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Minority stress, social integration, and the mental health needs of LGBTQ asylum seekers in North America

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ABSTRACT

Objective: Drawing on theoretical accounts of LGBTQ minority stress and models of social integration and immigrant health, the present study examines sexual and gender minority status - heretofore overlooked in crossnational frameworks of immigrant health - as an important determinant of asylum seeker mental health. With the goal of spurring intervention development among this population, this study also aims to characterize LGBTQ asylum seekers' interest in interventions aimed at alleviating minority stress, barriers to social integration, and associated mental distress.

Method: Respondents (n = 308) completed an online survey which included the Refugee Health Screener (RHS-15), and a battery of measures of minority stressors and barriers to social integration.

Results: Most respondents (80.20%) screened positive for mental distress. Consistent with minority stress theory, loneliness (OR = 1.14, 95% CI = 1.11, 1.16) and LGBTQ identity disclosure (OR = 3.46, 95% CI = 1.85, 6.50) were strongly associated with screening positive for mental distress. Consistent with theories of immigrant social integration, those who had been granted asylum (OR = 0.36, 95% CI = 0.25, 0.53) or had higher English language proficiency (OR = 0.35, 95% CI = 0.21, 0.60) were less likely to screen positive. In an exploratory analysis, the association between transgender identity and mental distress approached significance (OR = 3.60, 95% CI = 1.00, 7.2). As preliminary justification for applying these findings to practice, most of those who screened positive for distress were interested in receiving mental health counseling (70.45%). Most participants wanted more LGBTQ friends (83.1%), wanted to mentor an LGBTQ newcomer (83.8%), and were interested in joining an LGBTQ community center (68.2%).

Conclusion: This study demonstrates that LGBTQ asylum seekers are highly likely to experience mental distress that is influenced by unique social factors, including barriers to social integration, and are motivated to participate in interventions aimed at addressing their mental health needs.

1. Introduction

In the 1990s, a series of federal court cases and statutory reforms in North America transformed an individual's sexual orientation from being a basis for immigration exclusion to being a basis for immigration relief under international human rights law (Lee and Brotman, 2011; Piwowarczyk et al., 2016). Decisions from immigration courts extending similar relief on the basis of gender identity soon followed (Benson, 2008). LGBTQ (lesbian, gay, bisexual, transgender, queer) people, and other sexual and gender minority immigrants, have since claimed asylum on the basis of sexual orientation or gender identity, coming from over 80 countries around the world where it is a crime or generally unsafe to be a sexual or gender minority (International Lesbian, Gay, Bisexual, Trans and Intersex Association, 2017). It is difficult to estimate the size of the LGBTQ asylum-seeker population in North America since the United States (U.S.) and Canadian governments do not publish data on the basis of asylum claims or grants. One inquiry to the Government of Canada revealed that 1351 individuals claimed asylum on the basis of sexual orientation in 2004 (Rehaag, 2008). Based on an estimate that between 2.4% and 2.7% of immigrants to the U.S. identify as LGBTQ (Gates, 2013) and data on the overall number of asylum applications in 2016 (Mossad and Baugh, 2018), at least 5418 such individuals applied for asylum in that year.

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1.1. Mental health in LGBTQ asylum seekers

Existing cross-national frameworks for understanding immigrant health explicitly consider the role of social determinants of health such as race and socioeconomic status in both the sending and receiving country (Acevedo-Garcia et al., 2012). A growing body of research suggests that sexual orientation and gender identity are two additional social determinants of health that should be considered using these frameworks. While existing scholarship on immigrant health has generally found that immigrants to North America are healthier than the receiving population due to the health selection effect (Vang et al., 2017) this finding does not necessarily apply to immigrant *mental* health, and to LGBTQ immigrant mental health in particular. In fact, a small chart review of 50 LGB (lesbian, gay bisexual) survivors of torture found extremely high rates of major depression (76%), post-traumatic stress disorder (PTSD) (70%), and generalized anxiety disorder (28%) (Piwowarczyk et al., 2016).

LGBTQ asylum seekers face several barriers to social integration and therefore mental health. In this article, we define an asylum seeker's social integration as the development of robust social networks in their host country. Barriers to social integration for LGBTQ asylum seekers may be greater than those faced by both non-LGBTQ asylum seekers and non-asylum-seeker LGBTQ people. Compared to non-LGBTQ asylum seekers, LGBTQ asylum seekers contend with sexual and gender minority stress. Minority stress refers to the excessive burden of identity-specific stressors faced by LGBTQ populations compared to the general population that might explain the disproportionate burden of mental distress borne by LGBTQ individuals (Meyer, 2003). Particularly relevant to LGBTQ asylum seekers, minority stress theory specifies the challenges of identity concealment and the protective function of LGBTQ community connectedness (Frost and Meyer, 2012) and social support (Hatzenbuehler, 2009) related to sexual and gender minority mental health.

Identity disclosure can serve as an important barrier, or alternately facilitator, to social integration for LGBTQ populations, depending on its function and others' responses. Because they come from countries with high levels of anti-LGBTQ stigma, LGBTQ asylum seekers may be less likely than LGBTQ non-asylum seekers to reveal their LGBTQ identity to others, contributing to isolation from the wider LGBTQ community. However, previous research in other LGBTQ populations suggests that concealing one's identity may actually have a beneficial effect on mental health by protecting sexual and gender minorities from stigma and discrimination (Beals et al., 2009; Pachankis et al., 2015). Others' responses to one's LGBTQ identity disclosure likely mediate this effect (Pachankis and Bränström, 2018). Relatedly, psychological literature has also firmly established that social connectedness is important for mental health (Wang et al., 2017), especially for those who have experienced trauma (Aydin et al., 2016), including immigrants (Schweitzer et al., 2006) and LGBTQ populations (Pflum et al., 2015). Connectedness to the LGBTQ community in particular has demonstrated positive associations with LGBTQ mental health as it provides a means by which LGBTQ people can make comparisons to similar others rather than the outgroup (Kertzner et al., 2009; Ramirez-Valles et al., 2005).

Compared to non-migrant LGBTQ individuals, LGBTQ asylum seekers face cultural and linguistic barriers related to the process of adaptation to the host country environment (Berry, 1997). For instance, recent qualitative studies, drawing upon theories of social integration as applied to immigrants (Berry, 1997), have specifically identified several barriers to social integration faced by LGBTQ asylum seekers (Gowin et al., 2017; Logie et al., 2016). This population often has difficulty forming robust social networks with those from their own country or culture because of the real or perceived risk of persecution (Gowin et al., 2017; Piwowarczyk et al., 2016). Simultaneously, cultural and linguistic barriers can prevent LGBTQ immigrants from forming supportive relationships within broader host-country LGBTQ communities (Kahn, 2015). Research on general (non-LGBTQ) immigrant populations has found that greater fluency in the host country language (Roberts et al., 2016) and approval of immigration status (Silove et al., 2007) are associated with better mental health outcomes. Recent research on Latina transgender women has found a similar association regarding immigration status (Yamanis et al., 2018). Whether the same is true for LGBTQ asylum seekers overall remains unknown.

Although less studied than the above barriers to social integration, some demographic factors may also influence the mental health of LGBTQ asylum seekers. Research in general U.S. LGBTQ populations has found that younger age and lower education level are both associated with greater mental health burden (Reisen et al., 2013). Transgender identity is also associated with disproportionately adverse mental health (Perez-Brumer et al., 2017), as are bisexuality (Alexander et al., 2016), and female gender (Gulland, 2016).

Given that recent arrivals are generally uninsured and that asylum seekers have significant difficulty accessing mental health services (Bartolomei et al., 2016), this population also faces substantial barriers to accessing mental health services (McGuirk et al., 2015). At the same time, LGBTQ asylum seekers' preferences for mental health services, including those that might overcome financial or other access barriers, remain unknown. Although underutilized among LGBTQ immigrant populations, interventions that build social capital can strengthen existing social resources or provide such support where it may be currently lacking (Kawachi and Berkman, 2001), potentially at lower cost than traditional psychiatric care (Pistrang et al., 2008), with resultant improvements in mental health (Flores et al., 2017; Logie et al., 2016).

1.2. Study objectives

With the goal of understanding sexual and gender minority status as an important determinant of asylum seeker mental health, the present study seeks to test several specific hypotheses about the mental health of this population heretofore overlooked in cross-national frameworks of immigrant health:

1) Consistent with theoretical accounts of minority stress (Meyer, 2003) and barriers to social integration faced by immigrants (Berry, 1997), we hypothesize that LGBTQ asylum seekers will report a high incidence of mental distress and social isolation.
2) Consistent with minority stress theory, we hypothesize that LGBTQ asylum seekers' social isolation and identity disclosure will be associated with mental distress.
3) Consistent with theoretical accounts of immigrant social integration, we hypothesize that high English proficiency and being granted asylum will be negatively associated with mental distress.

With exploratory aims, we also examine associations between demographic factors such a gender identity, and age and mental health. With the goal of spurring intervention development among this population, we finally aim to characterize LGBTQ asylum seekers' interest in interventions aimed at alleviating mental distress and social isolation. Our findings will inform future efforts aimed at improving the mental health of this vulnerable and underserved population.

2. Method

2.1. Participants

The survey's target population included individuals over the age of 16 identifying as LGBTQ, or another sexual and gender minority, currently living in the U.S. or Canada. The target population must have applied, or planned to apply, for immigration status on the basis of persecution related to their sexual orientation and/or gender identity by filing a form I-589 with U.S. Customs and Immigration Services or a Basis of Claim form with the Immigration and Refugee Board of Canada.

The survey was available for participants across the U.S. and Canada to complete between March and September of 2018.

Potential participants were contacted by partnering with eight different non-profit organizations and individual service providers in the U.S. and Canada who work with LGBTQ asylum seekers. Six of the non-profit organizations provided services exclusively to LGBTQ immigrants and the remaining two provided legal services to asylum seekers in general.

These partners distributed the online survey to clients via email. Participants were informed that the survey was anonymous and that participation in the survey was voluntary. The study protocol was reviewed by the institutional review board of Yale University and deemed exempt from further review. Participants who completed the survey received a $20 gift certificate.

2.2. Measures

A draft survey was written in English, translated, and then back-translated, using professional interpreters in Spanish, French, Arabic, and Russian. Validated psychometric instruments that were already available in those languages were included in the final translated survey in unaltered form (Philadelphia Refugee Health Collaborative, 2014). The draft survey was piloted for readability with asylum seekers.

Mental distress. To our knowledge, no screening tool for mental distress has been validated for online administration in a population of asylum seekers. However, the Refugee Health Screener (RHS-15) (Hollifield et al., 2013) was specifically developed to efficiently screen for the need for referral to a mental health provider in refugee populations and was chosen for this study to assess the mental health burden of LGBTQ asylum seekers.

The RHS-15 was first validated in 2013 in a population of over 200 refugees from Asia and the Middle East, where it was found to correlate with diagnostic proxy instruments for depression, anxiety, and PTSD with high sensitivity and specificity (Hollifield et al., 2013). Since that time, the RHS-15 has been translated into 12 languages (Rhema et al., 2014) and is used at over 160 healthcare sites worldwide (Hollifield et al., 2016). The instrument has been validated for use in a variety of refugee populations in clinical and public health settings (Bjarta et al., 2018; Kaltenbach et al., 2017; Stingl et al., 2017). Respondents screen positive for emotional distress on the RHS-15 with a cumulative score of 12 or greater on the Likert scale questions, or a score of 5 or greater on the distress thermometer question (Pathways to Wellness, 2011). In clinical practice, respondents who screen positive on the RHS-15 are referred for mental health services given their high likelihood of having a diagnosable mental illness.

Social isolation. For our study, we used two measures of social isolation. The 4-item NIH Toolbox Loneliness measure was validated in direct reference to the 20-item University of Los Angeles, California Loneliness Scale (R-UCLA), showing a strong correlation with the original (Cyranowski et al., 2013). We also used the 4-item Patient-Reported Outcomes Measurement Information System (PROMIS) Short Form v2.0 Emotional Support scale (Reeve et al., 2007). This scale was developed using similar methods and for the same applications as the measures in the National Institutes of Health (NIH) Toolbox (Johnston et al., 2016; Reeve et al., 2007). Both the NIH Loneliness and PROMIS Emotional Support measures are scaled so that scores can be directly compared to U.S. adult population averages, with a mean of 50 and standard deviation of 10.

Identity concealment. The Outness Inventory Scale (Mohr and Fassinger, 2000) assesses the degree to which respondents' LGBTQ identity is known or talked about within different social spheres of their life. The scale asks participants to rate how open they are about their sexual orientation in different areas of their social life: family, co-workers/school peers, religious community, and friends. We modified the Outness Inventory Scale to include both sexual orientation and gender identity ("sexual orientation status" was changed to "LGBTQ identity") and simplified the response options. For each social domain, respondents could select: "no such group of people in my life," "know about your LGBTQ identity" or "do not know about your LGBTQ identity." Given that many LGBTQ asylum seekers are forced to live with strangers or family friends, we also added the social domain: "people I live with in a house or apartment." Because less than 50% of respondents ultimately endorsed membership in a religious community in the U.S. or Canada, we did not use that item in our score tabulations. We calculated outness scores as the average of all responses, with "no such group of people in my life" coded as "not applicable." For descriptive purposes, for each social domain where respondents indicated they were out, we also asked if their identity was accepted or not accepted by people in that social domain.

We performed exploratory factor analysis to evaluate whether our modified outness score represented a unitary factor. A method agreement procedure (Makowski, 2018) found that the optimal number of factors underlying the modified scale was one, with eight out of nine (88.89%) methods identifying one factor (VSS Complexity 1, Optimal Coordinates, Acceleration Factor, Parallel Analysis, Kaiser Criterion, Velicer MAP, BIC, and Sample Size Adjusted BIC).

LGBTQ community and social support. To better characterize respondents' connections to sources of social support, we asked about respondents' sources of support from family, significant other, immigrant community, LGBTQ resource center, religious organization, work/school, LGBTQ friends from online, LGBTQ friends from bars or clubs, and housemates. To characterize the extent of respondent's LGBTQ community, we asked if respondents had LGBTQ friends, LGBTQ friends from their country or culture, how many LGBTQ friends they had, and if they wanted to have more LGBTQ friends and LGBTQ friends from their country or culture.

English proficiency and asylum status. Participants were asked to classify their spoken English language proficiency as either beginner, fair, good, very good, or excellent (Diamond et al., 2014). For analysis, responses were dichotomized to either good/very good/excellent or fair/good. Participants were asked to classify their stage in the asylum application process according to whether they had applied for status, received a work permit, been granted status, or been denied status. For analysis, responses were dichotomized to either those who had been granted asylum status, and those who had not yet been granted status or had been denied status.

Other measures. Participants were also asked their birth country, current country and state/province of residence, years spent in current country, age, gender identity, sexual orientation, educational attainment, employment status, and school enrollment.

Intervention interest. To assess respondents' interest in different types of interventions aimed at improving mental and social health, we assessed their interest in joining a private Facebook group for LGBTQ immigrants, meeting other LQBTQ people from their country or culture through an anonymous website, joining a local LGBTQ community center, mentoring an LGBTQ immigrant who has just arrived in the U.S. or Canada, and seeing a mental health counselor. We also asked respondents if cost had ever been a barrier to accessing mental health services since their arrival in their host country.

2.3. Data analysis

In order to control for survey response quality respondents were required to answer each question in order to advance through the survey. We also established three criteria for survey inclusion. All survey questions must have been answered, the survey response time needed to be at least nine minutes, and the survey needed to contain no more than one inconsistent, exclusionary, or illogical answer. Unacceptable answers included listing "country of origin" as the U.S., Canada or another country from which LGBTQ people do not seek asylum, listing age as less than 16 or greater than 100, listing both heterosexual for sexual orientation and cis-gendered for gender

(respondent does not identify as LGBTQ), listing a country other than the U.S. or Canada as current country of residence, listing number of years living in U.S. or Canada as greater than stated age, a response of "yes" to the question "Do you have LGBTQ friends in the U.S. or Canada?" while also listing zero for the specific number of LGBTQ friends, and vice versa. Following these criteria, 308 out of 476 collected surveys were included in the study (65%). We discarded 77 surveys that did not meet completeness criteria, 10 surveys that contained two or more unacceptable answer choices, and 81 surveys that had a response time of less than nine minutes.

After describing means and standard deviations of social determinants and mental health, we used logistic regression to investigate factors predicting screening positive on the RHS-15. We considered five hypothesized predictors derived from minority stress theory and theories of immigrant social integration (loneliness, emotional support, identity disclosure, English proficiency, asylum application status) along with six other possible predictors of the RHS-15. Five predictors were continuous (loneliness, emotional support, identity disclosure, age, and log years lived in the U.S./Canada) and six were binary predictors (post-secondary education, good/very good/excellent English proficiency, granted asylum, transgender, cis-female, and bisexual). We present results from two modeling approaches. First, we fit 11 separate single-variable logistic regression models for each predictor. Second, we fit a multiple logistic regression model including all 11 predictors.

3. Results

3.1. Participant characteristics

Survey participants came from 48 different countries and were currently living in 29 different states or provinces. A third of participants had been granted asylum and a majority spoke good to excellent English. A plurality of participants was aged 30–39, cis-gender male and gay, originally from Russia, living in New York State, and employed, and had a post-secondary education. See Table 1 for a summary of participant characteristics.

3.2. Descriptive results: mental health, minority stress, and social integration

Mental distress. In our sample, 80.20% of participants screened positive for mental distress on the RHS-15. In a clinical setting, these respondents would have been referred to mental health services given their high likelihood of having a diagnosable mental illness. Cronbach's alpha for the fourteen Likert items on the RHS-15 among this sample was 0.91.

Social isolation. Across respondents, the mean Loneliness Score was 63.19 (SD = 10.86) and the mean scaled Emotional Support Score was 46.71 (SD = 9.42), indicating disproportionately low social and emotional support compared to U.S. population norms. The reference U.S. population norms for both loneliness and emotional support were $M = 50$ ($SD = 10$). Cronbach's alphas for the NIH Loneliness measure and PROMIS Emotional Support measures were 0.89 and 0.93 respectively.

LGBTQ community and sources of social support. Most participants reported having LGBTQ friends in the U.S. or Canada (91.2%) and specifically LGBTQ friends from their own country or culture (77.3%) but also wanted more LGBTQ friends (83.1%). The most commonly cited sources of social support were a significant other (41.2%) and LGBTQ friends made via the Internet (35.4%). The least commonly cited sources of social support were family (13.3%) and religious community (5.8%). One quarter of participants listed immigrant community as a primary source of social support. Table 2 summarizes participants' LGBTQ community connections and primary sources of social support.

Identity disclosure. The mean outness score was 0.73 (*SD = 0.30;*

Table 1
Characteristics of the sample.

	N	Percentage
Survey Language		
English	160	51.9
Russian	122	39.6
Spanish	18	5.8
French	6	1.9
Arabic	2	0.6
Region of Origin		
Europe/Central Asia	155	58.9
Caribbean	35	13.3
Latin America	34	12.9
Sub-Saharan Africa	25	9.5
Middle East/North Africa	8	2.6
Asia	6	2.3
Country of Origin (Top 5)		
Russia	113	36.7
Jamaica	27	8.8
Uganda	14	4.5
Nigeria	13	4.2
Belarus	13	4.2
Current Country		
United States	293	95.1
Canada	15	4.9
Current State/Province (Top 5)		
New York	130	42.2
California	46	14.9
Florida	37	12.0
Massachusetts	26	8.4
Ontario	15	4.9
Gender Identity		
Cis-Male	215	69.8
Cis-Female	56	18.2
Genderqueer/Genderfluid/Other	23	7.5
Transgender Female	11	3.6
Transgender Male	3	1.0
Sexual Orientation		
Gay	205	66.6
Lesbian	47	15.3
Bisexual	40	13
Heterosexual	10	3.2
Other	6	1.9
Age Range		
< 21	4	13.0
21–29	121	39.3
30–39	154	50.0
40–49	26	8.4
50+	3	9.4
Years in US or Canada		
< 1	42	13.6
1–2	91	29.5
3–4	92	29.9
5–6	29	9.4
7–8	11	3.6
9–10	15	4.9
11–12	2	0.6
12+	26	8.4
Stage of Asylum Process		
Application not submitted	40	13.0
Application submitted	20	6.5
Work permit received	138	44.8
Application granted	107	34.7
Application denied	3	1.0
Spoken English Proficiency		
Excellent	84	27.3
Very Good	92	29.9
Good	82	26.6
Fair	40	13.0
Beginner	10	3.2
Education		
No Formal	1	0.3
Primary	3	1.0
Secondary	56	18.2
Post-Secondary	248	80.5
Employed		
Yes	223	72.4

(*continued on next page*)

Table 1 (*continued*)

	N	Percentage
No	85	27.6
In School		
Yes	70	22.7
No	238	77.3

Note. $n = 308$.

Table 2
LGBTQ community connection, sources of social support, identity disclosure, and acceptance (n = 308).

Variable and categories	*N*	Percentage
Have LGBTQ Friends		
Yes	281	91.2%
No	27	8.8%
Have LGBTQ Friends from Home Country or Culture		
Yes	238	77.3%
No	70	22.7%
Want More LGBTQ Friends		
Yes	256	83.1%
No	52	16.9%
Want More LGBTQ Friends from Home Country or Culture		
Yes	216	70.8%
No	89	29.2%
Number of LGBTQ Friends		
0	17	5.5%
1-2	65	21.1%
3-5	99	32.1%
6-10	65	21.1%
11 +	62	20.1%
Source of Social Support		
Significant Other	127	41.2%
LGBTQ Friends from Internet	109	35.4%
LGBTQ Resource Center	87	28.2%
Immigrant Community	76	24.7%
Housemates	71	23.1%
LGBTQ Friends from Bars/Clubs	67	21.8%
Work/School Friends	56	18.2%
Biological Family	41	13.3%
Religious Organization	18	5.8%
Biological Family		
Not out	94	30.5%
Out, not accepted	127	41.2%
Out, accepted	74	24.0%
Not applicable	13	4.2%
Work/School Peers		
Not out	101	32.8%
Out, not accepted	30	9.7%
Out, accepted	159	51.6%
Not applicable	18	5.8%
Religious Community		
Not out	84	27.3%
Out, not accepted	21	6.8%
Out, accepted	39	12.7%
Not applicable	164	53.2%
Housemates		
Not out Out,	64	20.1%
not accepted	24	7.8%
Out, accepted	194	63.0%
Not applicable	28	9.1%

range = 0–1). Cronbach's alphas for the outness score was 0.62. On average, participants were out in the majority of their social domains, although most reported concealing their identity in at least one domain. Participants were most likely to be out to, as well as accepted by, their housemates, co-workers and classmates, and non-LGBTQ friends. Participants were least likely to be out to, and accepted by, their biological family and religious organizations. Table 2 summarizes participants' identity disclosure and acceptance.

3.3. Minority stress and social integration as determinants of mental distress

Three predictors were significant in the univariate logistic regression models predicting mental distress. Emotional support and being granted asylum were negatively associated with mental distress, whereas loneliness was positively associated with mental distress (see Table 3). Four predictors were significant in the multivariable logistic regression. As predicted, identity disclosure and loneliness were positively associated with mental distress (consistent with minority stress theory), whereas English proficiency and being granted asylum were negatively associated with mental distress (consistent with theories of immigrant social integration) (see Table 3). As for our exploratory aims, transgender identity approached significance and was positively associated with mental distress.

Because a plurality of respondents identified as Russian, we conducted a post hoc analysis that included 'Russian' as a binary covariate to verify if our results could be biased by this particular population. The results of the analysis were virtually unchanged and so we did not treat Russian respondents as a distinct group in our overall analyses.

3.4. Mental health intervention interest

Of those who screened positive, 70.45% indicated they would be "interested in seeing a mental health counselor to help with feelings or symptoms they are having." Of those who screened negative, 44.26% also expressed interested in seeing a mental health counselor. Over a third (38.60%) of our survey participants stated they had not been able to access mental healthcare since arriving in the Unites States or Canada because of cost. A majority of respondents expressed interest in interventions that involved in-person interaction, mental health services, and a private Facebook group for LGBTQ asylum seekers. Almost half were interested in joining an anonymous website to connect with other LGBTQ asylum seekers. Table 4 summarizes participants' intervention interest.

4. Discussion

This study demonstrates that LGBTQ asylum seekers in North America have a high burden of mental distress. Consistent with minority stress theory (Meyer, 2003), identity disclosure and perceived social isolation were positively associated with distress. Consistent with theories of immigrant social integration (e.g., Berry, 1997), granting of asylum status and English proficiency were negatively associated with distress. Transgender identity approached significance for a positive association with distress. In terms of mental health service needs, a majority of participants primarily relied on other LGBTQ people or organizations for social support but wanted more LGBTQ social connections. A majority of participants were interested in mental health and social support interventions, with interventions involving in-person interactions being the most popular.

4.1. Mental distress among LGBTQ asylum seekers

Our finding that four out of five respondents screened positive for mental distress is consistent with previous research among asylum seekers in general (Member Centers of the National Consortium of Torture Treatment Programs, 2015) and sexual minority asylum seekers in particular (Hopkinson et al., 2016 Piwowarczyk et al., 2016) showing high rates of suicidality and diagnosed mood, anxiety, and stress-related disorders. Such elevated levels of distress are also consistent with the frequent and varied forms of minority stressors (Meyer, 2003) that LGBTQ asylum seekers experience in both their sending and receiving countries. Pre-migration, LGBTQ asylum seekers are subjected to the constant anticipation of homophobia and transphobia, as well as various extreme forms of anti-LGBTQ persecution including rape, death threats, and torture (UNHRC, 2011). Post-migration,

Table 3
Determinants of a positive screening for mental distress on the RHS-15 based on logistic regression (n = 308).

Variable	Single Variable Models			Multivariable Models		
	OR	95% *CI*	*p*	*OR*	95% *CI*	*P*
Minority stress determinants						
Identity Disclosure[a]	1.14	(0.71, 1.83)	0.79	3.46	(1.85, 6.50)	0.048*
Emotional Support	0.94	(0.92, 0.95)	< 0.001***	0.98	(0.96, 1.00)	0.27
Loneliness	1.13	(1.11, 1.15)	< 0.001***	1.14	(1.11, 1.16)	< 0.001***
Social integration determinants						
English Proficiency[b]	0.74	(0.48, 1.12)	0.46	0.35	(0.21, 0.60)	0.05*
Asylum Status Granted[c]	0.55	(0.41, 0.74)	0.04*	0.36	(0.25, 0.53)	0.007**
Demographic determinants						
Post-Secondary Education[d]	1.02	(0.71, 1.46)	0.97	1.46	(0.95, 2.24)	0.38
Age	1.01	(0.98, 1.03)	0.78	1.00	(0.97, 1.02)	0.85
Years in Host Country[e]	1.13	(0.96, 1.34)	0.48	1.30	(1.03, 1.65)	0.27
Transgender[f]	2.20	(1.27, 3.81)	0.15	3.60	(1.00, 7.2)	0.06
Cis-Female	1.17	(0.80, 1.71)	0.69	1.08	(0.67, 1.73)	0.87
Bisexual	1.46	(0.92, 2.34)	0.42	2.09	(1.12, 3.91)	0.24

[a] Respondents were divided into those who were out in all social domains and those who were not out in any social domain.
[b] Respondents were divided into those with good/very good/excellent English proficiency and those with beginner/fair English proficiency.
[c] Respondents were divided into those whose asylum status was granted and those who did not have such status because they had not yet applied, had not yet had their status granted, or had been denied.
[d] Respondents were divided into those with post-secondary education and those with all other levels of education.
[e] Years were log transformed.
[f] This category includes all respondents who listed their gender as "transgender female," "transgender male," "genderqueer/genderfluid," and "other."

LGBTQ asylum seekers may continue to experience minority stress, often in the form of harassment and discrimination when seeking employment and housing (Gowin et al., 2017; Logie et al., 2016). Our findings point to a need for recognition of sexual orientation and gender identity as important pre- and post-migration social determinants of immigrant health in cross-national frameworks (Acevedo-Garcia et al., 2012) and for the elucidation of modifiable post-migration factors that the influence mental health of LGBTQ asylum seekers.

4.2. Minority stress as a determinant of LGBTQ asylum seekers' mental distress

Minority stress theory recognizes social support as a mediator of the association between sexual minority status and mental distress (Hatzenbuehler, 2009). In our analyses we found a mean loneliness score among LGBTQ asylum seekers that was over one standard deviation above the U.S. population mean. This finding is consistent with the many barriers to social integration outlined in Berry's (1997) acculturation framework, including discrimination, immigration status, and language and cultural differences. Previous research has found that sexual minority asylum seekers intentionally avoid associating with members of their own ethnic group due to experienced and expected homophobia (Kahn, 2015; Piwowarczyk et al., 2016), which is consistent with the infrequent endorsement of family and immigrant communities as a primary source of social support in our study. Religious organizations, a common source of social support in many immigrant communities, were the least popular forms of support in our sample (see Table 2). Many LGBTQ asylum seekers have experienced discrimination from religious organizations in their home countries (Jackle and Wenzelburger, 2015) and may also have higher rates of agnosticism and atheism, as in the North American LGBTQ populations (Wilkerson et al., 2013).

Other LGBTQ people (e.g., romantic partners, online friends or community center staff or members) were the most common source of primary support (see Table 2). This appears to be in contrast with prior research with sexual minority asylum seekers in which 54% of respondents said they had connections to "heterosexual community" and only 18% said they had connections to "LGB community" (Piwowarczyk et al., 2016). This difference may be because our sample population had spent more time in a host country before being surveyed; in fact, most of our participants had spent at least one year in the United States or Canada. Our sample was also recruited online and thus was more likely to be connected to internet-based LGBTQ communities.

Despite the fact that the majority of respondents had been able to form social relationships with other LGBTQ individuals in the United States or Canada, most still considered the extent of their LGBTQ social network to be insufficient and some had no LGBTQ community at all (see Table 2). Language differences, discussed in more detail below, may hinder the development of connections with host-country LGBTQ communities. Other barriers may include cultural differences, differences in conceptualization of sexual and gender identities, as well as racism and exoticization (Kahn, 2015). Many respondents also reported being in the closet in social spaces such as work, school, and home (see Table 2). The minority stress of identity concealment may contribute to subjective feelings of social isolation, while also creating an objective barrier to meeting other LGBTQ people (Berg and Millbank, 2009).

Being one standard deviation above the mean for loneliness was associated with more than three times the odds of screening positive for mental distress (see Table 3). Previous literature has identified strong associations between loneliness and depression (Ge et al., 2017). It may be that loneliness and depression are strongly correlated because both are negative affective states with similar underlying risk factors, because depression interferes with interpersonal relationships, or because a depressive state predisposes one to focus on feelings of loneliness. However, studies using cross-lagged and longitudinal designs have found evidence for a causal pathway from loneliness to depression (Cacioppo et al., 2006). Researchers have proposed that lonely people are hypervigilant to social threats. This hypervigilance causes stress which is in turn detrimental to mental health (Hawkley and Cacioppo, 2010). Thus, LGBTQ asylum seekers experiencing social isolation may be contending with the general stress of negative social expectations along with the specific minority stress of anticipated discrimination.

Cross-sectional and prospective studies in U.S.-based sexual minority populations have also found that social isolation mediates the relationship between minority stress and poor mental health outcomes (Hatzenbuehler, 2009, 2012). Additional research has found that social connection to LGBTQ community in particular can attenuate the relationship between exposure to minority stress and mental health morbidity (Frost and Meyer, 2012; Kertzner et al., 2009; Ramirez-Valles

et al., 2005). This may be because LGBTQ community can provide access to a non-stigmatizing environment, improved self-esteem through comparisons to other LGBTQ individuals, as well as social and material support (Kertzner et al., 2009; Ramirez-Valles et al., 2005).

Emotional support was significant in the single variable analysis, but not in the multivariable analysis (see Table 3). Emotional support may only have been significant in the single variable analysis due to its moderate negative correlation with loneliness. In fact, after controlling for the effect of loneliness in the multivariable models, emotional support had no independent effect on mental health. Previous research has also found loneliness to be a stronger predictor of depression than more objective measures (Cacioppo et al., 2006; Ge et al., 2017), which may include self-assessments of the frequency and strength of one's emotional support as in our study.

Minority stress theory also recognizes identity concealment as a proximal factor in sexual minorities' disproportionate experience of mental distress (Meyer, 2003). In our multivariable analysis, asylum seekers who had disclosed their LGBTQ identity in all major social domains of their life were over three times more likely to screen positive for mental distress (see Table 3). Previous U.S. research has suggested that sexual orientation concealment may shield LGB individuals from minority stress and resultant mental health morbidity (Huebner and Davis, 2005; Reisen et al., 2013). Research on a large population of sexual minority adults across 28 countries in Europe has shown that concealment of sexual orientation mitigates the detrimental mental health effects of minority stress, particularly in high-stigma countries (Pachankis and Bränström, 2018). LGBTQ asylum seekers are, by definition, from high-stigma countries and may be embedded in high-stigma immigrant communities (Gowin et al., 2017). One study of LGB asylum seekers found that a majority of those who disclosed their sexual orientation to another individual in the U.S. received a negative reaction (Piwowarczyk et al., 2016). Close to 10% of respondents in our study had to work, study, or live with others who knew of their LGBTQ identity but did not accept it. As in Pachankis and Bränström (2018), and in U.S.-based research demonstrating an association between state-level LGB climate and sexual minority health (Solazzo et al., 2018), the minority stress caused by exposure to social stigma may mediate the association between identity disclosure and mental distress in our study. However, other research showing a positive association between identity disclosure and mental health (Beals et al., 2009) or an association that varies with gender (Pachankis et al., 2015) suggest that further research focused on the circumstances and consequences of identity disclosure in different sub-populations of LGTBQ asylum seekers would be needed to further elucidate this complex relationship.

Overall, our findings that social isolation and identity disclosure are associated with mental distress are particularly concerning in light of recent changes in federal immigration policy priorities in the U.S. In response to a growing influx of migrants attempting to cross the United States-Mexico border, the United States government has begun to require asylum seekers to await their asylum hearings outside the U.S. (Hennessy-Fiske, 2019; Meissner et al., 2018). Given the high levels stigma and discrimination that LGBTQ asylum seekers already experience in Mexico and countries in South and Central America (Del Real, 2018; Hennessy-Fiske, 2019), they would likely face increased exposure to minority stress, barriers to social integration, and difficulty building LGBTQ community.

4.3. Barriers to social integration as determinants of LGBTQ asylum seekers' mental distress

According to theories of immigrant social integration (e.g., Berry, 1997), host language proficiency and immigration status are important determinants of mental health. In this study of LGBTQ asylum seekers, high English language proficiency was associated with screening negative for mental distress (see Table 3). Lack of English language proficiency is an established barrier to healthcare access for immigrants (Kim et al., 2011). However, the connection between language proficiency and mental health is not as well understood. Some research finding a link between lower English language proficiency and depression has interpreted fluency to be a proxy for acculturation (Roberts et al., 2016). Research based in acculturation theory (Berry, 1997) has found that immigrants who are more integrated into their host country culture have more favorable mental health outcomes (Bulut and Gayman, 2016), This association may be mediated by the psychological benefits of social connection discussed above, as well as improved access to material resources such as housing and employment (Ager and Strang, 2008).

Decreased exposure to anti-immigrant sentiment may also play a mediating role. Research showing an increased HIV risk for sexual minority migrants in host countries with high anti-immigrant bias found a decreased risk in migrants who spoke the host country language, attributing this protective effect to migrants' ability to be viewed as citizens and avoid anti-immigrant stigma (Pachankis et al., 2017). All of the above explanations may apply to our study population as well, although further research is needed to understand the mechanisms of association.

In the present study and consistent with previous studies on asylum seekers (Ryan et al., 2008; Silove et al., 2007) and LGBTQ immigrants (Yamanis et al., 2018), having a grant of asylum, and therefore legal permanent residence, was protective against distress (see Table 3). While this effect was independent of the amount of time spent in the host country, a grant of asylum status may still facilitate social integration, and its associated mental health benefits (Bulut and Gayman, 2016). A grant of asylum assures an immigrant that their host country will become their permanent home and opens access to integrating institutions such as state universities and workplaces. A grant of asylum also relieves the mental burden of uncertainty (Silove et al., 2007) and the fear of being deported back to a dangerous home country (Ryan et al., 2008; Yamanis et al., 2018). In addition, acquiring permanent resident status allows greater access to healthcare and other government benefits such as food stamps, which can alleviate financial and health strains. Given the substantial number of changes that are simultaneously enacted through a grant of asylum, further research is required to more definitively explain the association between asylum status and mental health.

Regardless of the mechanisms of association however, this finding highlights the importance of granting timely decisions to asylum seekers and providing mental health services to those awaiting status determinations. It is of particular relevance in light of the growing backlog of asylum cases in both the U.S. and Canada (Harris, 2019; Meissner et al., 2018) and recent trends to address asylum case backlogs by prioritizing the newest asylum cases, forcing those with older cases to wait longer to have their claims heard (Meissner et al., 2018).

4.4. Demographic factors as determinants of LGBTQ asylum seekers' mental distress

In our exploratory aims, transgender identity approached significance in our multivariable model and resulted in 3.6 times greater odds of screening positive for mental distress (see Table 3). This likely reflects the fact that transgender identity is associated with greater levels of mental distress but that our statistical power to detect a relationship was small given the small number of transgender respondents in our survey (n = 37, or 12.13% of the study population). Existing research has shown that compared to the general population, and sexual minority peers, transgender individuals are especially vulnerable to depression, anxiety, suicidality, and other mental health concerns (Nuttbrock et al., 2002). While no quantitative research has assessed the mental health burden of transgender asylum seekers, given the high rates of ostracism and violence (Balzer et al., 2016), relatively high visibility in public settings, and lack of legal recognition that transgender people face worldwide (Chiam et al., 2017), it is not

Table 4
Participant interest in interventions to improve social and mental health (n = 308).

	n	Percentage
Private Facebook Group		
Yes	198	64.3%
No	62	22.1%
Unsure	41	19.5%
Private Website		
Yes	150	48.7%
No	96	31.2%
Unsure	60	19.5%
LGBTQ Community Center		
Yes	210	68.2%
No	70	22.7%
Unsure	26	8.4%
Mentor LGBTQ Newcomer		
Yes	258	83.8%
No	30	9.7%
Unsure	18	5.8%
Mental Health Counseling		
Yes	201	65.3%
No	63	20.5%
Unsure	42	13.6%

surprising that transgender asylum seekers would experience particularly high rates of mental distress.

4.5. Implications

Overall, our findings suggest that interventions aimed at reducing the social isolation of LGBTQ asylum seekers could lead to significant improvements in mental health. Our findings are of particular relevance to healthcare providers because of the high levels of interest in both mental and social health interventions we demonstrated in the target population. Acceptance of referral to mental health services varies widely among different immigrant populations (Ballard-Kang et al., 2018), but a large percentage (70.45%) of those who screened positive for mental distress in our study expressed interest in seeing a mental health counselor (see Table 4). Our findings are consistent with a small survey conducted by a U.S. LGBTQ asylum seeker support organization where 85% of respondents said they needed mental health care (McGuirk et al., 2015). Despite this interest, over a third of our survey participants also indicated that they had not been able to access mental healthcare since arriving because of cost. In the U.S., asylum applicants must generally rely on non-profit organizations or charitable hospital programs to receive mental health services (Gruberg et al., 2018). A grant of asylum allows qualifying LGBTQ immigrants to apply for Medicaid and in some cases removes barriers to purchasing private insurance in state Affordable Care Act exchanges (National Immigration Law Center, 2015). In Canada, applicants awaiting determination can still access some free health services via the Interim Federal Health Program and provincial programs such as the Ontario Temporary Health Program (Mulé and Gamble, 2018). However, in both the U.S. and Canada, even those asylum seekers with access to healthcare coverage often face long wait times and limited access to mental health services (Mulé and Gamble, 2018), along with variable expertise in the care of immigrant LGBTQ populations (Kahn et al., 2017).

Interventions involving in-person social connections were popular with respondents and over 80% of respondents wanted to serve as a mentor for a more recent LGBTQ arrival (see Table 4). These results point to the promise of investing in LGBTQ asylum seekers as community advocates and peer health workers (Barnett et al., 2018). The results of this research also suggest that mental health resources should be made accessible those awaiting asylum determinations, and to those who are not proficient in English. For these populations, peer mental health and group support may be particularly useful because they can allow for communication in preferred languages, may be feasible on a larger scale for those without health insurance, and may result in concurrent reductions in social isolation and increased material support (Kahn, 2015; Logie et al., 2016).

Given the great need for mental health services identified in this population, further research on the feasibility of different forms of mental and social health support such as peer health counseling and telepsychiatry is warranted, in addition to overall investment in mental health services and provider competency training (Lelutiu-Weinberger and Pachankis, 2017). Participants' interest in LGBTQ community building, along with more collectivist cultures in the countries of origin of many asylum seekers, may also make group therapy a particularly effective form of mental health intervention (Reading and Rubin, 2011). Systematic reviews examining the impact of interventions such as support groups, one-to-one support, and cognitive behavioral interventions have noted that interventions can improve mental health outcomes, at least in the short term (Flores et al., 2017; Masi et al., 2010), but that ongoing research is needed to understand which specific interventions are effective in particular populations (Kawachi and Berkman, 2001).

4.6. Study limitations

This study consists of the largest-known survey on the social determinants of mental health of LGBTQ asylum seekers in North America using validated and normed measures among a diverse population of asylum seekers. However, study results should be interpreted in light of several important limitations. First, our study was cross-sectional and causation cannot be inferred from the associations identified. Also, because our survey was distributed via email, it was only accessible to those who were computer literate, had regular Internet access, and were literate in one of the five survey languages. Because our survey was distributed via service providers, nonprofits, and immigrant community networks that had an online presence, we were only able to reach asylum seekers who had a connection to at least one large service provider or community group.

Despite containing a wide range of participant characteristics, our convenience sampling resulted in a group that was biased towards certain demographic factors. A majority of our respondents had a post-secondary education, which may be due to the literacy barriers inherent in our survey distribution method (see Table 1). A large number of participants were also from Russian-speaking countries (see Table 1). One reason for this predominance is the existence of an active online community of Russian-speaking LGBTQ immigrants that is run by activists who were persecuted in their home countries. Few other LGBTQ asylum seeker subgroups are similarly organized and active online. Another possible explanation is the large wave of LGBTQ immigrants coming from Europe and Central Asia in recent years in response to state-sponsored crackdowns on LGBTQ people in Russian-speaking countries (Schreck, 2018). While post-hoc analyses did not show that Russian respondents and respondents with a post-secondary education differed from other respondents in terms of their odds of screening positive on the RHS-15, these demographic factors may still influence other study results, thus limiting their generalizability.

We utilized a screening tool for identifying mental health risk rather than diagnoses. Therefore, our survey does not capture the burden of specific mental illnesses such as major depression, anxiety disorders, or PTSD. Furthermore, as a clinical tool, this screener was designed to be administered in person by a trained professional, not self-administered online, and so its accuracy may be reduced. However, the only study that found the RHS-15 to be invalid was conducted in a group of extremely low-literacy refugees (Fellmeth et al., 2018). As mentioned above, a majority of our sample of asylum seekers had a post-secondary education and above average spoken fluency in English, which likely minimized inaccuracies related to self-administration.

5. Conclusion

Whereas prior quantitative research has examined the mental health burden of LGBTQ asylum seekers in small site-specific studies, our study examined the incidence of mental distress in a large sample of LGBTQ asylum seekers across North America. We applied minority stress theory, typically applied to *non-migrant* LGBTQ populations, and general theories of immigrant social integration, typically applied to *non-LGBTQ* populations, to this comprehensive investigation of LGBTQ migrant mental health. The present findings suggest that sexual orientation and gender identity are significant social determinants that should be taken into account under cross-national frameworks of immigrant health. LGBTQ asylum seekers have a high mental health burden and need for professional evaluation and treatment. As predicted from minority stress theory, higher loneliness and identity disclosure scores were associated with screening positive for mental distress. As predicted from theories of immigrant social integration, greater English proficiency and asylum application approval were associated with screening negative for mental distress. Pursuing exploratory aims, we also found that transgender identity represented an additional potential risk factor for mental distress. With the goal of translating these results into ultimate intervention, we found that LGBTQ asylum seekers have a strong interest in participating in mental health treatment and LGBTQ community building interventions, particularly those involving in-person interaction. Further research regarding LGBTQ asylum seekers' intervention preferences and the feasibility of such interventions is needed to lay the foundation for more effective mental health treatment and social support for this vulnerable segment of the LGBTQ population.

Author contribution

Samara Fox: Conceived and designed the analysis, Collected the data, Contributed data or analysis tools, Wrote the paper. Randi Griffin: Performed the analysis, Wrote the paper. John Pachankis: Conceived and designed the analysis.

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