

Journal of Family Strengths

Volume 17

Issue 2 *The Changing Landscape for LGBTIQ
Families: Challenges and Progress*

Article 6

December 2017

Links Between Social Support, Thwarted Belongingness, and Suicide Ideation among Lesbian, Gay, and Bisexual College Students

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Recommended Citation

Hill, Ryan M.; Rooney, Evan E.; Mooney, Megan A.; and Kaplow, Julie B. (2017) "Links Between Social Support, Thwarted Belongingness, and Suicide Ideation among Lesbian, Gay, and Bisexual College Students," *Journal of Family Strengths*: Vol. 17 : Iss. 2 , Article 6.

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Links Between Social Support, Thwarted Belongingness, and Suicide Ideation among Lesbian, Gay, and Bisexual College Students

Acknowledgements

This work was funded by a Florida International University Pre-doctoral Presidential Fellowship award to Ryan M. Hill.

A growing body of evidence has established having a lesbian, gay, or bisexual (LGB) identity as a risk marker for suicide-related behaviors. Recent data from the Youth Risk Behavioral Surveillance Survey revealed that 42.8% of LGB high school students reported having serious suicidal thoughts in the previous 12 months and 29.4% reported a suicide attempt over the same period, compared to just 14.8% and 6.4% of their heterosexual peers, respectively (Kann et al., 2016). This disparity appears to continue in emerging adulthood; a representative longitudinal study of New Zealand young adults reported suicide attempts among 28.6% of gay men and 10.0% of lesbian women over the last four years compared to only 1.6% of heterosexual men and 1.5% of heterosexual women (Fergusson, Horwood, Ridder, & Beautrais, 2005). These findings underscore the need to understand specific risk and protective markers associated with suicide-related behaviors among LGB emerging adults in order to identify appropriate targets for preventing suicide-related behaviors in this population.

The Interpersonal-Psychological Theory of Suicide

The interpersonal-psychological theory of suicide (IPTS; Joiner, 2005) provides a theoretical framework for conceptualizing and organizing risk markers of suicide-related behavior via a proximally situated set of constructs. The IPTS has received considerable empirical support in recent years, across a range of samples (for reviews, see Hill & Pettit, 2014; Stewart, Eaddy, Horton, Hughes, & Kennard, 2015). One primary hypothesis of the IPTS is that the desire for death, which manifests as suicide ideation, results from two primary factors: perceived burdensomeness and thwarted belongingness (Joiner, 2005; Van Orden et al., 2010).

Perceived burdensomeness is the sense that one is a drain on others' resources or that others would be "better off without me" (Joiner, 2005; Van Orden et al., 2010). Individuals who perceive themselves to be a burden on others may view suicide as a means for improving the lives of those they care about. Perceived burdensomeness has received considerable empirical support as a potent suicide risk marker across a variety of samples (for a review, see Hill & Pettit, 2014). Thwarted belongingness consists of a sense of loneliness, rejection, and a lack of reciprocal care (Van Orden et al., 2010) and may result from a failure to fulfill a basic psychological need for affiliation and relatedness (Hill & Pettit, 2013; Tucker & Wingate, 2014). Thwarted belongingness has been associated with suicide ideation across a variety of samples, including adolescents (Czyz, Berona, & King, 2015), college students (Hill & Pettit,

2013), military personnel (Bryan, 2011), and adults (Van Orden, Cukrowicz, Witte, & Joiner, 2012).

Under the IPTS framework, a lack of perceived social support is a key component of thwarted belongingness (Van Orden et al., 2010) and has been consistently linked to suicide ideation (for a review, see King & Merchant, 2008). Greater perceived social support has been associated with decreased suicide ideation among adolescents (Kerr, Preuss, & King, 2006), college students (Arria et al., 2009), and gay men (Friedman, Koeske, Silvestre, Korr, & Sites, 2006). A lack of perceived social support has also been associated with increased thwarted belongingness (Van Orden et al., 2012). Thus, according to the IPTS, social support serves a protective role against one's sense of thwarted belongingness, which in turn is associated with decreased suicide ideation.

Support of LGB Emerging Adults

Social support is derived from a variety of sources, including family, peer groups, and the larger community. LGB emerging adults, however, occupy a unique point of social intersectionality, which may provide additional sources of social support as adolescents and emerging adults assume a LGB identity. Troiden (1988) proposed that LGB emerging adults have access to and may interact with both the LGB community and the larger heterosexual community. Similarly, LGB individuals may shift between LGB and heterosexual peer groups, and for some, these peer and community groups may remain mutually exclusive. As a result, LGB emerging adults may receive social support from a wider array of sources not typically considered in research on heterosexual populations, including multiple peer and community groups.

A number of contextual factors contribute to suicide risk among LGB youth. In the familial context, LGB emerging adults face unique stressors that may threaten their social support networks, such as rejection by family and peers during the coming out process (Durso & Gates, 2012; Ryan, Russell, Huebner, Diaz, & Sanchez, 2010). The educational context appears to play a particularly important role in LGBTQ¹ suicide risk (Bontempo & D'Augelli, 2002; Grant et al., 2011; Hillier et al., 2010; Hong, Espelage, & Kral, 2011; Jones, 2015; Kosciw, Greytak, Giga, Villenas, & Danischewski, 2016; Rienzo, Button, Sheu, & Li, 2006; Seelman, 2016). School-based homophobic victimization has been associated with

¹ When referring to research that utilized only lesbian, gay, and bisexual youth, we use LGB (lesbian, gay, bisexual). We use LGBTQ (lesbian, gay, bisexual, transgender, and questioning) or LGBT (lesbian, gay, bisexual, and transgender) to refer specifically to research that included these broader populations.

increased suicidal thoughts and attempts in high school students (Russell, Ryan, Toomey, Diaz, & Sanchez, 2011; van Bergen, Bos, van Lisdonk, Keuzenkamp, & Sandfort, 2013). Research using both high school and college-aged youth has also indicated that students from educational institutions with policies that protect their LGBTQ students from victimization or that provide supportive environments for LGBTQ youth have significantly lower rates of suicide attempts, self-harm, and levels of depression than institutions lacking such protections and supports (Hillier et al., 2010; Hong et al., 2011; Jones, 2015; Kosciw et al., 2016). Seelman (2016) indicated that transgender college students who were denied access to gender-appropriate bathrooms or campus housing were significantly more likely to have a lifetime suicide attempt, even after controlling for interpersonal victimization. The community context may also contribute to suicide risk among LGBTQ youth (Duncan & Hatzenbuehler, 2014; van Bergen et al., 2013). In a sample of sexual minority high school students, those who lived in neighborhoods with a higher incidence of LGBT-targeted hate crimes reported higher suicidal ideation and attempts than those living in neighborhoods with a lower incidence of LGBT hate crimes (Duncan & Hatzenbuehler, 2014). These systemic and contextual factors that contribute to LGB youth suicidality are important for clinicians and direct service providers to consider in their work with LGB youth.

In addition to contextual factors, including hate crimes, institutional support, and broader legal policy, the sources from which LGB individuals receive social support may also impact their level of risk. One potential source of social support for LGB individuals is their family. Among adolescents and college students, social support from family has been associated with lower depressive symptoms and suicide ideation scores (Greening & Stoppelbein, 2002; Harris & Molock, 2000; Kleiman & Riskind, 2013; Ryan et al., 2010), lower rates of suicide attempts (Fleming, Merry, Robinson, Denny, & Watson, 2007; Ryan et al., 2010), and lower levels of general suicide risk behavior (Sharaf, Thompson, & Walsh, 2009). Similarly, among LGB adolescents, family support has been associated with lower levels of mental distress (Shilo, Antebi, & Mor, 2015) and reduced risk of suicide ideation and suicide attempts (Eisenberg & Resnick, 2006). Conversely, family rejection of LGB young adults has been related to higher rates of attempted suicide and high levels of depression in addition to other negative health outcomes (Ryan, Huebner, Diaz, & Sanchez, 2009).

In addition to social support from family members, peer (or friend) support has also been associated with lower suicide ideation among college students (Kleiman & Riskind, 2013) and lower general suicide risk behavior among adolescents (Sharaf et al., 2009). Among LGB youth and emerging

adults, peer support has been associated with lower levels of hopelessness, loneliness, depression, and suicidality (Greening & Stoppelbein, 2002; McConnell, Birkett, & Mustanski, 2015). However, the impact of peer support on LGB youth mental health may be dependent on the source of that support, as coming from either LGB or heterosexual peer groups: Doty and colleagues reported that LGB youth received more sexuality-related support from LGB peers than from heterosexual peers and that sexuality-related support uniquely predicted lower emotional distress (Doty, Willoughby, Lindahl, & Malik, 2010). Thus, preliminary evidence indicates a need to distinguish whether peer support for LGB emerging adults is derived from LGB peers or heterosexual peers.

Finally, research has examined the broader community as a source of social support (e.g., Herrero & Gracia, 2007; Herrero & Gracia, 2011). Community support includes community integration (i.e., feeling like a part of the community and being valued by the community), community participation (i.e., participation in community activities and social events), and use of community organizations (i.e., perceived availability of resources in the larger community; Herrero & Gracia, 2007). Community support has been linked to lower levels of depression and higher subjective well-being among adults (Herrero & Gracia, 2011). Among LGB adolescents, the impact of positive and negative climates for LGB youth, which may be viewed as an element of youths' communities, has been associated with a lower rate of suicide attempts (Hatzenbuehler, 2011). However, few studies have examined potential associations between support from the various communities LGB emerging adults interact with (heterosexual and LGB communities) on their sense of thwarted belongingness and suicide ideation.

Thus, substantial evidence links various sources of social support to decreased suicide ideation and attempts among emerging adults in general and LGB emerging adults in particular while other contextual factors may increase the risk of suicidality in LGB youth. Identifying *which* sources of support are independently associated with LGB emerging adults' sense of thwarted belongingness and/or suicide ideation may help identify the most salient potential targets for suicide prevention efforts for this population. For example, should preventive interventions focus on building family support, peer support, or both? Should therapists encourage LGB emerging adults to build heterosexual peer networks or to engage with the LGB community? The present study begins to address these questions by examining associations between various sources of support, thwarted belongingness, and suicide ideation among LGB emerging adults. We hypothesized that greater social support in each domain would be associated with lower

thwarted belongingness and lower suicide ideation, but no *a priori* hypotheses were made with regard to which sources of support would be independently associated with thwarted belongingness. Further, consistent with the tenets of the IPTS, we hypothesized that increased social support would be indirectly associated with decreased suicide ideation via lower thwarted belongingness.

Given the diverse array of potential sources of social support for LGB emerging adults, identifying those sources of social support that either contribute to or protect against an increased sense of thwarted belongingness and suicide ideation may help to inform preventive intervention efforts in this population.

Method

Participants and Procedures

Data were drawn from a cross-sectional study of 198 college students at a university located in a large, urban area in the southeastern United States. Participants were recruited via an undergraduate psychology participant pool and flyers distributed to campus sexual and gender minority groups between January and April, 2011. Inclusion criteria were: 18 years of age or older and enrolled at the university where the study took place. Upon the participant's completion of the suicide ideation items, a research team member reviewed the items and conducted further suicide risk assessment as needed. Students endorsing suicide ideation at any level were encouraged to seek treatment, and all participants received a list of resources for mental health care and suicide prevention. No students were deemed in need of emergency services. (For additional details on the study design, see Hill & Pettit, 2012.)

A sample of 50 students who identified as lesbian, gay, bisexual, questioning, or "other" orientation was included in the present analysis. Participants were 62.0% male, with a mean age of 20.84 years ($SD = 3.30$ years). The majority self-identified their ethnicity as Hispanic (70.0%) and their race as Caucasian or White (56.0%), African American or Black (24.0%), Asian American (2.0%), Native American or Alaskan Native (2.0%), and other (14.0%). Three students chose not to provide data regarding race.

Measures

Thwarted belongingness. Thwarted belongingness was assessed via the Interpersonal Needs Questionnaire (INQ; Van Orden, 2009). The INQ contains a 5-item subscale to assess thwarted belongingness. Items are rated on a 7-point Likert scale ranging from 1 (*not at all true for me*) to

7 (*very true for me*), with total scores ranging from 5-35. Items include “These days, I feel disconnected from other people” and “These days, other people care about me” (reverse coded). The INQ has demonstrated reliability and validity in a number of samples (e.g., Freedenthal, Lamis, Osman, Kahlo, & Gutierrez, 2011). Internal consistency (Cronbach’s alpha) in the present study was $\alpha = .79$.

Suicide ideation. The Adult Suicidal Ideation Questionnaire (ASIQ; Reynolds, 1991) is a 25-item self-report measure assessing suicide ideation and attempts among adults. Participants rate the frequency of specific suicide-related thoughts over the past month. ASIQ item scores range from 0 (*I never had this thought*) to 6 (*almost every day*), with total scores ranging from 0-150. Items include “I think about killing myself” and “If things don’t improve, I may kill myself.” Psychometric evaluations of the ASIQ show that it has excellent reliability and validity across both adult and college samples (Osman et al., 1999; Pettit et al., 2009; Reynolds, 1991). Internal consistency (Cronbach’s alpha) in the present study was $\alpha = .96$.

Family support. The 20-item Perceived Social Support from Family Scale (PSS-Fa; Procidano & Heller, 1983) was used to measure students’ perceptions of social support in their family environments. Items include “My family enjoys hearing about what I think” and “I rely on my family for emotional support.” Items are rated *yes*, *no*, or *don’t know*, with total scores ranging from 0-20. The PSS-Fa has demonstrated convergent validity, correlating negatively with a measure of negative social interactions (Procidano & Heller, 1983). Internal consistency (Cronbach’s alpha) in the present study was $\alpha = .94$.

Peer support. The 20-item Perceived Social Support from Friends Scale (PSS-Fr; Procidano & Heller, 1983) was used to measure students’ perceptions of social support in their peer groups, including heterosexual friends and LGB friends. Items include “My friends enjoy hearing about what I think” and “I rely on my friends for emotional support.” Items are rated *yes*, *no*, or *don’t know*, and total scores range from 0-20. The directions of the PSS-Fr were modified for this study in order to address different target domains. The original instructions read, “The statements that follow refer to feelings and experiences which occur to most people at one time or another in their relationships with their friends.” For the current study, this statement was modified for each form to read either “heterosexual friends” or “gay, lesbian, and bisexual friends.” Internal consistency (Cronbach’s alpha) in the present study was $\alpha = .96$ for heterosexual friend support and $\alpha = .78$ for LGB friend support.

Community support. Perceived community support from both the participants’ heterosexual and LGB community were measured by the

Perceived Community Support Questionnaire (PCSQ; Herrero & Gracia, 2007). The PCSQ assesses three domains of community support: Integration, participation, and organization. Example items include: “I identify with my community” and “I respond to calls for support in my community.” Items are rated on a 5-point Likert scale from *strongly disagree* to *strongly agree*, with total scores ranging from 4-20 for the integration domain and from 5-25 for the participation and organization domains. The scope of the PCSQ was modified to assess heterosexual and LGB communities separately in a manner similar to the peer support measure. In previous research the PCSQ demonstrated predictive validity: increases in PCSQ scores predicted reductions in depression over a period of six months (Herrero & Gracia, 2007). Internal consistency (Cronbach’s alpha) in the present study was $\alpha = .88$ for heterosexual community support and $\alpha = .92$ for LGB community support.

Depressive symptoms. Depressive symptoms were measured with the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). The CES-D is a 20-item self-report scale on which participants rate the frequency of different depressive symptoms experienced in the past week. Items are rated on a 4-point scale ranging from *rarely or none of the time (less than 1 day)* to *most or all of the time (5-7 days)*, with total scores ranging from 0-60. Items include “I felt depressed” and “I thought my life had been a failure.” It has demonstrated excellent reliability and validity in a young adult sample (Joiner, Walker, Pettit, Perez, & Cukrowicz, 2005). Internal consistency (Cronbach’s alpha) in the present study was $\alpha = .86$.

Data Analysis

Missing data occurred at a low frequency, with 1.5% of data missing overall. Data regarding race were missing for 6.0% of students ($n = 3$), and data for the LGB PSS-Fr and the LGB PCSQ were missing for 2.0% of students ($n = 1$). Little’s MCAR test was not statistically significant, $\chi^2(31) = 30.53$, $p = .49$, indicating that missing data were not significantly related to demographic or clinical variables in the data set. Thus, data were assumed to be at least missing at random (MAR). Given the small amount of missing data, listwise deletion was used and resulted in the loss of one case for analyses. The data were then evaluated for multivariate outliers by examining leverage indices for each individual. An outlier was defined as a leverage score four times greater than the mean leverage; no outliers were identified.

For examination of the indirect effects models, the PROCESS program (Hayes, 2013) was employed; this program estimates total, direct,

and indirect effects, allowing for the inclusion of covariates in the models. The PROCESS program uses a nonparametric resampling procedure with $n = 10,000$ bootstrap resamples to derive point estimates and 95% bias corrected and accelerated confidence intervals for the indirect effects. An indirect effect was considered statistically significant when the confidence interval of the indirect effect ($a \times b$) pathway did not include zero.

Results

Descriptive Results

Means and standard deviations of study variables, as well as correlations between them, are provided in Table 1. Thwarted belongingness was positively correlated with suicide ideation and depressive symptoms and negatively correlated with each of the family, peer, and community support variables. Suicide ideation was negatively correlated with family support but was not significantly correlated with any of the peer or community support variables.

Social Support and Thwarted Belongingness

A hierarchical linear regression model was evaluated to examine whether various sources of social support were associated with thwarted belongingness after accounting for the effects of age, sex, and depressive symptoms. Depressive symptoms were entered as a covariate to allow examination of the unique effects of social support on thwarted belongingness beyond the impact of co-occurring depressive symptoms. Age, sex, and depressive symptoms were entered in the first step, followed by the family, heterosexual peer, LGB peer, heterosexual community, and LGB community support variables in the second step. Unstandardized coefficients for the regression, as well as significance values and 95% confidence intervals, are provided in Table 2. The first step was statistically significant, $F(3,45) = 10.89$, $p < .001$, $\text{adj. } R^2 = .38$, with depressive symptoms significantly associated with thwarted belongingness. The addition of the social support variables in the second step was also statistically significant, $F(8,40) = 11.27$, $p < .001$, $\text{adj } R^2 = .63$, and offered a significant improvement in the percent of variance in thwarted belongingness accounted for by the model, $\Delta R^2 = .27$, $F(5, 40) = 7.08$, $p < .001$. In the second step, depressive symptoms, family support, and LGB community support were each significantly and independently associated with thwarted belongingness.

Indirect Effects of Social Support on Suicide Ideation

To test the hypothesis that sources of social support would be

associated with suicide ideation via their associations with thwarted belongingness, the PROCESS macro (Hayes, 2013) was employed to estimate two indirect effects models. The two models were estimated independently, as depicted in Figure 1, utilizing family support and LGB community support as independent variables. The PROCESS macro provides five relevant path coefficients in its output, provided in Table 3: a coefficient (a) for the path from the independent variable (family support or LGB community support) to the mediator (thwarted belongingness); a coefficient (b) for the path from the mediator to the dependent variable (suicide ideation); a coefficient ($a*b$) for the indirect effect of the independent variable on the dependent variable; a coefficient (c) for the total effect of the independent variable on the dependent variable; and a coefficient (c') for the direct effect (i.e., the total effect minus the indirect effect).

The indirect effect of family support on suicide ideation via thwarted belongingness was statistically significant (see the $a*b$ column in Table 3). The total effect of family support on suicide ideation was estimated at -0.95, such that for each 1-point increase in family support, suicide ideation was expected to decrease by 0.95 points. In addition, the indirect effect of LGB community support on suicide ideation via thwarted belongingness was also statistically significant. The total effect of LGB community support on suicide ideation was estimated at -0.21, such that for each 1-point increase in family support, suicide ideation was expected to decrease by 0.21 points.

Two additional indirect effects models were examined in which the independent and mediator variables were reversed, such that thwarted belongingness was the independent variable, family support and LGB community support were the mediators, and suicidal ideation was the dependent variable. These models failed to identify significant indirect effects, providing support for the hypothesized direction of the indirect effects previously identified.

Discussion

This study examined associations between various sources of social support, thwarted belongingness, and suicide ideation in a sample of LGB emerging adults through the lens of the IPTS. This study sought to identify which sources of social support were independently and directly associated with thwarted belongingness and indirectly associated with suicide ideation. Both family and LGB community support were independently associated with lower thwarted belongingness controlling for age, sex, depressive symptoms, and the other measured forms of social support. Examination of indirect effects models demonstrated that both family and LGB

community support were associated with suicide ideation via thwarted belongingness. These results suggest that harnessing family and LGB community support may be particularly useful in reducing thwarted belongingness and may be ideal foci for suicide prevention efforts for LGB emerging adults.

While previous research has identified policy-level and institutional-level factors that impact LGBTQ suicide risk (e.g., Duncan & Hatzenbuehler, 2014; Hillier et al., 2010; Jones, 2015), the present study focused on the potential impacts of more proximal elements of the social environment on suicide ideation in emerging adults. Through examination of a variety of sources of social support, this study sought to identify additional avenues and opportunities that can be utilized in suicide prevention efforts. Legal policy and access efforts (e.g., bathroom access for transgender individuals, anti-bullying policies for schools), while extremely valuable, may require ongoing efforts and lengthy legal proceedings. In contrast, community organizations and clinicians may be able to act more quickly to implement outreach efforts and programming to engage LGB individuals. As a result, the implications described below for both mental health providers and community organizations are intended to complement existing efforts to create an open, inclusive community that supports the mental health needs of LGB emerging adults.

Implications for Clinicians Working with LGB Emerging Adults

Based on findings from the current study, it appears that when LGB young adults experience connection to their family and community, they are less likely to also demonstrate one of the key risk factors for suicide ideation—cognitions of thwarted belongingness. This research is consistent with other studies that have indicated that parental acceptance for sexual and gender minority youth is one of the single most protective factors against a variety of negative health outcomes, including substance abuse, sexual risk behaviors, suicide ideation, and suicide attempts (Eisenberg & Resnick, 2006; Padilla, Crisp, & Rew, 2010; Ryan et al., 2009; Ryan et al., 2010). While peer support was not a significant, independent predictor of thwarted belongingness in the present study, this may be due, at least in part, to overlap between peer support and community support, as demonstrated by the moderate inter-correlations between peer and community support variables.

Previous research has demonstrated that broader contextual variables such as lack of school supports and negative community attitudes toward LGBTQ people may be significantly related to suicide risk (Duncan & Hatzenbuehler, 2014; Hillier et al., 2010; Hong et al., 2011; Jones, 2015;

Kosciw et al., 2016). Professionals should ask about ecological factors that may increase suicide risk. In addition, the current findings suggest that mental health professionals who are working with LGB emerging adults may need to pay particular attention to the quality of the social supports (i.e., familial and community) that these young people have in place. For example, screening tools that take into account family and community support may be especially useful for clinicians treating this population (e.g., Hill, Oosterhof, & Kaplow, 2017).

The unique associations between family and LGB community support and decreased thwarted belongingness may allow for more targeted ecological approaches to suicide prevention efforts. For example, suicide prevention programs for LGB emerging adults might emphasize a family-based approach to facilitate increasing supportive relationships among family members (e.g., the Family Acceptance Project; Ryan, 2014). Alternatively, prevention efforts could utilize behavioral activation techniques to enhance LGB emerging adults' involvement in their local sexual and gender minority communities (e.g., Brief Behavioral Activation Treatment for Depression, Lejeuz, Hopko, & Hopko, 2001). Although this study did not specifically assess a sense of acceptance or belonging within schools, previous research (e.g., Kosciw et al., 2016) suggests that when such supports are present they are associated with a decreased risk for suicide ideation and attempts for youth. This may also be true of college students and efforts to address the supportive climate of university campuses may be critical to addressing student suicide risk. Finally, as indicated by the indirect effect of family and LGB community support on suicide ideation via thwarted belongingness, addressing maladaptive cognitions of thwarted belongingness among LGB emerging adults may help reduce or prevent suicide ideation.

Implications for the Sexual and Gender Minority Community

The sexual and gender minority community may be uniquely suited to support disenfranchised and disconnected LGB emerging adults who experience thwarted belongingness. Based on the current findings, organizations within the sexual and gender minority community should be cognizant of their capacity for impacting the mental health of LGB emerging adults and should consider efforts to engage emerging adults directly. National-level campaigns, such as the "It Gets Better" campaign, aim to provide a message of hope and encouragement about depression and suicide ideation as their mission is to communicate to sexual and gender minority youth globally that they are not alone. Their efforts are disseminated primarily through Internet and social media platforms

(www.itgetsbetter.org). Further, The Trevor Project is a “national organization providing crisis intervention and suicide prevention services to lesbian, gay, bisexual, transgender, and questioning (LGBTQ) young people ages 13-24” (www.thetrevorproject.org). The Trevor Project is also primarily an online-based resource with in-person operations in only a few major U.S. cities. However, at a much broader level, the Human Rights Campaign actively engages sexual and gender minority individuals at both national and local levels in political advocacy. The advocacy efforts of the Human Rights Campaign (HRC) seek to protect legal rights of sexual and gender minority individuals but also provide opportunities for increased connection and collaboration with the community itself. HRC’s website allows users to search by their state and large cities within the state to seek out opportunities to become involved in advocacy efforts (www.hrc.org).

Local, community-based efforts may also be particularly useful in engaging LGB emerging adults and fostering community participation and integration. For example, high school-based clubs (e.g., Gay-Straight Alliances), LGBTQ Resource Centers on college campuses, LGBTQ-focused young professionals groups, PFLAG chapters, and PRIDE chapters may help emerging adults to feel less isolated, more aware of others “like them,” and more connected to the sexual and gender minority community. Additionally, many faith-based organizations (e.g., Metropolitan Community Churches) make specific outreach efforts to the sexual and gender minority community and thus offer a unique platform for providing support and a sense of community. However, efforts to engage LGB emerging adults in the community must be balanced with an awareness of stigma that may prevent them from participation in that community. Thus, sexual and gender minority community organizations should also partner with providers, educators, and organizations in their local communities to help emerging adults who are questioning or are not yet “out” to find safe ways to access supportive peers in the sexual and gender minority community. In the face of an ever-changing political and social climate within the United States, community organizations may provide a safe and consistent environment for emerging adults.

Limitations and Future Directions

The results of this study should be considered within the context of its limitations. The study utilized a cross-sectional design and thus was unable to examine the temporal relations between social support, thwarted belongingness, and suicide ideation. For example, it is possible that emerging adults with a greater sense of thwarted belongingness may be less likely to seek out social support. However, the indirect effect from

thwarted belongingness to suicidal ideation via social support was not statistically significant, indicating that this alternative explanation did not fit the data and lent support for the hypothesized direction of effects. Additionally, the study sample was recruited using a targeted strategy to oversample for LGB students, specifically those who participated in student groups affiliated with sexual and gender minorities. This strategy may have produced a sample with characteristics that are not representative of the general population of LGB college students and may not be generalizable to emerging adults who are not college students. While the sample was sufficiently powered for the proposed analyses, it was not large enough to examine lesbian, gay, and bisexual emerging adults separately and did not include transgender emerging adults or other sexual and gender minority groups. Due to reliance on self-report measures for this study, the data may also have been subject to social desirability biases. In addition, data regarding participants' perception of larger contextual factors, such as levels of homophobia within the community and the campus climate for LGB individuals, were not available. As a result, we were unable to examine the potential role of those contextual factors. Finally, the measures of LGB peer and community support utilized in the present study were based on existing psychometrically valid scales with the instructions modified for this study. While the measures demonstrated acceptable reliability in this sample, the psychometric properties of these modified scales have not been evaluated.

Additional research on the association between social support and suicide ideation among LGB emerging adults is needed and should focus on the utilization of longitudinal designs and the testing of specific suicide prevention programs. By examining the relations between these factors in the context of a longitudinal design, researchers will be able to temporally distinguish how social support resources affect levels of both thwarted belongingness and suicide ideation. Additionally, researchers should investigate the effectiveness of suicide prevention programs that leverage family and LGB community support and target thwarted belongingness as compared to those that focus on other forms of social support. For example, programs that aim to decrease thwarted belongingness (e.g., the LEAP intervention; Hill & Pettit, 2016) might be adapted for LGB emerging adults by adding a family and community social support component.

Conclusions

This study examined associations between social support, thwarted belongingness, and suicide ideation in a sample of LGB emerging adults. While all forms of social support were negatively correlated with thwarted belongingness, both family and LGB community support were

independently associated with lower thwarted belongingness. Examination of indirect effects models demonstrated that both family and LGB community support were associated with suicide ideation via thwarted belongingness. If replicated in a longitudinal study, these results suggest that family and LGB community support may be particularly useful targets for prevention efforts aimed at reducing thwarted belongingness and, ultimately, suicide ideation among LGB emerging adults.

References

- Arria, A. M., O'Grady, K. E., Caldeira, K. M., Vincent, K. B., Wilcox, H. C. & Wish, E. D. (2009). Suicide ideation among college students: A multivariate analysis. *Archives of Suicide Research*, 13(3), 230-246.
- Bontempo, D. E., & D'Augelli, A. R. (2002). Effects of at-school victimization and sexual orientation on lesbian, gay, or bisexual youths' health risk behavior. *Journal of Adolescent Health*, 30(5), 364-374.
- Bryan, C. J. (2011). The clinical utility of a brief measure of perceived burdensomeness and thwarted belongingness for the detection of suicidal military personnel. *Journal of Clinical Psychology*, 67(10), 981-992.
- Czyz, E. K., Berona, J., & King, C. A. (2015). A prospective examination of the interpersonal-psychological theory of suicidal behavior among psychiatric adolescent inpatients. *Suicide and Life-Threatening Behavior*, 45(2), 243-259.
- Doty, N. D., Willoughby, B. L. B., Lindahl, K. M., & Malik, N. M. (2010). Sexuality related social support among lesbian, gay, and bisexual youth. *Journal of Youth and Adolescence*, 39(10), 1134-1147.
- Duncan, D. T., & Hatzenbuehler, M. L. (2014). Lesbian, gay, bisexual, and transgender hate crimes and suicidality among a population-based sample of sexual-minority adolescents in Boston. *American Journal of Public Health*, 104(2), 272-278.
- Durso, L. E., & Gates, G. J. (2012). *Serving our youth: Findings from a national survey of services providers working with lesbian, gay, bisexual and transgender youth who are homeless or at risk of becoming homeless*. Los Angeles, CA: The Williams Institute with True Colors Fund and the Palette Fund.
- 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.
- Fergusson, D. M., Horwood, L. J., Ridder, E. M., & Beautrais, A. L. (2005). Sexual orientation and mental health in a birth cohort of young adults. *Psychological Medicine*, 35(7), 971-981.
- Fleming, T. M., Merry, S. N., Robinson, E. M., Denny, S. J., & Watson, P. D. (2007). Self-reported suicide attempts and associated risk and protective factors among secondary school students in New Zealand. *Australian and New Zealand Journal of Psychiatry*, 41(3), 213-221.
- Freedenthal, S., Lamis, D. A., Osman, A., Kahlo, D., & Gutierrez, P. M. (2011). Evaluation of the psychometric properties of the Interpersonal Needs Questionnaire-12 in samples of men and

- women. *Journal of Clinical Psychology*, 67(6), 609-623.
- Friedman, M. S., Koeske, G. F., Silvestre, A. J., Korr, W. S., & Sites, E. W. (2006). The impact of gender-role nonconforming behavior, bullying, and social support on suicidality among gay male youth. *Journal of Adolescent Health*, 38(5), 621-623.
- Grant, J. M., Mottet, L. A., Tanis, J., Harrison, J., Herman, J. L., & Keisling, M. (2011). *Injustice at every turn: A report of the National Transgender Discrimination Survey*. Washington, DC: National Center for Transgender Equality and National Gay and Lesbian Task Force..
- Greening, L., & Stoppelbein, L. (2002). Religiosity, attributional style, and social support as psychosocial buffers for African American and white adolescents' perceived risk for suicide. *Suicide and Life-Threatening Behavior*, 32(4), 404-417.
- Harris, T. L., & Molock, S. D. (2000). Cultural orientation, family cohesion, and family support in suicide ideation and depression among African American college students. *Suicide and Life-Threatening Behavior*, 30(4), 341-353.
- Hatzenbuehler, M. L. (2011). The social environment and suicide attempts in lesbian, gay, and bisexual youth. *Pediatrics*, 127(5), 896-903.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford Press.
- Herrero, J., & Gracia, E. (2007). Measuring perceived community support: Factorial structure, longitudinal invariance, and predictive validity of the PCSQ (Perceived Community Support Questionnaire). *Journal of Community Psychology*, 35(2), 197-217.
- Herrero, J., & Gracia, E. (2011). Covariates of subjective well-being among Latin American immigrants in Spain: The role of social integration in the community. *Journal of Community Psychology*, 39(7), 761-775.
- Hill, R. M., Oosterhof, B., & Kaplow, J. B. (2017). Prospective identification of adolescent suicide ideation using classification tree analysis: Models for community-based screening. *Journal of Consulting and Clinical Psychology*, 85(7), 702-711.
- Hill, R. M., & Pettit, J. W. (2012). Suicidal ideation and sexual orientation in college students: The roles of perceived burdensomeness, thwarted belongingness, and perceived rejection due to sexual orientation. *Suicide and Life-Threatening Behavior*, 42(5), 567-579.
- Hill, R. M., & Pettit, J. W. (2013). The role of autonomy needs in suicidal ideation: Integrating the interpersonal-psychological theory of suicide and self-determination theory. *Archives of Suicide Research*, 17(3),

288-301.

- Hill, R. M., & Pettit, J. W. (2014). Perceived burdensomeness and suicide-related behaviors in clinical samples: Current evidence and future directions. *Journal of Clinical Psychology, 70*(7), 631-643.
- Hill, R. M. & Pettit, J. W. (2016). Pilot randomized controlled trial of LEAP: A selective preventive intervention to reduce adolescents' perceived burdensomeness. *Journal of Clinical Child and Adolescent Psychology, 1*-12.
- Hillier, L., Jones, T., Monagle, M., Overton, N., Gahan, L., Blackman, J., & Mitchell, A. (2010). *Writing themselves in 3: The third national study on the sexual health and wellbeing of same sex attracted and gender questioning young people*. Melbourne, Australia: Australian Research Centre in Sex, Health and Society, La Trobe University.
- Hong, J. S., Espelage, D. L., & Kral, M. J. (2011). Understanding suicide among sexual minority youth in America: An ecological systems analysis. *Journal of Adolescence, 34*(5), 885-894.
- Joiner, T. E. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.
- Joiner, Jr., T. E., Walker, R. L., Pettit, J. W., Perez, M., & Cukrowicz, K. C. (2005). Evidence-based assessment of depression in adults. *Psychological Assessment, 17*(3), 267-277.
- Jones, T. (2015). *Policy and gay, lesbian, bisexual, transgender and intersex students*. Cham, Switzerland: Springer International.
- Kann, L., Olsen, E. O., McManus, T., Harris, W. A., Shanklin, S. L., Flint, K.H., . . . Zaza, S. (2016). Sexual identity, sex of sexual contacts, and health-related behaviors among students in grades 9-12—United States and selected sites, 2015. *Morbidity and Mortality Weekly Report. Surveillance Summaries, 65*(9), 1-202.
- Kerr, D. C., Preuss, L. J., & King, C. A. (2006). Suicidal adolescents' social support from family and peers: Gender-specific associations with psychopathology. *Journal of Abnormal Child Psychology, 34*(1), 103-114.
- King, C. A., & Merchant, C. R. (2008). Social and interpersonal factors relating to adolescent suicidality: A review of the literature. *Archives of Suicide Research, 12*(3), 181-196.
- Kleiman, E. M., & Riskind, J. H. (2013). Utilized social support and self-esteem mediate the relationship between perceived social support and suicide ideation: A test of a multiple mediator model. *Crisis, 34*(1), 42-49.
- Kosciw, J. G., Greytak, E. A., Giga, N. M., Villenas, C., & Danischewski, D. J. (2016). *The 2015 National School Climate Survey: The*

- experiences of lesbian, gay, bisexual, transgender, and queer youth in our nation's schools*. New York, NY: GLSEN.
- Lejuez, C. W., Hopko, D. R., & Hopko, S. D. (2001). A brief behavioral activation treatment for depression: Treatment manual. *Behavior Modification*, 25(2), 255-286.
- McConnell, E. A., Birkett, M. A., & Mustanski, B. (2015). Typologies of social support and associations with mental health outcomes among LGBT youth. *LGBT Health*, 2(1), 55-61.
- Osman, A., Kopper, B. A., Linehan, M. M., Barrios, F. X., Gutierrez, P. M., & Bagge, C. L. (1999). Validation of the Adult Suicidal Ideation Questionnaire and the Reasons for Living Inventory in an adult psychiatric inpatient sample. *Psychological Assessment*, 11(2), 115-123.
- Padilla, Y. C., Crisp, C., & Rew, D. L. (2010). Parental acceptance and illegal drug use among gay, lesbian, and bisexual adolescents: Results from a national survey. *Social Work*, 55(3), 265-275.
- Pettit, J. W., Temple, S. R., Norton, P. J., Yaroslavsky, I., Grover, K. E., Morgan, S. T., & Schatte, D. J. (2009). Thought suppression and suicidal ideation: Preliminary evidence in support of a robust association. *Depression and Anxiety*, 26(8), 758-763.
- Procidano, M. E., & Heller, K. (1983). Measures of perceived social support from friends and from family: Three validation studies. *American Journal of Community Psychology*, 11(1), 1-24.
- Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1(3), 385-401.
- Reynolds, W. M. (1991). Psychometric characteristics of the Adult Suicidal Ideation Questionnaire in college students. *Journal of Personality Assessment*, 56(2), 289-307.
- Rienzo, B. A., Button, J. W., Sheu, J. J., & Li, Y. (2006). The politics of sexual orientation issues in American schools. *Journal of School Health*, 76(3), 93-97.
- Russell, S. T., Ryan, C., Toomey, R. B., Diaz, R. M., & Sanchez, J. (2011). Lesbian, gay, bisexual, and transgender adolescent school victimization: Implications for young adult health and adjustment. *Journal of School Health*, 81(5), 223-230.
- Ryan, C. (2014). Generating a revolution in prevention, wellness and care for LGBT children and youth. *Temple Political and Civil Rights Law Review*, 23(2), 331-344.
- Ryan, C., Huebner, D., Diaz, R. M., & Sanchez, J. (2009). Family rejection as a predictor of negative health outcomes in white and Latino

- lesbian, gay, and bisexual young adults. *Pediatrics*, 123(1), 346-352.
- Ryan, C., Russell, S. T., Huebner, D., Diaz, R., & Sanchez, J. (2010). Family acceptance in adolescence and the health of LGBT young adults. *Journal of Child and Adolescent Psychiatric Nursing*, 23(4), 205-213.
- Seelman, K. L. (2016). Transgender adults' access to college bathrooms and housing and the relationship to suicidality. *Journal of Homosexuality*, 63(10), 1378-1399.
- Sharaf, A. Y., Thompson, E. A., & Walsh, E. (2009). Protective effects of self-esteem and family support on suicide risk behaviors among at-risk adolescents. *Journal of Child and Adolescent Psychiatric Nursing*, 22(3), 160-168.
- Shilo, G., Antebi, N., & Mor, Z. (2015). Individual and community resilience factors among lesbian, gay, bisexual, queer and questioning youth and adults in Israel. *American Journal of Community Psychology*, 55(1-2), 215-227.
- Stewart, S. M., Eaddy, M., Horton, S. E., Hughes, J., & Kennard, B. (2015). The validity of the interpersonal theory of suicide in adolescence: A review. *Journal of Clinical Child and Adolescent Psychology*, 46(3), 437-449.
- Troiden, R. R. (1988). Homosexual identity development. *Journal of Adolescent Health Care*, 9(2), 105-113.
- Tucker, R. P., & Wingate, L. R. (2014). Basic need satisfaction and suicidal ideation: A self-determination perspective on interpersonal suicide risk and suicidal thinking. *Archives of Suicide Research*, 18(3), 282-294.
- van Bergen, D. D., Bos, H. M., van Lisdonk, J., Keuzenkamp, S., & Sandfort, T. G. (2013). Victimization and suicidality among Dutch lesbian, gay, and bisexual youths. *American Journal of Public Health*, 103(1), 70-72.
- Van Orden, K. A. (2009). *Construct validity of the Interpersonal Needs Questionnaire* (Unpublished doctoral dissertation). Florida State University, Tallahassee, FL.
- Van Orden, K. A., Cukrowicz, K. C., Witte, T. K., & Joiner, T. E. (2012). Thwarted belongingness and perceived burdensomeness: Construct validity and psychometric properties of the Interpersonal Needs Questionnaire. *Psychological Assessment*, 24(1), 197-215.
- Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, Jr., T. E. (2010). The Interpersonal Theory of Suicide. *Psychological Review*, 117(2), 575-600.

Table 1

Descriptive Statistics of, and Correlations Between, Study Variable

	1	2	3	4	5	6	7	Mean	(SD)
1. Thwarted belongingness	--							12.30	(6.16)
2. Suicide ideation	.55***	--						19.64	(18.60)
3. Family support	-.37**	-.32*	--					11.36	(6.19)
4. Heterosexual peer support	-.52***	-.27	.28*	--				15.90	(4.83)
5. LGB peer support	-.47**	-.21	.16	.46**	--			15.41	(5.46)
6. Heterosexual community support	-.49***	-.28	.11	.53***	.24	--		45.38	(10.07)
7. LGB community support	-.50***	-.13	-.05	.30*	.47**	.50***	--	51.90	(11.23)
8. Depressive symptoms	.64***	.49***	-.26	-.45**	-.42**	-.43**	-.30*	13.98	(8.18)

Notes. LGB = lesbian, gay, bisexual; * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 2

Regression Model of Social Support and Thwarted Belongingness

Independent Variable	Estimate	Standard Error	t	p	95% CI	
Step 1					LL	UL
Age	0.23	0.22	1.04	.31	-0.21	0.67
Sex	-0.96	1.46	-0.66	.51	-3.91	1.98
Depressive symptoms	0.49	0.09	5.49	<.001	0.31	0.67
Step 2						
Age	0.24	0.17	1.40	.17	-0.11	0.60
Sex	-1.58	1.15	-1.37	.18	-3.91	0.75
Depressive symptoms	0.23	0.09	2.67	.01	0.06	0.40
Family support	-0.33	0.10	-3.43	.001	-0.53	-0.14
Heterosexual peer support	-0.06	0.15	-0.37	.72	-0.36	0.25
LGB peer support	-0.11	0.13	-0.84	.41	-0.37	0.15
Heterosexual community support	-0.10	0.08	-1.38	.17	-0.26	0.05
LGB community support	-0.20	0.06	-3.03	.004	-0.32	-0.07

Notes. LGB = lesbian, gay, bisexual; 95% CI = 95% confidence interval.

Table 3

Summary of Point Estimates for Indirect Effects of Support on Suicide Ideation via Thwarted Belongingness

	Effect of IV on M	Effect of M on DV	Direct Effect	Total Effect of IV on DV	Indirect Effect	95% BCA CI	
(DV)	(a)	(b)	(c')	(c)	(a*b)	LL	UL
1. Family support	-0.37**	1.53***	-0.38	-0.95*	-0.57*	-1.33	-0.12
2. LGB community support	-0.28***	1.97***	0.33	-0.21	-0.54**	-1.10	-0.23

Notes: IV = independent variable; M = mediator; DV = dependent variable; BCA CI = bias corrected and accelerated confidence interval (generated using 10,000 bootstrap samples); LGB = lesbian, gay, bisexual; * $p < .05$; ** $p < .01$; *** $p < .001$.

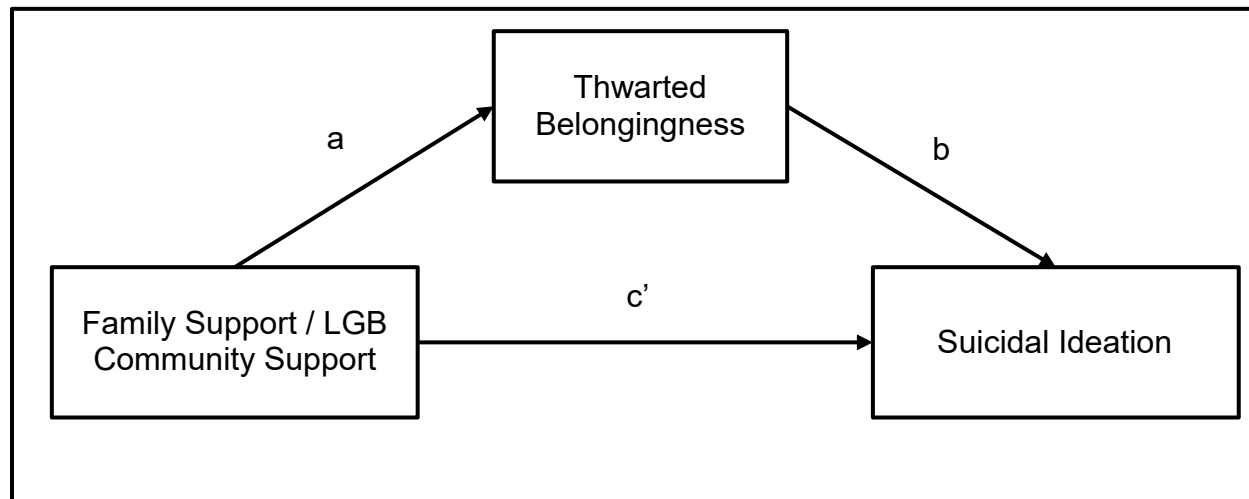


Figure 1. Indirect effects model of the relationship between social support and suicidal ideation via thwarted belongingness.