some authors have proposed the use of existing regulatory guidance as a non-exceptionalism approach to design research methodology when using social media as a recruitment strategy (Bhatia-Lin et al., 2019; Gelinas et al., 2017). The Belmont Report, a seminal work that has provided an ethical framework for research with human subjects, advised investigators to conduct research with respect for persons, beneficence, and justice (Department of Health, Education, and Welfare, 1979). The report stipulated research participant selection should be undertaken with attention to justice (Department of Health,

Table 3. Ethical Tenets for Using Facebook and Other Social Media for Recruitment of Transgender Samples.

- Prior to conducting research in the transgender community, researchers should work to establish trust, build relationships, and be visible in transgender communities (Tebbe & Budge, 2016). This pre-research collaboration with the transgender community will ensure study design and methodology are feasible and acceptable to participants (Reisner et al., 2016).
- Ask for permission from the Lesbian, Gay, Bisexual, Transgender, Queer or Questioning (LGBTQ) or transgender group's administrator or moderator to post research recruitment posts within the group (Gelinias et al., 2017; Vincent, 2018). Contacting the social media group's administrator/moderator communicates respect (Vincent, 2018).
- Use recruitment materials with inclusive respectful language that is commonplace within the trans community comprised various intersected identities (Tebbe & Budge, 2016; Vincent, 2018). For example, a transgender individual may have other identifies such as racial and cultural that are components of their life experience.
- Proactively disclose your presence and be transparent about your intention in the LGBTQ or transgender social media group; do not create phony or misleading profiles to gain access to the group (Gelinias et al., 2017).
- Be mindful of potential vulnerabilities (Gelinias et al., 2017). For example, while studies may use a traditional method of peer-to-peer word of mouth referrals, this practice in social media may incur unique privacy risks. If participants share the researcher's social media post on their personal social media page, potential participants may post sensitive information in the comment section below the post (Gelinias et al., 2017). Researchers should review participants posts to ensure no identifiable information is shared (Curtis, 2014). While it may be impossible or undesirable to stop other social media users from sharing the research advertisement/post, Gelinias et al. (2017) recommends getting participant permission before sharing on the participant's page. In addition, researchers can provide participants with privacy risks, written in plain language, associated with social media platforms (Bender et al., 2017).
- Be mindful of publicly displayed information (e.g., unprotected message boards). The author may feel uncomfortable with potentially sensitive information being used for academic publication (Vincent, 2018). Do not disclose sensitive information without permission (Gelinias et al., 2017). Do not post contact/sign-up forms in social media platforms (Curtis, 2014).
- Ensure compliance with the Website's terms of use. The terms of use will describe appropriate and inappropriate behavior as well as behavior subject to legal consequences (Gelinias et al., 2017).

Note. LGBTQ = lesbian, gay, bisexual, transgender and queer or questioning.

Education, and Welfare, 1979). Investigators should impartially offer individuals the opportunity to participate in research, but also be mindful of social injustice implications (i.e., unjust social patterns related to social, racial, sexual, and cultural biases and research with vulnerable subjects; Department of Health, Education, and Welfare, 1979).

Previous studies rarely acknowledged the ethical considerations of using social media as a recruitment strategy. The two main proposed ethical considerations are respect for privacy and investigator transparency (Gelinias et al., 2017). These two ethical considerations were used to delineate ethically sound practice guidelines that can also mitigate privacy risks when recruiting adult transgender-identified persons through social media platforms. These ethical tenets are bulleted in Table 3.

Conclusion

Using social media as an adjunctive recruitment method can help researchers access the hidden transgender population. In addition, if face-to-face opportunities are limited, social media platforms, such as Facebook, provide alternatives to traditional recruitment methods that can expedite recruiting a diverse sample at a reduced cost. However, recruitment samples generated solely from social media are limited by a decreased ability to reach potential participants with reduced or no Internet access. In addition, social media samples may be overrepresented by young female participants with greater resource access. Social media as a recruitment method has

inherent privacy risks. Researchers can address these privacy risks with purposeful attention and inclusion of privacy and transparency when using social media for recruitment.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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Note

1. Note, because theorists and researchers sometimes focus on different populations within the lesbian, gay, bisexual, transgender, queer or questioning, intersexual, asexual, two-spirit (LGBTQIA2S+) community, references within this manuscript may vary.

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