# Stigma and negative mental health outcomes in sexual/gender minority youth in Utah

James S. McGraw[1] · Harrison D. Angoff[1] · Jay Chinn[1] · Wesley R. Barnhart[1] · Brinna N. Lee[1] · Eileen Diggins[1] · Amy K. Jordan[1] · Jared Branch[2] · Meagan Docherty[1]

## Abstract

In recent years, local governments and communities in Utah have begun discussing ways sexual/gender minority youth may experience particularly high levels of negative mental health symptoms, stigma, bullying, and family rejection. Using the Psychological Mediation Framework (PMF), we examined if being bullied due to sexual orientation or gender identity was associated with self-harm, internalizing symptoms, substance misuse, suicide risk, and academic achievement through social, cognitive, and emotional processes. To test this hypothesis, we ran a path analysis on a large representative sample of sexual/gender minority middle and high school students in Utah ($N = 6909$). Results demonstrated general support for the proposed pathways, with 51% to 78% of the effects of being bullied onto the negative outcomes being mediated by the social, cognitive, and emotional processes. The need for more anti-bullying policies and targeted psychological treatments for sexual/gender minority youth in Utah is discussed.

Lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ)[1] youth are often at higher risk for experiencing a number of internalizing and externalizing problems compared to their heterosexual peers (for a review, see Russell & Fish, 2016). For example, a 2016 report examining health-related behaviors among 9th–12th graders in the United States ($N = 15,624$) found that compared to heterosexual students, LGB students reported higher levels of current cigarette use (19.2% vs. 9.8%), current alcohol use (40.5% vs 32.1%), feeling sad or hopeless (60.4% vs. 26.4%), suicidal ideation (42.8% vs 14.8%), and suicide attempts (29.4% vs. 6.4%; Kann et al., 2016). Transgender and non-binary youth and young adults, compared to their cis-gender peers (Connolly et al., 2016) and

national norms (Rimes et al., 2017), report higher levels of internalizing and externalizing mental health symptoms.

Two major approaches are often used to explore and explain the potential reasons sexual and gender minorities may be at greater risk for these internalizing and externalizing problems. One major approach is to consider the higher prevalence of known universal risk factors for all youth, referred to as general psychological and/or interpersonal processes. Processes such as low family support, high parental conflict, and adverse childhood experiences are experienced more by LGBTQ youth but operate similarly regardless of sexual or gender identity status (e.g., Clements-Nolle et al., 2018). Put another way, these are general processes that put all individuals who experience them at risk for psychopathology or adverse outcomes, regardless of sexual orientation or gender identity. A second approach is to consider specific minority stress factors related to the person's LGBTQ status such as discrimination or stigma (Meyer, 2003). LGBTQ youth often report elevated stigma, discrimination, and bullying from parents, friends, and peers because of their LGBTQ identities, and this discrimination consistently predicts poorer mental health outcomes (Kann et al., 2016; McConnell et al., 2016; Rimes et al., 2017).

Synthesizing these two general approaches, Hatzenbuehler (2009) proposed the Psychological Mediation Framework (PMF), which suggests that distal stigma-related stressors

---

[1] We use the term LGBTQ as our main indicator of sexual and gender minorities throughout the manuscript but may use different language when speaking about specific studies.

✉ James S. McGraw
jsmcgra@bgsu.edu

1 Department of Psychology, Bowling Green State University, Psychology Building, 822 East Merry Avenue, Bowling Green, OH 43403, USA

2 Department of Psychology, Avila University, Kansas City, MO, USA

(e.g., prejudice, discrimination, violence) predict poorer general intra−/inter-personal psychological processes (e.g., poor coping, social isolation, negative cognitions), which in turn predicts psychopathology (e.g., depression, substance misuse). A number of cross-sectional and longitudinal studies provide general support for the PMF (see Hatzenbuehler et al., 2013). For example, Mustanski and Liu (2013) found that hopelessness (a general psychological process) partially mediated the relationship between LGBT victimization and suicide attempt history among ($N = 248$) LGBT youth, highlighting how LGBT stigma (i.e., victimization) may lead an LGBTQ person to experience greater hopelessness in their personal lives, which may then lead to greater psychopathology (e.g., suicidal thoughts).

These findings may be particularly salient in the western state of Utah. In recent years, communities in Utah have begun to discuss the ways in which LGBTQ youth may experience particularly high levels of negative mental health symptoms, stigma, bullying, and family rejection (see Cox & Eliason, 2018; Cranney, 2017; Lovett, 2019; Jackson, 2016; Ramseth, 2018; Salinger, 2018; Shaw, 2016; University of Utah, 2018). In the current study, we sought to utilize the PMF to examine potential predictors of psychopathology (e.g., depressive symptoms, self-harming behaviors, substance misuse, and suicide risk) and poor academic achievement among a representative sample of LGBTQ adolescent students in the state of Utah. Findings from the current study may offer additional support for the PMF, including greater clarity as to how stigma may lead to disparities in mental health and well-being faced by Utah's LGBTQ youth.

## Effects of Stigma on Negative Outcomes

The association between stigma and negative mental health outcomes is well-documented, resulting in the American Psychological Association (APA) detailing the important part that stigma may have on the mental health of LGB and transgender and gender diverse individuals (APA, 2011, 2015). Numerous studies underlie these conclusions, with notable implications for adolescents and young adults. For example, one qualitative study found that stigma related events among LGBTQ adolescents may be alarmingly common, with the larger majority of participants reporting at least one instance of enacted stigma (i.e., experience of harassment, discrimination, and violence; Gower et al., 2019). Survey data of both national and international samples demonstrates the continued association of stigma and negative mental health (Lessard et al., 2020); psychological distress or despair (Lea et al., 2014); and specific symptoms like self-harm (Veale et al., 2017), substance use (Lessard et al., 2020), and suicide attempts (Lea et al., 2014). Moreover, experiences of stigma have also been shown to be related to lower academic grades

and perceptions of school safety (Lessard et al., 2020), adding another form of stress onto LGBTQ students. Taken together, such research supports a link between the high rates of stigma-related victimization among LGBTQ youth and negative mental health outcomes, prompting further investigation of the psychological processes that may underlie these effects.

## General Psychological Processes as Mediators

As noted above, the PMF proposes that the link between stigma-related stressors and negative mental health outcomes may be explained by general psychological processes. Specifically, stress stemming from stigma increases risk for psychopathology through elevations in interpersonal problems, emotion dysregulation, and negative cognitions; these processes mediate the association between stigma and mental health (Hatzenbuehler, 2009). In his framework proposal, Hatzenbuehler emphasized that mediating processes are significantly impacted by experiences of the stressor. For example, individuals may exhibit hopelessness prior to experiencing stigma-related stress. However, the PMF would hypothesize that this hopelessness increases as a consequence of the stigma-related stressor and that this increased hopelessness mediates the relationship between the stigma-related stress and subsequent mental health outcomes.

There is compelling evidence to support the suggestion that emotional, social, and cognitive processes may function as mediators between stress and negative mental health. For instance, a longitudinal study demonstrated that the experience of a stigma-related stressor was associated with increased rumination and, subsequently, increased depression and anxiety (Hatzenbuehler et al., 2010). Another study found that LGB young adults who experienced stigma-related stressors subsequently reported more social isolation, which in turn accounted for psychological distress (Hatzenbuehler et al., 2012). Survey data from a nationwide sample of sexual minorities indicated that perception of discrimination was associated with increased expectations of rejection, which partially accounted for increased psychological distress (Liao et al., 2015).

Several of the proposed mediating processes may be of particular salience to LGBTQ adolescents. Eisenberg and Resnick (2006) found that the risk of suicide ideation and attempts for LGB youth was largely mediated through protective factors, including family connectedness and adult caring. An earlier study demonstrated that, among LGB youth, social support and cognitive coping strategies fully mediated experiences of depressive symptoms and partially mediated suicidality (Safren & Heimberg, 1999). Given the potential for cognitive and social supports to play vital protective roles, the possibility that stigma-related stressors may disrupt these supports takes on additional weight. Research that advances

understanding of the relationships between these variables is therefore crucial, particularly for individuals whose circumstances place them at elevated risk.

## Utah as a Case Study

The unique challenges experienced by sexual and gender minority youth may be particularly salient in the western state of Utah. The 3.2 million people in Utah are mostly young (29.5% are under the age of 18), white (90.7%), and are members of the Church of Jesus Christ of Latter-day Saints (60%), a conservative Christian religion (U.S. Census, 2019; Pew, 2018). Latter-day Saints (LDS) tend to be highly religious and politically conservative (Pew, 2018). Perhaps not surprisingly, LDS are overwhelming unsupportive of gay rights, with only 36% believing that "homosexuality should be accepted", 57% saying "homosexuality should be actively discouraged", and 68% opposing or strongly opposing same-sex marriage (Pew, 2018). Given that the majority of the population in Utah is LDS, many LGBTQ youth in Utah may live in unsupportive LDS households (Mattingly et al., 2016; McGraw Chinn, et al., 2021) and may thus be exposed to greater levels of stigma from family and peers. Furthermore, previous research has found that Utah LGBTQ youth (Agnoff et al., 2020; McGraw, Docherty et al., 2020) and Utah LGB adults (McGraw, Peer, et al., 2020) may be more at high risk for experiencing thoughts about suicide or self-injury and engage in suicidal and non-suicidal self-injury. Thus, it is possible that LGBTQ youth living in Utah may be at risk for experiencing a number of other negative mental health outcomes.

## Present Study

This study sought to examine the PMF as it applies to LGBTQ youth in Utah. Previous research has demonstrated that LGBTQ individuals, specifically youth, are at higher risk for negative mental health problems, self-harm, suicide, discrimination, and stigma. We aimed to identify social, emotional, and cognitive factors consistent with the PMF that may mediate these harmful outcomes in LGBTQ youth in Utah, using a representative sample of middle and high school students in the state. The proposed path model can be found in Fig. 1.

## Methods

We used relevant data extracted from the 2019 State of Utah PNA Survey, which is conducted as part of the Student Health and Risk Prevention Statewide Survey (SHARP). The survey is coordinated and administered by the State of Utah Department of Human Services, Division of Substance Abuse and Mental Health; State Board of Education; Department of Health; and Bach Harrison, LLC. The SHARP survey is administered in-person to students in 6th, 8th, 10th, and 12th grades across 39 school districts and 17 charter schools, including one private school (Utah Department of Human Services, 2019a). The survey is administered every two years in order to assess adolescent substance use, anti-social behaviors, mental health, and risk/protective factors of adolescent problem behaviors (Utah Department of Human Services, 2019b). Sampling procedures and survey weights seek to make the total sample ($N = 86,346$) representative of the state's schools. Weighting adjusts for differential response rates and to be similar to the state enrollment counts by age, sex, school district, race, sex by district, and race by district.

### Participant Characteristics

We used a subsample of youth who self-identified as gay or lesbian ($n = 892$), bisexual ($n = 3136$), or said they weren't sure of their sexual orientation ($n = 2846$). We also included 297 youth who identified as transgender, 32 of whom identified as heterosexual or who were missing on sexual orientation. The total sample size used in analyses was 6909. Sixth graders were not included in analyses because they were not given an option to indicate their sexual orientation or endorse a transgender or "other" gender identity. The mean age of the sample used in analyses was 15.03 ($SD = 1.61$). Across gender, race/ethnicity and grade level, participants primarily identified as "Woman/girl" (61.56%), "White" (67.74%), and were in eighth grade (47.42%). Participant demographic characteristics can be found in Table 1.

### Missing Data

First, we examined whether certain variables were associated with missingness on at least one variable. Results showed that level of missingness was higher at younger ages ($p < .05$); 12th graders were less likely to be missing on one variable than 8th graders ($p < .05$); higher levels of self-harm were related to lower odds of missingness ($p < .01$); and missingness was higher at lower levels of internalizing symptoms ($p < .05$) and lower levels of academic achievement ($p < .01$). Race, gender, bullying victimization, parental closeness, family conflict, negative cognitions, motivation for substance use, suicide risk, and substance misuse were not associated with missingness (all $ps > .05$). As such, missing data were handled using Full Information Maximum Likelihood (FIML), which uses all available data in order to estimate model parameters (Baraldi & Enders, 2010; Enders & Bandalos, 2001). FIML is preferred when missing values are missing completely at random (MCAR) or missing at random (MAR). FIML is also utilized as a way to maintain power and

**Fig. 1** Proposed Paths Modeling the Psychological Mediation Framework
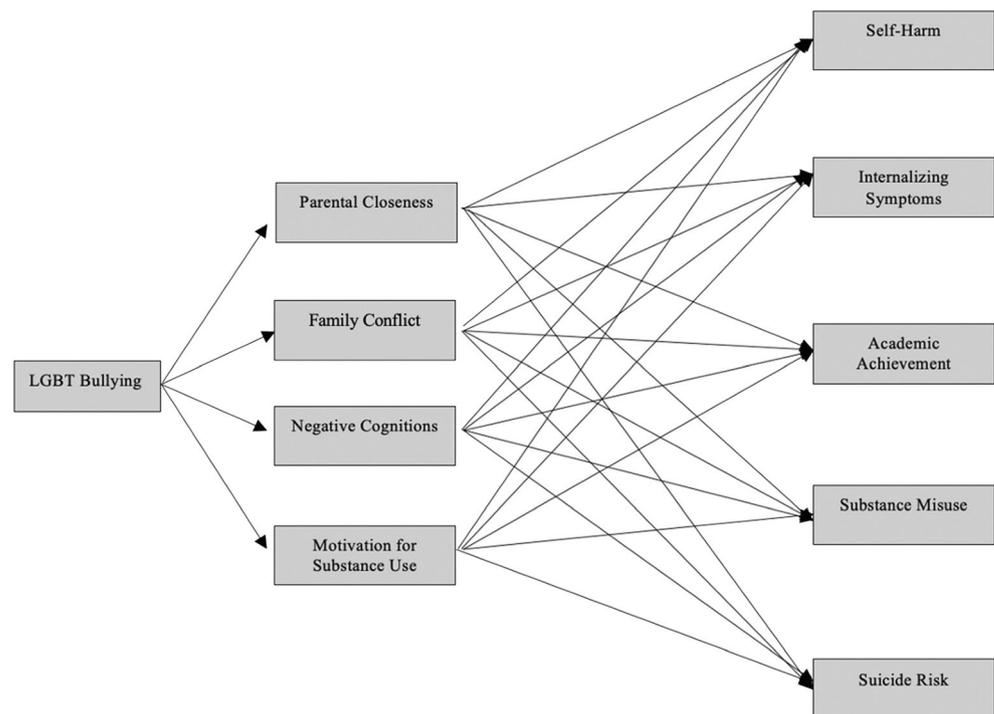


reduce over- or underestimation of different parameters (e.g., mean, regression coefficients) relative to other methods (e.g., listwise deletion; single imputation), when data may not be MCAR (Baraldi & Enders, 2010; Newman, 2014).

**Table 1** Descriptive statistics among analytic sample

| | n | % |
|---|---|---|
| Grade level | | |
| Grade 8 | 3276 | 47.42 |
| Grade 10 | 2289 | 33.13 |
| Grade 10 | 1344 | 19.45 |
| Sexual orientation | | |
| Heterosexual (Transgender) | 32 | 0.46 |
| Gay/Lesbian | 892 | 12.92 |
| Bisexual | 3136 | 45.41 |
| Unsure/questioning | 2846 | 41.21 |
| Gender | | |
| Man/boy | 1951 | 28.39 |
| Woman/girl | 4231 | 61.56 |
| Transgender | 297 | 4.32 |
| Other | 394 | 5.73 |
| Race (1=white) | 4648 | 67.74 |
| Age (M/SD) | 15.03 | 1.61 |
| Bullied due to sexual orientation/Gender | 1611 | 24.29 |

N = 6909

Sample sizes for each variable may not add up to total N due to missing data

## Variables/Measures

### Predictor Variables

**Bullied Due to Sexual Orientation/Gender** Bullied because one's sexual orientation or gender was assessed using a single item assessing perceived reasons for being bullied (e.g., "If you have been bullied in the past 12 months, why do you think you were bullied?"), allowing for multiple answers including "my gender" and "my sexual-orientation." The absence of being bullied due to sexual orientation or gender identity was coded as "0", while any affirmative answer was coded as a "1".

### Mediating Variables

**Parental Closeness** Parental closeness was measured using five items assessing how close the participants felt to both their mother and father individually (e.g., "Do you feel very close to your mother?"), the degree to which they shared their thoughts and feelings with their mother and father individually (e.g., "Do you share your thoughts and feelings with your father?"), and the degree they felt they could go to their mother and father if they needed help with a personal problem (e.g., "If I had a personal problem, I could ask my mom or dad for help."). Item responses ranged from 1 to 4 (i.e., "definitely no" to "definitely yes"). Individual item scores were summed to calculate total parental closeness. Internal consistency was good for the 5-item measure ($a = .83$).

**Family Conflict** Family conflict was measured using three items assessing participants' agreement about conflict behaviors in their family from insults or yelling (e.g., "people in my family often insult or yell at each other"), arguing repeatedly "(e.g., "we argue about the same things in my family over and over"), and having serious arguments (e.g., "people in my family have serious arguments"). Item responses ranged from 1 to 4 (i.e., "definitely no" to "definitely yes"). Individual item scores were summed to get the total family conflict score. Internal consistency was good ($a = .85$).

**Motivation for Substance Use** Participant's motivation for using substances was assessed using a single item asking, "Did you use alcohol or drugs to relieve feelings such as sadness, anger, or boredom?" The item allowed respondents to answer for both alcohol and drugs separately, with options being "no," "yes," or "don't use." Both "no" and "don't use" were coded as "0" with a yes on one being coded as "1" and "2" for both.

**Negative Cognitions** Participants' negative cognitions were assessed with three items on 4-points Likert scale (i.e., definitely no to definitely yes) exploring negative thinking: "Sometimes I think that life is not worth it," "At times, I think I am no good at all" and "All in all, I am inclined to think that I am a failure." Scores on each item were aggregated into a total negative cognitions score. Internal consistency was excellent ($a = .92$).

## Outcome Variables

**Internalizing Symptoms** Internalizing symptoms were measured using six items assessing the frequency of negative mental health symptoms over the last 30-day period, such as feeling nervous, hopeless, restless or fidgety, worthless, depressed and unable to be cheered up, and feeling like everything was an effort. Participants responded on 5-point Likert scale (e.g., "all of the time to none of the time."). Individual item scores were summed to calculate total internalizing symptoms. Internal consistency was excellent ($a = .92$).

**Substance Misuse** Substance misuse was measured using 10-items examining problematic substance use of alcohol and drugs independently, over the last 12-month period. The items assessed if participants had spent more time using alcohol or drugs more than they had intended, if they had neglected important responsibilities due to alcohol or drug use, if they had ever wanted to stop, if others had objected to their usage, and if they found themselves frequently thinking about using. Responses could either be "yes," "no," or "don't use." Affirmative answers were coded as ones and "no" or "don't use" were coded as zero. Individual item scores were summed

to calculate total substance misuse. Internal consistency was good ($a = .83$).

**Self-Harm** Self-harm was assessed using a single item inquiring about purposely harming one's self *without wanting to die*, over the past 12 months (e.g., "in the past 12 months, have you ever done something to purposefully hurt yourself without wanting to die, such as cutting or burning yourself on purpose? If so, how many times did you do so?"). Answers ranged from "0 times," "1 time," "2 or 3 times," "4 or 5 times," or "6 or more times."

**Academic Achievement** Academic achievement was assessed with one question asking participants about their grades in school over the past year ("Putting them together, what were your grades like last year?"). Participants could respond with "Mostly F's", "Mostly D's", "Mostly C's", "Mostly B's", or "Mostly A's".

**Suicide Risk** Suicide risk was examined by aggregating participants' responses across three different suicide-related behaviors: suicidal thoughts, suicidal plan, and suicide attempts. Participants were asked, "In the past year, did you ever seriously consider attempting suicide?"; "In the past year, did you make a plan about how you would attempt suicide?"; and "During the past 12 months, how many times (if any) did you actually attempt suicide?". The questions examining suicide thoughts and plan included dichotomous responses (yes/no), and the question examining past-year suicide attempts included five response options, ranging from "0 times", to "6 or more times", which was then dichotomized into those who endorsed and did not endorse one or more past-year suicide attempt. A total suicide risk score was taken by summing individuals' responses across these three items, with scores ranging from 0 to 3. Sufficient Cronbach's alpha was obtained for this measure ($a = .81$).

## Control Variables

**Age** Participants indicated their age by responding to the question, "How old are you?" Response options spanned from "10 or younger", to "19 or older," with individual ages options (e.g., "11", "12") available to select in between these anchors.

**Gender** Gender was assessed with a single item (e.g., "thinking about your gender, which of the following best describes you") with response options for woman/girl, man/boy, transgender and other.

**Grade Level** Grade level was assessed with a single item (e.g., "what grade are you in?") with item responses being 6th through 12th grade.

**Race** Race was assessed with a single item (e.g., "what is your race?") allowing for multiple answers of the following options: "American Indian or Alaska Native," "Asian," "Black or African American," "Hispanic or Latino," "Native Hawaiian or other Pacific Islander," and "White." For our analyses, we coded race dichotomously as White and Racially/ethnically diverse.

## Analytical Plan

Variable coding, descriptive statistics, and zero-order correlations were conducted in Stata version 16 (StataCorp, 2019). We then tested our hypotheses in regard to the Psychological Mediation Framework using a mediation model conducted in Mplus 8.3. (Muthen & Muthen, 2017). One path model including all LGBTQ participants was conducted. Age, grade level, race, and gender identity were included as correlated exogenous covariates. The model had three levels: the predictor (i.e., LGBTQ bullying), hypothesized mediators (parental closeness, family conflict, motivation for substance use, negative cognitions), and outcome variables (suicide risk, substance misuse, academic achievement, self-harm, internalizing symptoms). All of the outcomes were allowed to covary and were regressed on each mediator and on the control variables (age, grade level, race, and gender identity). Additionally, each mediator was allowed to covary and was regressed on LGBTQ bullying and the included covariates. Finally, LGBTQ bullying was regressed on the covariates.

Our analyses provided an opportunity to examine whether bullying based on one's LGBTQ identity was related to suicide risk, substance misuse, academic achievement, self-harm, and internalizing symptoms, after accounting for age, grade level, race, and gender identity, and whether these relations were mediated by (due to) parental closeness, family conflict, motivation for substance use, and negative cognitions. It also allowed us to examine the extent to which each proposed mediator, relative to others, accounted for the relation between LGBTQ bullying and each outcome. This is particularly important because complete mediation is seldom found in psychology research as there are often multiple mediators working simultaneously to influence a relation (in Preacher & Kelley, 2011). Given the presence of multiple mediators and paths in our model, measures of effect size were particularly important so that indirect effects could be compared within paths. To examine effect size, we used the ratio of the indirect effect to the total effect, which Preacher and Kelley (2011) articulate as being a stable measure of effect size for samples larger than 500.

# Results

## Preliminary Analyses

Overall, approximately 24% of youth were bullied on the basis of their sexual orientation or gender. Descriptive statistics for continuous study variables be found in Table 2.

To examine bivariate relations between study variables, zero-order correlations were examined (Table 2). All correlations were significant and in their expected directions. For example, internalizing symptoms, self-harm, and negative cognitions were all positively associated with suicide risk (all $ps < .001$), and academic achievement was negatively related to internalizing symptoms, substance misuse and family conflict (all $ps < .001$). Additionally, higher levels of substance misuse and internalizing symptoms were related to higher levels of self-harm (both $ps < .001$), and parental closeness was negatively related to family conflict ($p < .001$).

## Mediation Analysis

Next, we conducted a path analysis to determine whether the Psychological Mediation Framework could be extended to the experience of LGBTQ bullying. Figure 2 displays the resulting standardized direct effects for model paths. Overall, model fit indices indicated that the model was a good fit to the data: $\chi^2(24) = 576.74$, $p < .001$, RMSEA = .06, CFI = .95, TLI = .79, SRMR = .06.

### Direct Effects between LGBTQ Bullying and Mediating Variables

LGBTQ victimization had a negative direct effect on parental closeness ($\beta = -.14$) and a positive direct effect on family conflict ($\beta = .16$), negative cognitions ($\beta = .24$), and motivation for using alcohol/drugs ($\beta = .08$; all $ps < .001$).

### Individual Mediation Paths

All indirect effects and direct effects from LGBTQ bullying to our outcome variables can be found in Table 3. Below we describe each path from LGBTQ bullying to the outcome variables. Results are presented separately for each outcome.

**Self-Harm** LGBTQ bullying had a positive direct effect on self-harm ($\beta = .12$, $p < .001$). Additionally, all indirect paths from LGBTQ bullying to self-harm were significant, with the exception of the path through family conflict ($p = .476$). Results indicated that about 51% of the total effect from LGBTQ bullying to self-harm was mediated, with 5.16% of the total effect explained by parental closeness ($p < .01$), 0.79% by parental conflict ($p = .476$), 40.08% by negative cognitions ($p < .001$), and 4.76% by motivations for substance

**Table 2** Correlations between major study variables

| | Parental closeness | Family conflict | Negative cognitions | Motivation for substance use | Academic achievement | Internalizing symptoms | Self-harm | Substance misuse | Suicide risk |
|---|---|---|---|---|---|---|---|---|---|
| Parental closeness | – | – | – | – | – | – | – | – | – |
| Family conflict | −0.43*** | – | – | – | – | – | – | – | – |
| Negative cognitions | −0.43*** | −0.45*** | – | – | – | – | – | – | – |
| Motivation for substance use | −0.22*** | 0.20*** | 0.25*** | – | – | – | – | – | – |
| Academic achievement | 0.20*** | −0.13*** | −0.17*** | −0.18*** | – | – | – | – | – |
| Internalizing symptoms | −0.42*** | 0.40*** | 0.76*** | 0.24*** | −0.18*** | – | – | – | – |
| Self-harm | −0.33*** | 0.31*** | 0.55*** | 0.26*** | −0.12*** | 0.52*** | – | – | – |
| Substance misuse | −0.23*** | 0.20*** | 0.24*** | 0.73*** | −0.17*** | 0.23*** | 0.25*** | – | – |
| Suicide risk | −0.37*** | 0.35*** | 0.64*** | 0.31*** | −0.15*** | 0.59*** | 0.63*** | 0.30*** | – |
| M(SD) | 14.01(4.26) | 4.13(2.79) | 7.81(3.26) | 0.26(0.58) | 4.10(1.06) | 17.90(6.93) | 2.13(1.52) | 0.66(1.54) | 0.96(1.17) |

***$p < 0.001$

use ($p < .001$). As such, part of the total effect of LGBTQ bullying on self-harm could be explained by higher levels negative cognitions and motivation for substance use, and by lower levels of parental closeness.

**Internalizing Symptoms** LGBTQ bullying also had a positive direct effect on internalizing symptoms ($ß = .08$, $p < .001$). Further, all indirect paths from LGBTQ bullying to internalizing symptoms were significant, except for the indirect effect
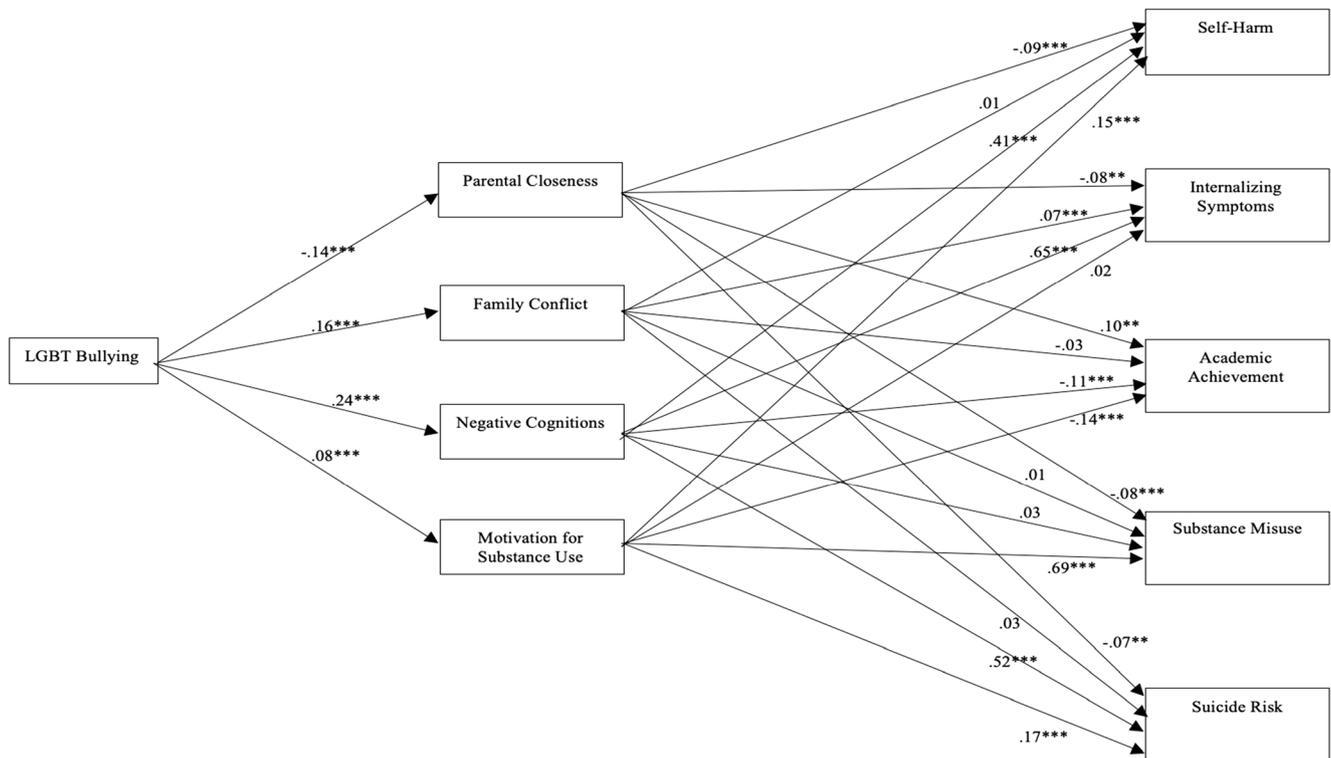


**Fig. 2** Path Figure with Standardized Coefficients of Direct Effects Between Study Variables. Paths represent direct effects from LGBT bullying to mediating variables, and from mediating variables to outcomes ($N = 6909$). There are paths (direct from victimization to outcomes) and covariances that are included in the model, but not depicted in the above figure. Standardized regression coefficients (ß) are shown. * $p < .05$. ** $p < .01$. ***$p < 0.001$

**Table 3** Summary of all estimated direct and indirect effects from LGBT victimization to outcome variables for overall path model (N = 6909)

| Predictor | Mediators | Outcome | ß | p value |
|---|---|---|---|---|
| Direct effects | | | | |
| LGBT Victimization ➜ | – | Academic Achievement | .04* | < .01 |
| LGBT Victimization ➜ | – | Internalizing Symptoms | .08* | < .001 |
| LGBT Victimization ➜ | – | Self-Harm | .12* | < .001 |
| LGBT Victimization ➜ | – | Substance Misuse | .02 | .146 |
| LGBT Victimization ➜ | – | Suicide Risk | .11* | < .001 |
| Indirect effects | | | | |
| LGBT Victimization ➜ | Parental Closeness ➜ | Academic Achievement | −.03* | .002 |
| LGBT Victimization ➜ | Family Conflict ➜ | Academic Achievement | −.01 | .138 |
| LGBT Victimization ➜ | Negative Cognitions ➜ | Academic Achievement | −.07* | < .001 |
| LGBT Victimization ➜ | Motivation for Using Alcohol/Drugs ➜ | Academic Achievement | −.03* | < .001 |
| LGBT Victimization ➜ | Parental Closeness ➜ | Internalizing Symptoms | .01* | .004 |
| LGBT Victimization ➜ | Family Conflict ➜ | Internalizing Symptoms | .01* | .001 |
| LGBT Victimization ➜ | Negative Cognitions ➜ | Internalizing Symptoms | .16* | < .001 |
| LGBT Victimization ➜ | Motivation for Using Alcohol/Drugs ➜ | Internalizing Symptoms | .00 | .208 |
| LGBT Victimization ➜ | Parental Closeness ➜ | Self-Harm | .01* | .002 |
| LGBT Victimization ➜ | Family Conflict ➜ | Self-Harm | .00 | .476 |
| LGBT Victimization ➜ | Negative Cognitions ➜ | Self-Harm | .10* | < .001 |
| LGBT Victimization ➜ | Motivation for Using Alcohol/Drugs ➜ | Self-Harm | .01* | < .001 |
| LGBT Victimization ➜ | Parental Closeness ➜ | Substance Misuse | .01* | < .001 |
| LGBT Victimization ➜ | Family Conflict ➜ | Substance Misuse | .00 | .664 |
| LGBT Victimization ➜ | Negative Cognitions ➜ | Substance Misuse | .01 | .053 |
| LGBT Victimization ➜ | Motivation for Using Alcohol/Drugs ➜ | Substance Misuse | .06* | < .001 |
| LGBT Victimization ➜ | Parental Closeness ➜ | Suicide Risk | .01* | .005 |
| LGBT Victimization ➜ | Family Conflict ➜ | Suicide Risk | .01 | .070 |
| LGBT Victimization ➜ | Negative Cognitions ➜ | Suicide Risk | .13* | < .001 |
| LGBT Victimization ➜ | Motivation for Using Alcohol/Drugs ➜ | Suicide Risk | .01* | < .001 |

* Statistically significant with alpha set at .05; ß = standardized regression coefficient; −−, not applicable

through motivation for substance use ($p = .208$). Overall, about 68% of the total effect from LGBTQ bullying to internalizing symptoms was mediated. Specifically, 4.14% of the total effect from LGBTQ bullying to internalizing symptoms could be explained by parental closeness ($p < .01$), 3.76% by parental conflict ($p = .001$), 59.77% by negative cognitions ($p < .001$), and 0.38% by motivation for substance use ($p = .208$). As was the case with the mediated effects accounting for the relation between LGBTQ bullying and self-harm, a portion of the total effect between LGBTQ bullying and higher levels of internalizing symptoms could be explained by higher levels of negative cognitions and motivation for substance use, and lower levels of parental closeness.

**Academic Achievement** A positive direct effect also emerged between LGBTQ bullying and academic achievement ($ß = 0.04$, $p < .05$). All indirect paths from LGBT victimization to academic achievement were significant, with one exception. The indirect effect from LGBT victimization to academic

achievement through parental conflict was not significant ($p = .138$). Specifically, about 57% of the total effect from LGBT victimization to academic achievement was mediated, with 14.29% of the total effect explained by parental closeness ($p < .01$), 5.10% by parental conflict ($p = .138$), 27.55% by negative cognitions ($p < .001$), and 11.22% by motivation for substance use ($p < .001$). Upon further inspection, the total effect from LGBTQ bullying to academic achievement was suppressed and found to be insignificant ($ß = −0.02$, $p = .361$), such that the direct effect from LGBTQ bullying to academic achievement was significant and positive, but the indirect effects were significant and negative.

**Substance Misuse** A direct effect did not emerge between LGBTQ bullying and substance misuse ($ß = .02$, $p = .146$). However, the indirect paths through parental closeness and motivation for substance use were significant (both $ps < .001$), suggesting full mediation. The indirect paths through parental conflict ($p = 0.664$) and negative cognitions

($p = .053$) were not significant. Specifically, about 78% of the total effect from LGBTQ bullying to substance misuse was mediated, with 12.37% of the total effect explained by parental closeness ($p < .001$), 1.03% of the total effect explained by parental conflict ($p > .664$), 7.22% of the total effect explained by negative cognitions ($p > .053$), and 57.73% of the total effect explained by motivation for substance use ($p < .001$). This suggests that effect of LGBTQ bullying on substance misuse can predominately be explained by higher levels of motivation for substance use.

**Suicide Risk** Lastly, there was a direct effect between LGBTQ bullying and suicide risk ($\beta = .11$, $p < .001$). All indirect effects from LGBTQ bullying to suicide were significant, except for the indirect effect through parental conflict ($p = .070$). Specifically, 59% of the total effect from LGBTQ bullying to suicide risk could be explained by mediation. Results indicated that 3.79% of the total effect was explained by parental closeness ($p < .01$), 1.89% by parental conflict ($p = .070$), 48.11% by negative cognitions ($p < .001$), and 5.30% by motivation for substance use ($p < .001$). As such, a portion of the positive relation between LGBTQ bullying and suicide risk appears to be accounted for by higher levels of negative cognitions and motivation for substance, and lower levels of parental closeness.

**Discussion** In general, our study found support for Hatzenbuehler's Psychological Mediation Framework (PMF). Specifically, LGBTQ youth in Utah experiencing stigma related to their sexual orientation/gender identity experienced elevated internalizing and externalizing symptoms and in a large part, these relationships were mediated by more general social, emotional, and cognitive processes.

Beyond the general support for the PMF, the results of our study revealed a number of important findings specific for Utah youth. First and foremost, a sizeable portion of LGBTQ youth in Utah experience stigma/bullying from their peers because of their sexual orientation/ gender identity (24%). These findings echo a recent report from GLSEN examining the school climate for LGBTQ students in Utah, which found that 22% of students heard school staff make homophobic remarks and 45% reported hearing negative remarks about a student's gender expression (GLSEN, 2021). Thus, the school environments in Utah may not be safe for many LGBTQ youth. Creating safe environments at school may be increasingly important, as many Utah LGBTQ youth experienced additional family conflict and low levels of parental closeness compared to their heterosexual peers (see BLINDED). Given that LGBTQ youth in Utah may experience stigma in both home *and* school environments, interventions that target both school and home life are needed.

Of particular concern is that the experienced perceived bullying/stigma was related to a host of negative outcomes, spanning from internalizing symptoms (i.e., anxiety, depression, suicidal thoughts) and externalizing issues (substance misuse, self-harm, suicide attempts. Even with a number of powerful mediators, many of the effects of the stigma onto these negative outcomes remained, which suggest a drastic need to reduce the presence of bullying and stigma in Utah schools. School staff, administrators, advocacy groups, and local politicians would be well positioned to introduce specific policies to decrease school bullying, especially against LGBTQ youth. Not surprisingly, when schools have specific anti-bullying policies that create protections for LGBTQ students, LGBTQ students consistently report fewer instances of harassment (Hall, 2017).

Thirdly, the significant social, emotional, and cognitive mediators suggest that school administrators, parents, and mental health professionals can also target well-known risk factors, such as family conflict and negative cognitions, in order to reduce the negative outcomes LGBTQ Utah students experience. For example, negative cognitions were arguably the most powerful mediator for many of the negative outcomes. A number of empirically supported treatments (ESTs) explicitly target negative cognitions (e.g., Cognitive-Behavioral Therapy) and find mild to moderate effects in reducing internalizing symptoms (Ishikawa et al., 2007; Keles & Idsoe, 2018; Weisz et al., 2006). In addition, more acceptance based, 3rd wave cognitive behavioral therapies like, Acceptance and Commitment Therapy (ACT) have begun to be tested for treating the effects of stigma for sexual minorities (Skinta & Curtin, 2016; Yadavaia & Hayes, 2012). ACT may be an excellent treatment choice, given that the negative cognitions the LGBTQ adolescents may have about their environment may be congruent with their actual experiences, suggesting that attempts to 'correct' such cognitions may be inappropriate. In summary, the current findings suggest the need for LGBTQ Utah youth to receive both greater mental health support to target general risk factors for psychopathology and more systematic changes in terms of school anti-bullying policies and protections.

## Limitations and Future Directions

First, the cross-sectional nature of the sample did not allow us to determine causality across study variables. Future research would be well-positioned to employ experimental and longitudinal paradigms to discern the temporal order of study variables in relation to LGBTQ youth. Second, the state of Utah has especially high rates of documented suicide and suicide-related health problems compared with other U.S. states, which is why examining Utah was particularly important (CDC, 2020). However, while our sample was representative and statewide, findings cannot be generalized beyond LGBTQ Utahn youth. Future research should examine the PMF with LGBTQ youth in states in which religiosity and

conservative politicism may play less of a role on sexual identity to distinguish potential constraints on generality. Our study also grouped sexual and gender minorities, and thus we were unable to parse out effects specific to each group. Indeed, there is some evidence to suggest that these risks may be exacerbated for transgender youth (Moody et al., 2015), and thus future research should endeavor to explicitly sample transgender youth when replicating the present study. Moreover, sexual and gender identity are qualitatively different aspects of being, and while grouping them allows for the evaluation of common effects across minoritized gender and sexual identities, there is also some evidence to suggest variability between groups (Levasseur et al., 2013). While this study focused on victimization as a whole, measures of bullying and victimization could be improved by creating distinctions between types of victimization in future research to determine potential differences between them. Future research should also examine peer and parental relationships beyond victimization (e.g. parenting styles and social connectedness Georgiou et al., 2016; Schall, Wallace & Chhuon, 2016).

## Conclusions

Sexual and gender minority youth in Utah commonly experience stigma and bullying due to their sexual orientation/gender identity. In a representative sample of LGBTQ youth, we found general support for Hatzenbuehler's (2009) psychological mediation framework (PMF), which suggests that the stigma experienced by Utah LGBTQ youth leads to a host of internalizing and externalizing concerns, through well-known general psychological processes (e.g., negative cognitions, parental conflict). However, even with a number of powerful mediators, stigma maintained most direct effects to negative outcomes, suggesting that stigma/bullying serves as a powerful predictor of negative outcomes for LGBTQ Utah youth. School administrators, parents, advocacy groups, mental health professionals, and policy makers in Utah would be well served in creating solutions to decrease stigma and bullying against LGBTQ Utah youth and increasing access to mental health care to target well-known risk factors, such as negative cognitions and family conflict.

## Declaration

## References

American Psychological Association. (2011). *Guidelines for psychological practice with lesbian, gay and bisexual clients*. American Psychological Association https://www.apa.org/pi/lgbt/resources/guidelines.

American Psychological Association. (2015). *Guidelines for psychological practice with transgender and gender non-conforming people*. American Psychological Association https://www.apa.org/practice/guidelines/transgender.pdf.

Angoff, H. D., McGraw, J. S., & Docherty, M. (2020). Intersecting Identities and Nonsuicidal Self-Injury among Youth. *Identity*, 1–17. https://doi.org/10.1080/15283488.2020.1863216

Baraldi, A. N., & Enders, C. K. (2010). An introduction to modern missing data analyses. *Journal of School Psychology, 48*(1), 5–37. https://doi.org/10.1016/j.jsp.2009.10.001.

Centers for Disease Control and Prevention. (2020, April 29). *Stats of the state of Utah*. Centers for Disease Control and Prevention. https://www.cdc.gov/nchs/pressroom/states/utah/utah.htm.

Clements-Nolle, K., Lensch, T., Baxa, A., Gay, C., Larson, S., & Yang, W. (2018). Sexual identity, adverse childhood experiences, and suicidal behaviors. *Journal of Adolescent Health, 62*(2), 198–204. https://doi.org/10.1016/j.jadohealth.2017.09.022.

Connolly, M. D., Zervos, M. J., Barone, C. J., Johnson, C. C., & Joseph, C. L. (2016). The mental health of transgender youth: Advances in understanding. *Journal of Adolescent Health, 59*(5), 489–495. https://doi.org/10.1016/j.jadohealth.2016.06.012.

Cox, S., & Eliason, S. (2018). Memorandum: Recommendations from the Governor's teen suicide prevention task force.

Cranney, S. (2017). The LGB Mormon paradox: Mental, physical, and self-rated health among Mormon and non-Mormon LGB individuals in the Utah behavioral risk factor surveillance system. *Journal of Homosexuality, 64*(6), 731–744. https://doi.org/10.1080/00918369.2016.1236570.

Eisenberg, M. E., & Resnick, M. D. (2006). Suicidality among gay, lesbian and bisexual youth: The role of protective factors. *Journal of Adolescent Health, 39*(5), 662–668. https://doi.org/10.1016/j.jadohealth.2006.04.024.

Enders, C., & Bandalos, D. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling: A Multidisciplinary Journal, 8*(3), 430–457. https://doi.org/10.1207/s15328007sem0803_5.

Georgiou, S. N., Ioannou, M., & Stavrinides, P. (2016). Parenting styles and bullying at school: The mediating role of locus of control. *International Journal of School & Educational Psychology, 5*(4), 226–242. https://doi.org/10.1080/21683603.2016.1225237.

GLSEN. (2021). *School climate for LGBTQ students in Utah (state snapshot)*. GLSEN.

Gower, A. L., Valdez, C. A. B., Watson, R. J., Eisenberg, M. E., Mehus, C. J., Saewyc, E. M., Corliss, H. L., Sullivan, R., & Porta, C. M. (2019). First- and second-hand experiences of enacted stigma among LGBTQ youth. *The Journal of School Nursing*, 105984051986309. https://doi.org/10.1177/1059840519863094.

Hall, W. (2017). The effectiveness of policy interventions for school bullying: A systematic review. *Journal of the Society for Social Work and Research., 8*, 45–69. https://doi.org/10.1086/690565.

Hatzenbuehler, M. L. (2009). How does sexual minority stigma "get under the skin"? A psychological mediation framework. *Psychological Bulletin, 135*(5), 707–730. https://doi.org/10.1037/a0016441.

Hatzenbuehler, M. L., Mclaughlin, K. A., Keyes, K. M., & Hasin, D. S. (2010). The impact of institutional discrimination on psychiatric disorders in lesbian, gay, and bisexual populations: A prospective study. *American Journal of Public Health, 100*(3), 452–459. https://doi.org/10.2105/ajph.2009.168815.

Hatzenbuehler, M. L., Pachankis, J. E., & Wolff, J. (2012). Religious climate and health risk behaviors in sexual minority youths: A population-based study. *American Journal of Public Health, 102*(4), 657–663. https://doi.org/10.2105/ajph.2011.300517.

Hatzenbuehler, M. L., Phelan, J. C., & Link, B. G. (2013). Stigma as a fundamental cause of population health inequalities. *American Journal of Public Health, 103*(5), 813–821. https://doi.org/10.2105/ajph.2012.301069.

Ishikawa, S. I., Okajima, I., Matsuoka, H., & Sakano, Y. (2007). Cognitive behavioural therapy for anxiety disorders in children and adolescents: A meta-analysis. *Child and Adolescent Mental Health., 12*, 164–172. https://doi.org/10.1111/j.1475-3588.2006.00433.x.

Jackson, L. (2016, July 19). *The lonely struggle of a gay Mormon*. CNN. https://www.cnn.com/2016/07/16/living/gay-mormon-struggle/.

Kann, L., McManus, T., Harris, W., Shanklin, S., Flint, K., Hawkins, J., … Zaza, S. (2016). Youth risk behavior surveillance — United States, 2015. *Morbidity and Mortality Weekly Report: Surveillance Summaries, 65*(6), 1–174. https://doi.org/10.2307/24805802

Keles, S., & Idsoe, T. (2018). A meta-analysis of group cognitive behavioral therapy (CBT) interventions for adolescents with depression. *Journal of Adolescence, 67*, 129–139. https://doi.org/10.1016/j.adolescence.2018.05.011.

Lea, T., Wit, J. D., & Reynolds, R. (2014). Minority stress in lesbian, gay, and bisexual young adults in Australia: Associations with psychological distress, suicidality, and substance use. *Archives of Sexual Behavior, 43*(8), 1571–1578. https://doi.org/10.1007/s10508-014-0266-6.

Lessard, L. M., Watson, R. J., & Puhl, R. M. (2020). Bias-based bullying and school adjustment among sexual and gender minority adolescents: The role of gay-straight alliances. *Journal of Youth and Adolescence, 49*(5), 1094–1109. https://doi.org/10.1007/s10964-020-01205-1.

Levasseur, M. T., Kelvin, E. A., & Grosskopf, N. A. (2013). Intersecting identities and the association between bullying and suicide attempt among New York City youths: Results from the 2009 New York City youth risk behavior survey. *American Journal of Public Health, 103*(6), 1082–1089. https://doi.org/10.2105/ajph.2012.300994.

Liao, K. Y.-H., Kashubeck-West, S., Weng, C.-Y., & Deitz, C. (2015). Testing a mediation framework for the link between perceived discrimination and psychological distress among sexual minority individuals. *Journal of Counseling Psychology, 62*(2), 226–241. https://doi.org/10.1037/cou0000064.

Lovett, I. (2019, April 12). *One teenager killed himself. Six more followed.* . https://www.wsj.com/articles/one-teenager-killed-himself-six-more-followed-11555061402.

Mattingly, M. S., Gallihera, R. V., Dehlin, J. P., Crowell, K. A., & Bradshaw, W. S. (2016). A Mixed Methods Analysis of the Family Support Experiences of GLBQ Latter Day Saints. *Journal of GLBT Family Studies*, *12*(4), 386-409. https://doi.org/10.1080/1550428X.2015.1085345

McConnell, E. A., Birkett, M., & Mustanski, B. (2016). Families matter: Social support and mental health trajectories among lesbian, gay, bisexual, and transgender youth. *Journal of Adolescent Health, 59*(6), 674–680. https://doi.org/10.1016/j.jadohealth.2016.07.026.

McGraw, J. S., Chinn, J., & Mahoney, A. (2021). Historical, Doctrinal, and Empirical Insights into Latter-day Saint Sexual Minorities' Psychological and Interpersonal Functioning. *Journal of GLBT Family Studies*, *17*(2), 168-195. https://doi.org/10.1080/1550428X.2020.1800545

McGraw, J. S., Docherty, M., S., Chinn, J., & Mahoney, A. (2020). Family, Faith, and Suicidal Thoughts and Behaviors Among LGBTQ Youth in Utah. *Unpublished Manuscript.*

McGraw, J. S., Peer, S. O., McManimen, S., Chinn, J., & Mahoney, A. (2020). Comparison of Lifetime Suicide Attempts and Recent Suicidal/Self-Harming Thoughts Among Sexual Minority and Heterosexual Utahns: Results from a Population-Based Survey. *Archives of Suicide Research.* https://doi.org/10.1080/13811118.2020.1806159

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, Gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin., 129*, 674–697. https://doi.org/10.1037/0033-2909.129.5.674.

Moody, C., Fuks, N., Peláez, S., & Smith, N. G. (2015). "Without this, I would for sure already be dead": A qualitative inquiry regarding suicide protective factors among trans adults. *Psychology of Sexual Orientation and Gender Diversity, 2*(3), 266–280. https://doi.org/10.1037/sgd0000130.

Mustanski, B., & Liu, R. T. (2013). A longitudinal study of predictors of suicide attempts among lesbian, gay, bisexual, and transgender youth. *Archives of Sexual Behavior, 42*(3), 437–448. https://doi.org/10.1007/s10508-012-0013-9.

Muthén, L. K., & Muthén, B. O. 1998-2017. *Mplus User's Guide. Eighth Edition*, Los Angeles, CA: Muthén & Muthén.

Newman, D. A. (2014). Missing data: Five practical guidelines. *Organizational Research Methods, 17*(4), 372–411. https://doi.org/10.1177/1094428114548590.

Pew Research Center (2018). *Religion in America: U.S. religious data, demographics and statistics*. Pew Research Center's Religion & Public Life Project. https://www.pewforum.org/religious-landscape-study/state/utah/.

Preacher, K. J., & Kelley, K. (2011). Effect size measures for mediation models: Quantitative strategies for communicating indirect effects. *Psychological Methods, 16*(2), 93–115. https://doi.org/10.1037/a0022658.

Ramseth, L. (2018, April 8). *Why does Utah have a high suicide rate? A researcher is starting a years-long search for answers.* . https://www.sltrib.com/news/health/2018/04/07/utah-needs-a-better-strategy-to-prevent-suicide-a-researcher-is-about-to-spend-years-talking-with-grieving-families-to-design-it/.

Rimes, K. A., Goodship, N., Ussher, G., Baker, D., & West, E. (2017). Non-binary and binary transgender youth: Comparison of mental health, self-harm, suicidality, substance use and victimization experiences. *International Journal of Transgenderism, 20*(2–3), 230–240. https://doi.org/10.1080/15532739.2017.1370627.

Russell, S. T., & Fish, J. N. (2016). Mental health in lesbian, gay, bisexual, and transgender (LGBT) youth. *Annual Review of Clinical Psychology, 12*(1), 465–487. https://doi.org/10.1146/annurev-clinpsy-021815-093153.

Safren, S. A., & Heimberg, R. G. (1999). Depression, hopelessness, suicidality, and related factors in sexual minority and heterosexual adolescents. *Journal of Consulting and Clinical Psychology, 67*(6), 859–866. https://doi.org/10.1037/0022-006x.67.6.859.

Salinger, T. (2018, April 8). *Utah candidate says gay teen who committed suicide guilty of 'the sins of homosexuality and the sins of murder'* . nydailynews.com. https://www.nydailynews.com/news/national/utah-candidate-trolls-gay-teen-committed-suicide-article-1.2813623.

Schall, J., Wallace, T. L. B., & Chhuon, V. (2016). 'Fitting in' in high school: how adolescent belonging is influenced by locus of control beliefs. *International Journal of Adolescence and Youth*. https://doi.org/10.1080/02673843.2013.866148

Shaw, M. (2016, April 10). *After Utah LGBT advocate's suicide, community recalls his passion, kindness*. Standard - Examiner. https://www.standard.net/news/local/after-utah-lgbt-advocates-suicide-community-recalls-his-passion-kindness/article_a13a2ca1-5f4e-5f56-a522-35e806f46170.html.

Skinta, M. D. [Ed], & Curtin, A. [Ed]. (2016). Mindfulness and acceptance for gender and sexual minorities: A clinician's guide to fostering compassion, connection and equality using contextual strategies. *Mindfulness and acceptance for gender and sexual minorities: A Clinician's guide to fostering compassion, strategies.*

StataCorp. (2019). *Stata Statistical Software: Release 16*. College Station, TX: StataCorp LLC.

University of Utah (May, 2018). I choose love: Standing for Stockton. From https://nursing.utah.edu/blog/2018/05/seeds-blog.php

Utah Department of Human Services. (2019a). *Prevention needs assessment survey results for state of Utah*. https://dsamh.utah.gov/pdf/sharp/2019/State%20of%20Utah%20Report.pdf

Utah Department of Human Services. (2019b). *SHARP survey reports*. https://dsamh.utah.gov/reports/sharp-survey

Veale, J. F., Peter, T., Travers, R., & Saewyc, E. M. (2017). Enacted stigma, mental health, and protective factors among transgender youth in Canada. *Transgender Health, 2*(1), 207–216. https://doi.org/10.1089/trgh.2017.0031.

Weisz, J. R., McCarty, C. A., & Valeri, S. M. (2006). Effects of psychotherapy for depression in children and adolescents: A meta-analysis. *Psychological Bulletin., 132*, 132–149. https://doi.org/10.1037/0033-2909.132.1.132.

Yadavaia, J. E., & Hayes, S. C. (2012). Acceptance and commitment therapy for self-stigma around sexual orientation: A multiple baseline evaluation. *Cognitive and Behavioral Practice., 19*, 545–559. https://doi.org/10.1016/j.cbpra.2011.09.002.