



Socioecological Predictors of Resilience in Sexual and Gender Minority Individuals

Dana L. Surwill¹ · Jennifer R. Pharr¹

Accepted: 14 August 2024

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Abstract

Many factors affect an individual's resilience. Low resilience has been attributed to increased stress, anxiety, depression, and suicidality within the LGBTQIA+ population, which is heightened compared to different populations. This study identifies predictors of resilience in the LGBTQIA+ population and aims to identify predicting factors at all levels of the socioecological model. This was a cross-sectional study of data from a web-based survey that was conducted from January to February 2022. A national sample of 1033 LGBTQIA+ adults was utilized for hierarchical regression analysis. Hierarchical regression analyses were performed for total resilience, which had an average score of 143.66 (SD = 33.88) and accounted for 53.4% of resiliency variance. Factors that were found to decrease an individual's resiliency score were depression, stress, suicidality, and isolation discrimination distress. Factors found to increase an individual's resiliency scores are college graduate 4 years+, married, outness, personal comfortability with being SGM, gender expression discrimination distress, and vicarious discrimination distress. Understanding the factors that influence resilience is vital to improving the resilience of the LGBTQIA+ communities. Interventions that focus on decreasing depression, stress, and suicidality may be particularly impactful for all types of resilience.

Keywords Resilience · Sexual and gender minority · Socioecological model · Hierarchical regression

Introduction

In recent years, there has been a significant increase in individuals identifying as lesbian, gay, bisexual, transgender, queer, intersex, and other non-cisgender and non-heterosexual identities (LGBTQIA+). In 2012, only 3.5% of adults in the United States identified as LGBT, compared to 7.1% in 2021 [1]. Further examination of American adults in 2021 determined that 0.8% of Traditionalists (1945 and earlier), 2.6% of Baby Boomers (1946–1964), 4.2% of Generation X (1965–1980), 10.5% of Millennials (1981–1996), and 20.8% of Generation Z (1997–2003) identify as LGBT [1] (Fig. 1)

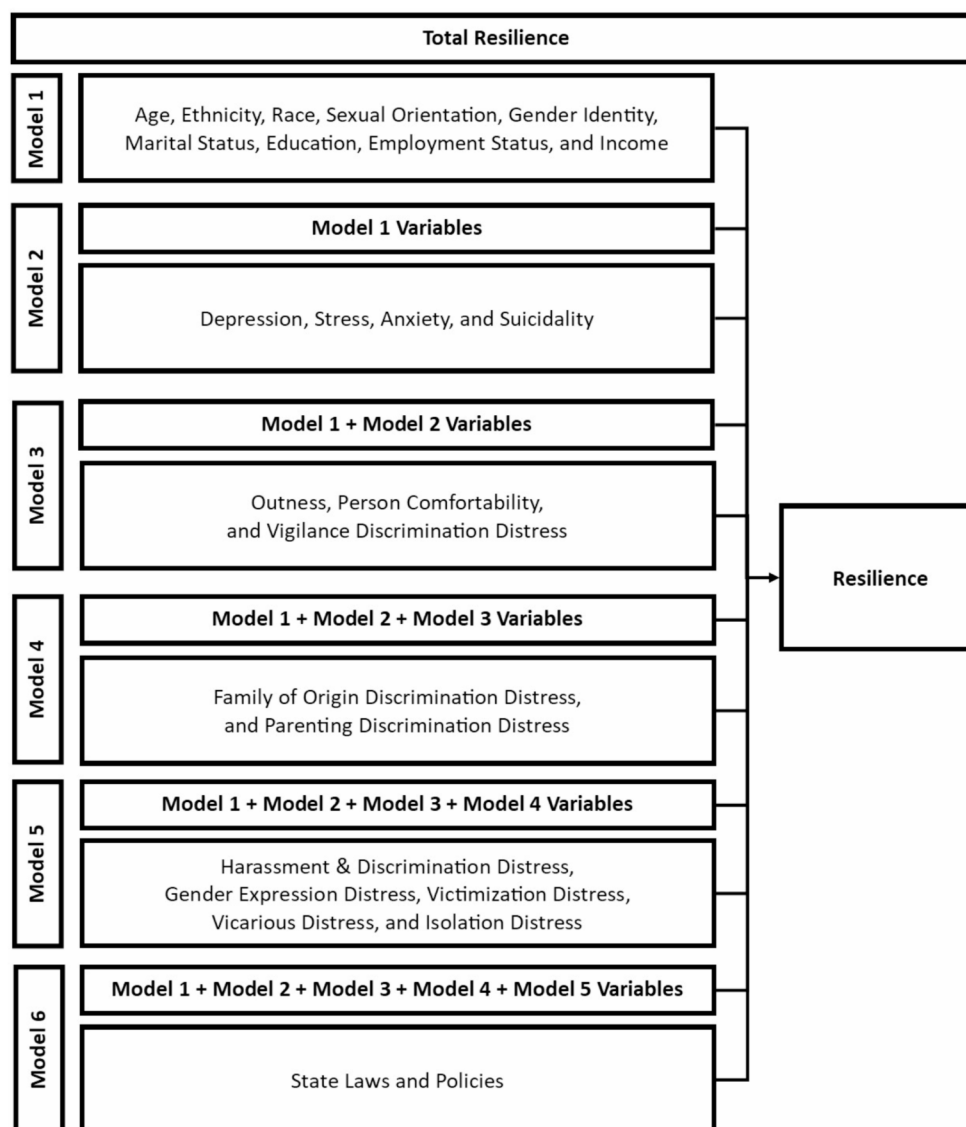
It has been well shown through research that the LGBTQIA+ population is at a higher risk for health

disparities such as stress, anxiety, depression, and suicidality. LGBTQIA+ individuals experience extra stress due to discrimination, victimization, microaggressions, and rejection. These events create hostile environments and actively contribute to various psychological difficulties like anxiety and depression [2]. The 2022 U.S. Census Bureau Household Pulse Survey found that in all age groups, the LGBTQIA+ population exhibits higher rates of anxiety and depression symptoms [3]. As the LGBTQIA+ population increases in age, the percentage of individuals experiencing anxiety and depression symptoms approaches the percentage of non-LGBTQIA+ individuals [3]. Specifically, 60.8% and 50.0% of LGBTQIA+ individuals aged 18–29 experience symptoms of anxiety and depression, respectively compared to 35.4% and 28.9% of their heterosexual and cisgendered counterparts [3]. In a meta-analysis of lifetime suicide attempts from high-income countries, a 10% prevalence in population surveys and a 20% prevalence in community surveys was found for sexual minority adults compared to a prevalence of 4% for heterosexual respondents [4].

✉ Dana L. Surwill
Surwill@unlv.nevada.edu

¹ Department Environmental and Occupational Health,
School of Public Health, University of Nevada, 4700, South
Maryland Parkway, Las Vegas, NV 89119, USA

Fig. 1 Hierarchical regression models used for analyses



Resiliency has been widely explored by research as an avenue to decrease the health disparities LGBTQIA+ individuals face. It is the ability of an individual to withstand or quickly recover from difficult events as resilience buffers the impact of stress on health outcomes and allows an individual to survive or thrive while experiencing various stigmatizing events [5, 6]. Specifically, resilience has been observed to buffer the damaging effects of stress and is negatively associated with anxiety and depression [7–9]. Suicide and suicidal ideation have also been identified as having a negative correlation with higher resiliency levels [9, 10].

Previous research has identified some predictors of resilience in various levels of the socio-ecological model (SEM) developed by Urie Bronfenbrenner. The SEM states that health is impacted by the interaction of multiple levels of influence including individual, relationships, community,

and policy [11]. Previous research has focused on the individual level predictors of resilience and has found a positive association between socioeconomic status [12–16], self-view (e.g. self-esteem [14–25], self-liking [2, 6, 9, 14, 19], self-worth [14, 20, 26, 27]), worldview constructs [5], and life evaluations [20] and higher resilience.

Variables that have been identified as negatively associated with resilience include concealment of sexuality or gender [13, 18, 21, 22, 25, 27–29], internalized stigma [12, 13, 20, 23, 24, 26–31], shame [12, 23], and self-harm [13, 29].

At the relationship level, family, friendships, role models, and social support [12–33] were found to be predictors of resilience while at the community level community advocacy [13, 20, 23, 26] and community connectedness [14], alienation [23], isolation [9, 13–15, 18], microaggressions [12, 21, 24, 25, 33], rejection [2, 18, 21, 22, 27–31], and

structural stigma [12, 13, 18, 24] were found to be predictors. The policy level contains only one predictor: Affirmative laws and policies [6, 17, 18, 21, 25, 30–32].

Previous research has examined one or two levels of the SEM, but none has examined the predictors of resilience at multiple levels of the SEM. The purpose of this study was to identify predictors of resilience in the LGBTQIA+ population at multiple levels of the SEM. Based on the literature discussed above, we hypothesized that we would find factors that are associated with an increased or decreased resilience score at multiple levels of the SEM.

Methods

Study Design and Data Collection

The present cross-sectional study collected data from 1,033 LGBTQIA+ adults between 28 January and 7 February 2022. All participants resided in the United States, including Washington D.C., and participated in an online Qualtrics survey consisting of valid psychometric items. Using a pay-for-service model, the Qualtrics Research Marketing Team contractually provided a high-quality and complete data set of the desired sample (*Qualtrics Panels Project*). Various avenues were used to distribute the survey link, including in-app notifications, listserv, among contacts of the investigators, etc. (*Qualtrics Panels Project*). Qualtrics was able to provide researchers with diverse datasets that represent the studied population due to sampling participants from partnerships with over 20 online sample providers (*Qualtrics Panels Project*). Participants were offered financial incentives in the forms of gift cards, cash rewards, SkyMiles, or redeemable points per the contract between Qualtrics and panel providers or data collection partners (*Qualtrics Panels Project*). Any variability in incentive amount was not revealed to the researchers.

Eligible participants were 18 years old or older, identified as LGBTQIA+, understood English, and had the ability to provide informed consent. The University of Nevada, Las Vegas Institutional Review Board deemed this study exempt because no identifiable information was collected. All participants provided informed consent electronically.

Variables and Measures

The Resilience Scale for Adults was used to measure the dependent variable. It is a 33-item questionnaire that includes subscale for perception of self, plan for future, structural style, social competence, social resources, and family cohesion [19, 34]. Questions are answered on a Likert scale of 1 (strongly disagree) to 7 (strongly agree), with

total resilience scores ranging from 33 to 231, and higher scores denote higher levels of resilience.

Detailed information about independent variables is provided in Table 1. These were measured at the individual, relationship, community, and societal levels of the SEM. Individual level variables included demographic characteristics (sexual orientation, gender identity, outness, age, education, employment, income, marital status, race and ethnicity, outness, and personal comfortability with identity). Mental variables of depression, anxiety, stress, and suicidality, were measured using the following validated survey tools: Center of Epidemiologic Studies Depression Scale (10 items) [35, 36], General Anxiety Disorder-7 (7 items) [37], Perceived Stress Scale (10 items) [38, 39], and Suicidal Ideation Scale (10 items) [40, 41]. Lastly, the Daily Heterosexist Experiences Questionnaire (DHEQ – 44 items) subscale of vigilance (which measure identity concealment) was used to measure vigilance distress [42].

At the relationship level of the SEM, we used the DHEQ subscales for family of origin and parenting discrimination distress. At the community level, we used the DHEQ subscales of harassment, gender expression, victimization, vicarious, and isolation discrimination distress. Finally, at the societal level we used the Movement Action Project LGBTQ laws and policies scores as a measure of affirmative laws and policies [43], and data from the ACLU as to whether a state had proposed or enacted a state-level transgender ban [44].

Sample Size Justification

The sample size was pre-estimated with the following formula: $n = z^2 \sigma^2 / d^2$. A confidence interval (CI) of 95% ($\alpha = 0.05$, $z = 1.96$), a $d = 5\%$ margin of error, and a 41% variance of resilience. The required minimum sample was calculated to be 630, but after applying a 20% nonresponse rate, a total of $n = 630 + 126 = 756$ was needed.

Statistical Analysis

Re-coding and cleaning of the data for the analytical procedures was completed before categorical and continuous variables were presented. Frequencies and proportions were used to present categorical variables, whereas mean and standard deviations, if normality was assumed, were used to present the continuous variables. A hierarchical regression model was also used to predict the change in variance of resilience beyond demographic variables (Fig. 1). To complete the regression analysis, dummy codes were used for polytomous categorical variables in order to calculate accurate parameters. Every test was two-sided with a significant p -value at $p < 0.05$. Effect sizes for chi-square,

Table 1 The measures and variables utilized in this study

Variable	Tool used	Measurement scale	Total # of items	Likert scale options	Score range	Psychometric properties
Dependent						
Resilience, social resources, family cohesion	The Resilience Scale for Adults. ⁵⁶⁻⁵⁷ Used both the total resilience score and subscales for (1) personal resilience (perception of self, plan for future, structural style, and social competence), (2) social resources, and (3) family cohesion.	Continuous	33	Strongly disagree (1)-Strongly agree (7)	Higher scores denote higher levels of resilience	Cronbach's alpha = 0.84 Test-retest Pearson $r = 0.84$
Independent						
Individual Factors						
<i>Sociodemographic</i>	(1) Sexual orientation. (2) Gender identity (3) Education. (4) Employment (5) Income (6) Marital status (7) Race (8) Ethnicity (9) Age	(1) Categorical (2) Categorical (3) Categorical (4) Categorical (5) Categorical (6) Categorical (7) Categorical (8) Dichotomous (9) Continuous	9	(1) Lesbian, gay, bisexual, queer, questioning, asexual, straight/ heterosexual (check all that apply) (2) female, male, trans man, trans male, trans women, trans female, genderqueer, gender non-conforming, gender non-binary (check all that apply) (3) less than high school, high school diploma/GED, some college/no degree, Associate's degree, Bachelor's degree, Master's degree, Doctoral degree or professional. (4) employed, retired, homemaker, student, unable to work, unemployed and looking for work (5) less than \$10,000, \$10,000–19,999, \$20,000–29,999, \$30,000–49,999, \$50,000–74,999, greater than \$50,000 (6) Divorced, separated, widowed, married, member of an unmarried couple, single (never married) (7) American Indian/Alaskan Native, Asian, Black, Native Hawaiian/Pacific Islander, Other, Multiple (8) Hispanic, Spanish, Latinx or Non-Hispanic (9) Age		
<i>Mental Health</i>	(1) Depression - The Center for Epidemiological Studies Depression-Short Form (2) Anxiety - General Anxiety Disorder-7 (3) Stress - Perceived Stress Scale (4) Suicidality – Suicidal Ideation Scale (SIS)	(1) Continuous (2) Continuous (3) Continuous (4) Continuous	(1) 10 (2) 7 (3) 10 (4) 10	(1) How often have you felt this way. Rarely (0) to Most of the time (3) (2) How often have you been bothered by problems over the past two weeks? Not at all (0) to Nearly every day (3) (3) How often during the past month, feelings occurred? Never (0) to Very often (4) (4) Suicidal thoughts and plans. never (1) to always (5)	(1) 0–30 (2) 0–21 (3) 0–40	(1) Cronbach's alpha = 0.86 (2) Cronbach's alpha = 0.94 (3) Cronbach's alpha = 0.84–0.86 (4) Cronbach's alpha = 0.91),

Table 1 (continued)

Variable	Tool used	Measurement scale	Total # of items	Likert scale options	Score range	Psychometric properties
<i>Vigilance</i>	Daily Heterosexist Experiences Questionnaire (DHEQ) Used subscale: Vigilance distress	Continuous Additionally, we included a dichotomous variable (yes/no) for the occurrence of the different subscales of discrimination occurrence.	8	Experiences over the past 12 months Scale of 0 to 5: 0 = did not happen/not applicable to me to 5 = it happened and bothered me extremely	Higher score denotes greater distress	Cronbach's alpha = 0.86
<i>Outness</i>		Dichotomized	1	I would say that I am open (out) as LGBTQ+ person. not at all open/out (1) to totally open/out (5)		
<i>Personal comfort-ability with being SGM</i>			3	“Even if I could change my sexual orientation and/or gender identity, I wouldn't.”, “I feel comfortable being an LGBTQ+ person” and “Being LGBTQ+ is as natural as being heterosexual /cisgender”. strongly disagree (1) to strongly agree (7)	Higher score denotes greater comfortability	
Relationship Factors						
<i>Family Discrimination Parenting Discrimination</i>	Daily Heterosexist Experiences Questionnaire (DHEQ) Used subscale: (1) Family discrimination distress and (2) parenting discrimination distress	Continuous	(1) 6 (2) 6	Experiences over the past 12 months Scale of 0 to 5: 0 = did not happen/not applicable to me to 5 = it happened and bothered me extremely	Higher score denotes greater distress	Cronbach's alpha = 0.79
Community Factors						
<i>Discrimination</i>	Daily Heterosexist Experiences Questionnaire (DHEQ). Used subscales of: (1) Harassment/discrimination distress, (2) Gender expression discrimination distress (3) Victimization distress, and (4) Vicarious discrimination distress (5) Isolation discrimination distress	Continuous	(1) 6 (2) 6 (3) 4 (4) 6 (5) 4	Experiences over the past 12 months Scale of 0 to 5: 0 = did not happen/not applicable to me to 5 = it happened and bothered me extremely	Higher score denotes greater distress	Cronbach's alpha = 0.92 total questionnaire. Reliability for each subscale: harassment and discrimination ($\alpha = 0.85$), victimization ($\alpha = 0.87$), vicarious trauma ($\alpha = 0.82$).
Societal Factors						
<i>SGM State Law Score</i>	Movement Action Project – Equality Map State Profile	Continuous			Scale of -6 to 39.5 with a higher score indicating greater protective laws and policies for SGM people	
<i>Transgender Sports Ban</i>	ACLU 2021 Session bills	Dichotomized (yes/no)				

Table 2 Demographic characteristics of the sample ($n=1,033$)

Variable	# Missing	Number	%
Sexual orientation	9		
Bisexual		465	46.97
Gay		224	22.63
Lesbian		160	16.16
Other		141	14.24
Gender identity	0		
Female		554	55.46
Male		316	31.63
Other		129	12.91
Race	0		
Black		89	13.22
White		498	74.00
Other races		52	7.73
Multiple races		34	5.05
Ethnicity	5		
Non-Hispanic		853	85.39
Hispanic, Spanish, Latinx		146	14.61
Education	5		
High school degree or less		299	29.93
Some college, no degree or associate degree		355	35.54
Bachelor or higher degrees		345	34.53
Marital status	5		
Single (previously married)		134	13.41
Married or unmarried couples		405	40.54
Single (never married)		460	46.05
Employment status	6		
Employed		484	48.45
Out of the labor force		296	29.63
Unable to work		116	11.61
Unemployed		103	10.31
Income	6		
Less than \$20,000		340	34.03
\$20,000 - \$49,999		337	33.73
\$50,000 or more		322	32.23
Outness	58		
Not at all open/out		80	8.21
Somewhat open/out		261	26.77
Open/out		165	16.92
Very open/out		121	12.41
Totally open/out		348	35.69

independent-sample-t-test, Pearson correlation, hierarchical linear regression, and logistic regression were reported wherever appropriate. The effect sizes utilized are Cramer's V/Φ , Cohen's d , coefficient of determination (R^2), Cohen's f square, and odds ratio, respectively. The data were analyzed using The Statistical Package for Social Sciences for Windows, version 27.0 (SPSS, Chicago, IL, USA) and Statistical Analysis System (SAS 9.4).

Table 3 Mean and standard deviations of the variables tested ($n=1,033$)

Variable	Mean	Standard Deviation
Age	38.56	15.72
Depression	12.38	6.70
Anxiety	9.31	6.39
Stress	19.58	8.00
Suicidal ideation	18.86	10.57
Total Resilience	143.66	33.88

Results

Participants' Characteristics

The demographic characteristics in Table 2 show that most participants identified as bisexual (46.58%); female (55.37%); White (74.35%); non-Hispanic (85.41%); some college, no degree, or associate degree (35.41%); never-married singles (45.72%); employed (48.39%); annual income of \$20,000 or less (33.89%); and totally open/out (35.69%). The average, as shown in Table 3, was 38.56 (standard deviation [SD]=15.72) for age, 12.38 (SD=6.70) for depression, 9.31 (SD=6.39) for anxiety, 19.58 (SD=8.00) for stress, and 18.86 (SD=10.57) for suicidal ideation.

Total Resilience

The mean total resilience score was 143.66 (SD=33.88) and as noted in Table 4, the sixth model of the first hierarchical regression for total resilience accounted for over 50% of the variance in resiliency (R^2 53.4%) with ten significant variables. Depression ($B=-1.577$, $p<0.001$), stress ($B=-1.370$, $p<0.001$), suicidality ($B=-0.598$, $p<0.001$), and isolation discrimination distress ($B=-0.838$, $p=0.004$) decreased resilience. However, college graduate 4 years+ ($B=+4.806$, $p=0.038$), married ($B=+6.088$, $p=0.017$), outness ($B=+6.934$, $p<0.001$), personal comfortability with being SGM ($B=+0.606$, $p=0.008$), gender expression discrimination distress ($B=+0.834$, $p=0.007$), and vicarious discrimination distress ($B=+0.331$, $p=0.010$) increased resilience.

Discussion

The significant mental health variables, depression [16, 21, 23–27], stress [2, 5, 15–19, 23–27], and suicidality [2, 9, 14–17, 32–25, 32] were associated with decreased resilience. This coincides with a wide range of research that shows a negative association between depression, stress, suicidality and resilience. A study by Scandurra et al. (2017) determined that individual and external resilience can moderate depression, stress, and suicidality, but only at high

levels [23]. This study, however, did not analyze the differing heights of resiliency. Further research has also found that mental health support and suicide-related beliefs are associated with increased resilience. Mental health support from both peers and professionals helps individuals stay connected and build resilience to counteract the negative effects of the mental health variables discussed [17, 20, 30, 32]. Resilience is also built by beliefs such as suicide causes more harm than good, it is too permanent of a solution, and causes a significant loss to friends and family [20]. However, believing that suicide is an acceptable solution is associated with significantly decreased resilience [9]. Studies have found rumination is associated with decreased resilience [9, 26] as well as self-harm that may arise from the mental health variables discussed [13, 29].

Outness and personal comfortability with sexual orientation or gender identity increased resilience. Concealment of sexual/gender orientation, the antithesis of outness and a topic in other studies, has been associated with decreased resilience, consistent with our findings [12, 18, 21, 25, 27–29]. Outness allows individuals to affiliate with the LGBTQIA+ community, which is widely found to increase resilience [5, 6, 20, 23, 24, 26]. However, a study by Alam and Marston states that affiliation with the LGBTQIA+ community can decrease resilience due to differing cultural norms [30]. Personal comfortability with gender and sexual orientation can also be associated with pride [20, 23, 24] as well as self-esteem, self-liking, and self-worth [2, 6, 9, 14–24, 26, 27], which have both been found to impact resilience positively. Alternatively, internalizing sexual stigma can negatively impact resilience [2, 12, 13, 21, 23–31].

Demographic variables associated with an increase in resilience included being a college graduate or being married. This contradicts a previous study from Friberg et al. that stated higher resilience was not associated with years of education [19]. Other research finds that in certain cultures, marriage can be used as a straightening device, leading to poor mental health [30]. However, marriage is also associated with better mental health, along with state-level policies protecting marriage rights for LGBTQIA+ individuals [13, 45].

Multiple discrimination variables were associated with changes in resilience. Gender expression discrimination distress and vicarious discrimination distress is associated with an increase in resilience whereas isolation discrimination distress is associated with a decrease in resilience. A study by Woodford et al. explains that discrimination is a risk factor to depression, which was discussed above as having a negative association on resilience [24]. However, another study from Baiocco et al. found that individuals

who experienced higher rates of discrimination had higher resilience overall, supporting the results of this study [26].

Societal laws and policies were not found to impact resilience. This is contradicted by a study from Pharr et al. that found laws and policies have a significant impact suicidal ideation, a variable associated with decreased resilience [6]. Additionally, the study from Woodford et al. states that exclusionary policies toward the LGBTQIA+ community further discriminate these individuals, resulting in lower resilience [24].

Limitations

Causation of resilience cannot be determined due to the cross-sectional nature of this study. For example, mental health outcomes may decrease resilience or decreased resilience may exasperate mental health outcomes. Furthermore, self-report, self-selection, under-coverage bias, and information bias may be present as this study analyzed data from an online survey that was circulated to individuals who were a part of the Qualtrics panel. Only the completed responses were made available to the researchers per the agreement with Qualtrics. The survey was completed using Qualtrics and a convenience sampling method, which may make the sample not representative, affecting generalizability and external validity. Additionally, analyses on small subgroups of race were unable to be conducted due to sample size. Finally, there may be additional increasing and decreasing factors for resilience that were not included in this survey.

Strengths

This study analyzed a survey that was nationally available, allowing for increased diversity in respondents. A large sample size is also a benefit as it allows for more accurate conclusions to be drawn.

Conclusion

This study found that depression, stress, and suicidality decrease resilience, whereas outness and personal comfortability with sexual orientation or gender identity increase an individuals resilience score. Demographic variables affecting total resilience were college education and marriage. Additionally, gender expression discrimination distress, vicarious discrimination distress, and isolation discrimination distress impacted resilience.

Understanding the factors that influence resilience is vital to improving the resilience of the LGBTQIA+ communities. Interventions that focus on decreasing depression, stress, and suicidality and increasing outness or

Table 4 Total resilience

Variables	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	B	p-value	B	p-value	B	p-value	B	p-value	B	p-value	B	p-value
Constant	122.515	<0.001	189.291	<0.001	170.425	<0.001	170.309	<0.001	172.506	<0.001	173.423	<0.001
Individual - Socioeconomics												
Age	0.506	< 0.001	0.086	0.240	0.089	0.217	0.094	0.195	0.095	0.184	0.094	0.189
Hispanic, Latino, or Spanish (ref. Non-Hispanic)	3.528	0.261	1.889	0.442	2.206	0.360	2.035	0.401	2.289	0.341	2.100	0.384
Some college, Associates degree	0.426	0.870	-0.566	0.782	-0.411	0.837	-0.334	0.868	-0.667	0.737	-0.720	0.718
College graduate 4 years+ (ref. High school grad or less)	8.621	0.004	4.058	0.085	4.930	0.033	4.952	0.033	4.764	0.039	4.806	0.038
Unemployed	-5.702	0.133	-1.264	0.671	-1.610	0.581	-1.541	0.598	-1.430	0.622	-1.598	0.582
Out of labor force	0.497	0.849	-1.075	0.597	-0.309	0.877	-0.280	0.889	-0.669	0.736	-0.560	0.778
Unable to work (ref. Employed)	-6.184	0.096	4.030	0.170	2.292	0.428	2.432	0.401	2.548	0.376	2.361	0.413
White	-2.841	0.559	-3.842	0.313	-3.422	0.358	-3.511	0.347	-4.378	0.237	-4.381	0.237
Black	-1.309	0.812	-2.313	0.594	-1.926	0.650	-2.219	0.603	-2.556	0.545	-2.544	0.547
Other (ref. Multiple)	-5.537	0.363	-5.041	0.291	-2.332	0.618	-2.517	0.591	-3.753	0.421	-3.487	0.456
\$20,000–49,999	0.723	0.791	1.564	0.465	1.300	0.535	1.323	0.528	1.120	0.590	1.078	0.604
\$50,000+ (ref. <\$20,000)	-3.879	0.373	3.580	0.143	2.818	0.239	2.845	0.234	2.806	0.238	2.940	0.217
Other, multiple sexual orientation	8.177	0.009	0.108	0.975	1.390	0.678	1.378	0.681	0.757	0.820	0.819	0.806
Bisexual	-4.677	0.196	1.626	0.567	3.734	0.183	3.618	0.198	2.984	0.285	3.088	0.269
Lesbian (ref. Gay)	-0.964	0.826	1.705	0.620	1.786	0.595	1.728	0.608	2.144	0.521	2.189	0.513
Female	2.615	0.439	2.960	0.266	1.476	0.573	1.441	0.583	1.073	0.682	0.976	0.710
Transgender, nonbinary	-7.972	0.084	-0.212	0.953	-1.489	0.676	-1.378	0.700	-3.564	0.326	-3.559	0.326
Other, multiple gender identity (ref. Male)	-2.624	0.657	1.740	0.707	-0.615	0.892	-0.402	0.930	-2.817	0.542	-3.034	0.512
Married	8.314	0.012	7.595	0.004	6.547	0.010	6.657	0.009	6.083	0.017	6.088	0.017
Divorced, widowed, separated (ref. Single)	-3.971	0.234	-0.270	0.918	0.042	0.987	-0.268	0.918	-0.788	0.760	-0.796	0.758
Individual – Mental Health												
Depression			-1.596	< 0.001	-1.575	< 0.001	-1.563	< 0.001	-1.588	< 0.001	-1.577	< 0.001
Stress			-1.401	< 0.001	-1.368	< 0.001	-1.372	< 0.001	-1.362	< 0.001	-1.370	< 0.001
Anxiety			0.357	0.118	0.313	0.165	0.324	0.152	0.308	0.169	0.305	0.174
Suicidality			-0.553	< 0.001	-0.554	< 0.001	-0.570	< 0.001	-0.589	< 0.001	-0.598	< 0.001
Individual – Resilience, Vigilance, and Outness												
Vigilance discrimination distress			0.042	0.790	0.021	0.917	0.021	0.917	-0.228	0.356	-0.240	0.332
Outness (ref. Out/open)			8.253	< 0.001	8.009	< 0.001	8.009	< 0.001	7.111	< 0.001	6.934	< 0.001
Personal comfortability with being SGM			0.698	0.001	0.698	0.001	0.750	0.001	0.588	0.010	0.606	0.008
Family – Resilience and Discrimination												
Family of origin discrimination distress							-0.098	0.643	-0.392	0.093	-0.391	0.095
Parenting discrimination distress							0.477	0.338	-0.014	0.980	-0.007	0.990
Community – Resilience and Discrimination												
Harassment & Discrimination distress							0.122	0.666	0.116	0.681	0.116	0.681
Gender Expression discrimination distress							0.814	0.009	0.834	0.007	0.834	0.007
Victimization discrimination distress							0.311	0.427	0.313	0.425	0.313	0.425
Vicarious discrimination distress							0.334	0.009	0.331	0.010	0.331	0.010

Table 4 (continued)

Variables	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	B	p-value	B	p-value	B	p-value	B	p-value	B	p-value	B	p-value
Isolation discrimination distress												
Societal - Laws and Policies												
SGM State Law Score												
TGSB Proposed or Enacted (ref. No)												
R ²	0.171		0.496		0.519		0.520		0.533		0.534	
ΔR ²	0.171		0.325		0.023		0.001		0.013		0.001	
F	9.520		37.664		36.698		34.160		30.524		28.852	

Bolded numbers are significant at the $p < 0.05$

personal comfortability with an SGM identity may be particularly impactful for resilience. Future research should further evaluate various predictors of resilience for the LGBTQIA+ population.

Acknowledgements J.R.P. received sabbatical assistance from the University of Nevada, Las Vegas to conduct this research.

Author Contributions Conceptualization, J.R.P.; Methodology, J.R.P.; Software, J.R.P.; Validation, J.R.P.; Formal Analysis, J.R.P.; Investigation, J.R.P.; Data Curation, J.R.P.; Writing—Original Draft Preparation, D.L.S. and J.R.P.; Writing—Review and Editing, D.L.S. and J.R.P.; Visualization, J.R.P.; Supervision, J.R.P.; Project Administration, J.R.P. All authors read and approved the final manuscript.

Funding This research received no external funding.

Data Availability Data are not available due to privacy.

Declarations

Ethics Approval and Consent to Participate The University of Nevada, Las Vegas Institutional Review Board deemed this study exempt because no identifiable information was collected.

Consent for Publication Not Applicable.

Conflict of Interest The authors declare no conflict of interest.

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