

The Influence of Social Support on Disparities in Mental Health and Substance Use for LGBT

Youth: A Critical Review

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Abstract

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LGBT youth experience disparities when compared to cisgender and/or heterosexual youth in critical health-related outcomes such as mental illness, suicidality, and substance use. Social support represents a demonstrable avenue of resilience for ameliorating these disparities, but the unique challenges of this population call for consolidation of the recent literature on social support to adequately tailor interventions. I conducted a trans-disciplinary search of the literature published after 2010 that examines the relationship between social support and these health outcomes among LGBT youth, resulting in 19 peer-reviewed, empirical studies that reported on mental illness, suicidality, or substance use outcomes in regards to LGBT youth between 13-25 years old. Overall, social support from various sources (e.g., parents, peers) was significantly protective of adverse health outcomes in a majority of studies, with results varying depending on age, gender, and the type of outcome. Family and peer support were most often studied and nearly universally protective across health outcomes, and school and partner support were less studied but often protective. Parental support was most protective for the examined health outcomes for adolescents (ages 13-18), whereas peer support was more influential for emerging adults (ages 18-25). Gender differences were significant, and social support created more mixed outcomes for substance use than for other health outcomes. Recommendations for practitioners include encouraging an environment of opportunity for social support in various ways, such as peer or family counseling for youth.

Introduction

Lesbian, gay, bisexual, and transgender (LGBT) youth experience disparities in mental illness, suicidality, and substance use when compared to heterosexual or cisgender youth.¹⁻⁵ A 2008 meta-analysis on LGB adolescent drug use found that LGB youth were almost twice as likely to report substance use than heterosexual adolescents.³ Additionally, a large review of the literature on LGB adolescent health disparities found consistently higher rates of mental illness and suicidality when compared to heterosexual adolescents.¹ These health disparities appear to be greater for certain sub-groups within the LGBT community, such as bisexual and transgender youth. For example, in the 2008 meta-analysis, bisexual youth were 3.5 times more likely to use substances than heterosexual youth.³ While transgender youth are less often included in research efforts, transgender-inclusive research also points to higher rates of mental illness, suicidality, and substance use in comparison to cisgender youth, including sexual minorities who are not transgender.⁶⁻⁸ Given these disparities, mitigating these preventable health outcomes among LGBT youth represents a significant public health issue.

Age is an important factor in considering approaches to influence health outcomes in LGBT youth. Adolescence, typically categorized as ages 13-18, and emerging adulthood, categorized as ages 18-25,¹¹ are crucial time periods for the development – or prevention – of mental illness, suicidality, and substance use.^{1,12} Many mental illnesses first present in this age range,¹² and adolescents who experience a major depressive episode are at higher risk for adulthood mental illness – whether it be a relapse of depression or another mental illness.¹³ Moreover, 90% of people with a clinically-diagnosed substance-use disorder started using before the age of 18.¹⁴ The continuing development of the brain in adolescence and emerging adulthood

increases vulnerability to the negative effects of some drugs and increases the likelihood of addiction.^{14,15} Adolescence is also a period of elevated suicidality; suicide is the second leading cause of death among this age group after unintentional injury.¹⁶ For LGBT youth in particular, the transition to adulthood marks several important developmental phases. This is the time when they are most likely to disclose their identity.¹⁷ Youth may also develop more serious relationships with subsequent recognition or dismissal of those relationships. Family rejection in response to identity can result in dire consequences for this age group, such as highly disproportionate rates of homelessness, a condition that further increases the risks associated with these health-related outcomes.^{1,18} Although the literature often focuses on LGBT adolescents when considering risk of homelessness, emerging adulthood is increasingly important to consider as almost half of the emerging adults in the U.S. are dependent on their family either financially or residentially.¹⁹

Research has found for many years that social support is protective for mental health, suicidality, and substance use.²⁰⁻²³ As such, social support represents a promising area of research for both improving health outcomes and building on existing strengths of LGBT youth and communities.^{20,24,25} Several definitions of social support exist, and one that captures the broad range of relationships studied in this review is, “the functions performed for the individual by significant others”.²⁰ Social support is further categorized into types: *emotional support*, the sense of love and caring from others; *informational support*, which refers to facts or advice provided by others that assist in solving specific problems; *appraisal support*, wherein a person receives specific feedback or advice; and *instrumental support*, which constitutes physical or material assistance with problems.^{20,21} *Perceived* social support, as opposed to objective, quantifiable instances of social support, represents an especially reliable protective factor for

LGBT individuals, with demonstrated associations with decreased depression and anxiety, improved self-esteem, improved satisfaction with life, and enhanced relationship satisfaction.²⁶⁻

²⁹ Social support may exert both a main effect on health (whereby direct relationships are observed between support and health among LGBT youth) and a buffering effect on health (whereby social support modifies the relationship between sexual orientation and health).

Perceived support may be particularly important to buffering stress for vulnerable populations experiencing disproportionate amounts of stress due to discrimination.²⁰ The minority stress model, influential in LGBT research, also acknowledges these direct and buffering pathways, suggesting that social support may affect health outcomes by reducing the number and severity of stressful events (chronic or acute) directly and by improving resilience when stress occurs.^{30,31}

Future interventions could focus on strengthening or expanding social support for LGBT youth in order to improve outcomes. Nonetheless, there has been no review of the literature focused on social support among LGBT youth to date, and LGBT youth face unique challenges that may require a tailored approach.^{12,32} For example, while family support is often a focus of the clinical literature and lauded as a salient source of support for young LGBT people,^{12,33} a more nuanced understanding of social support may be especially beneficial to providers and programs in situations where family support is unavailable or difficult to reconcile, as with homeless LGBT youth facing family rejection. In this situation, knowledge of the influence of other types and sources of support on health becomes critical. Social support can also take unique forms for the LGBT population, such as the tendency towards “families of choice”.^{32,34-36}

In order to address these issues and identify current gaps in knowledge, this critical review seeks to consolidate and analyze the research from January 2010 to January of 2017 pertaining to the effects of social support on mental health, suicidality, and substance use in

LGBT adolescents and emerging adults. This knowledge may help future efforts to reduce profound disparities for this population.

Methods

This literature review includes English-language peer-reviewed articles published between January 2010 and March 2017, as cultural attitudes toward LGBT people have changed rapidly and dramatically since 2010.¹² More large-scale data also became available, in part because sexual and gender identity measures were added to major national surveys in the U.S. between 2000 and 2010.^{37,38}

I used three search platforms to capture a comprehensive, trans-discipline literature base: PubMed, PsychInfo, and Sociological Abstracts. I derived different variations of keywords relating to LGBT, young adults, social support, mental illness, and substance use from the thesauruses of PsychInfo and Sociological Abstracts. I used MEDLINE indexing to determine the appropriate terms in PubMed. Collectively, this generated 146 articles that were then examined for fit with the inclusion criteria. The inclusion criteria were that the studies: 1) be peer-reviewed, 2) examine social support, 3) include an LGBT population, 4) disaggregate an age group between ages 13 and 25, 5) be an empirical study using either qualitative or quantitative methodologies, 6) report mental health or substance use outcomes, and 7) examine the relationship of interest (social support, as a mediator or moderator, and the impact on a health outcome).

I reviewed the abstracts first against these inclusion criteria, and then the full articles in situations of uncertainty. The full process is noted in Figure 1. By the end of this process, 19 studies met all the criteria and are included in this review.

Results

The authors, year of publication, and title of the 19 included studies are presented in Table 1, with a summary of the main findings in Table 2. All results in the tables or reported in this section that describe increases or decreases in risk that were significant at $p \leq .05$. First, the overall characteristics from the 19 studies are presented, followed by specific results based on sources of support, and finally a report on patterns found in the literature. Table 3 provides a visual summary of the relationships (increase, no effect, or decrease in risk) between sources of support and health outcomes.

Overall Description

The studies included exhibited several strengths. Although many of the studies used cross-sectional designs, six included longitudinal study designs. Additionally, 16 out of the 19 articles disaggregated and analyzed different sources of support. The studies examined a multitude of social support sources, which allowed for a richer analysis of this aspect of the research question. Seven of the studies reported validated measures for social support, and 16 reported validated measures for health outcomes. All but two of the studies' samples were either nationally representative or included more than 50% racial/ethnic minorities, and sample size in 16 studies exceeded 200 participants. Seven studies focused on adolescents, four included only emerging adults, and eight looked at some combination of the two age groups; this variety of age groups made it possible to examine how the importance of different sources of social support changed over time.

Some aspects of the studies limited the scope of the analysis. While source was often examined, the type (i.e. informational, emotional, instrumental, or appraisal) of support was not

often specified in the description of the measures. Only one study disaggregated sexuality-specific support, so that type of support is included in this analysis.³⁹ Six of the studies used incomplete measures of social support – for instance, Seil et al. (2014) looked at “community connectedness”, which is likely a good proxy for social support but not one that has been validated as such.⁴⁰ Some of the studies did not adequately identify their measures, and some excluded transgender or bisexual groups without reporting the reasoning. Five studies analyzed data from the same study, the National Longitudinal Study of Adolescent Health (Add Health),⁴¹ a prospective cohort (although two studies analyzed one wave in a cross-sectional design) that included both sexuality and social support measures. These studies are bolded in Table 3 to distinguish them and raise the possibility of duplication when considering the findings. The Add Health survey data is considerably dated; it began in 1994 when participants attended 7th-12th grade, and most of the studies included in this review took information from waves I-IV, conducted between 1994 and 2001.⁴¹ Similarly, the McConnell et al. studies (8 and 9) analyze the same cohort, Project Q2, at different points in time. These two studies are underlined in Table 3 to visually represent the replicated data source.

Sources of Support

Family/Parental Support

Eleven studies examined parental and family support, and all eleven found that it directly protected against mental illnesses, while three found it directly protected against suicidality (see Table 3).^{6,39,42-48} Just under half of these studies identified transgender people. The age range of the studies was broad: eight included adolescents and seven included emerging adults, with overlap between the age ranges common (i.e., ages 16-23). Depression was the most commonly

studied mental illness with about half of the studies explicitly measuring it. Other common mental health indicators in this group included general mental health and psychological distress.

Seven studies compared parental and family support to other sources. Five studies – 2, 8, 16, 17, 19 – found parental/family support offered the most protection against risk of mental illness and suicidality.^{39,42,43,46,47} McConnell et al. (study 9) didn't find significant differences in psychological distress in an emerging adult cohort with a high-support subgroup that included family, peer, and significant-other support and a high-support subgroup that included peer and significant-other social support but not family support.¹⁷ However, an examination of the same cohort in an earlier publication by McConnell et al. (study 8), where a majority of participants were adolescents, found the family support subgroup did significantly better in mental health and suicidality outcomes, indicating the importance of age when considering the effect of family support on mental illness and suicidality relative to other sources.^{17,42} The study by Mustanski et al. (study 11) was the only one that found peer support to be more protective against psychological distress when compared to family support, and this study captured an older age range of 16-24.⁴⁹

While the two studies (12,13) examining substance use found significantly protective effects of parental social support on marijuana,⁴⁸ hard drug use,^{44,48} and binge drinking,⁴⁴ study 12 found no effect for some measures of substance use – specifically, parental support did not mediate the relationship between bisexual women and higher rates of heavy drinking relative to heterosexual women.⁴⁸ However, for both lesbian and bisexual women, parental support partially mediated the higher rates of marijuana use and hard drug use when compared to heterosexual women.⁴⁸ Simons et al. (study 18) found that perceived parental support was significantly associated with reduced binge drinking and drug use.⁶

Peer Support

Seven of the ten studies that considered peer support looked at youth older than 16, and the other three included younger adolescents. Psychological distress (four studies) and depression (three studies) were the most commonly considered mental health indicators, and suicidality (two studies) and substance use (two studies) were less frequently considered than mental health for this source of support. Additionally, only the McConnell et al. studies (8 and 9) – both of which drew data from the same cohort – identified transgender individuals, so these findings may be limited to LGB individuals.^{17,42}

The seven studies that examined the influence of peer social support on risk of mental illness found a significant protective effect.^{17,18,42,43,46,47,49} However, McConnell et al. (study 8) found mixed results: when comparing a group of high peer and significant other support and a group with low social support from family, peers, and significant others, outcomes for depression, symptoms of major depressive disorder, and suicidality were not significant, but anxiety outcomes were significantly improved in the higher support group.⁴² Interestingly, Teasdale and Bradley-Engen (19) found that peer social support *increased* suicidal tendencies (OR: 1.14, partial OR from log regression with no CI).⁴⁷ In this case, the authors measured suicidality as experiencing suicidal thoughts, a suicide attempt, or a suicide attempt that required medical attention in the last year.⁴⁷

Only Johns et al. (study 5) examined how peer support affected the risk of substance use and found it protective, specifically for same-sex attracted, emerging adult women and for the risk of being a smoker.⁵⁰ However, the study noted that peer support did not show an observed relationship to the *amount* of cigarettes smoked when comparing heavy and light smokers.⁵⁰

Sexuality-Specific Support

For comparisons of type of support from different sources, Doty et al. (study 2) specifically considered sexuality-related support – defined as support for coping with sexuality-related stress – and found that LGBT friends provided more support for sexuality-related stress when compared to heterosexual friends, but heterosexual friends provided more support than family members for this type of stress.³⁹ While both LGBT and heterosexual peers provided more of this type of support than parents, parental support remained the most influential protective source for emotional distress.³⁹

Significant-Other/Partner

Studies 1, 8, 9, and 16 investigated the relationship between support from a significant other and the risk of mental illness and substance use.^{17,42,43,51} Only study 8 examined suicidality and found no significant effect.⁴² Measurement represents an issue when interpreting the results for this source of support, as the McConnell et al. studies looked at “non-family support” groups that included both peer and significant-other support,^{17,42} and the other two studies simply looked at relationship status and not the individual’s perception of the quality of the relationship.^{43,51} With that limitation in mind, three studies found directly protective effects for risk of mental illness.^{17,40,41} However, Austin and Boznick (study 1) found that cohabitation in lesbian and gay emerging adults was associated with an increased risk of substance use.⁵¹

School

While only three studies (4,15,19) considered the relationship between school-related social support and health, the former directly and significantly reduced the risk for all three health outcomes of interest.^{40,47,52} Only one study included transgender youth, which limits the generalizability for this group of studies. The measurement of school social support differed

somewhat across these three studies, including: a caring adult in a school setting,⁴⁰ social support from teachers,⁴⁷ and the presence or absence of a Gay-Straight Alliance (GSA).⁵² The existence of a GSA was associated with significant reductions in risk of using cocaine, hallucinogens, marijuana, and recreational or non-medical use of prescription medication, but there was no effect found for risk of using drugs such as GHB, inhalants, meth, steroids, or anti-anxiety medications, although the sample may have been too small to detect differences.⁵² Another study demonstrated significant reductions in marijuana use, alcohol use, and lifetime drug use when comparing heterosexual students with an adult connection to LGB students without an adult connection.⁴⁰ In this study there were also protective effects that trended towards significance when comparing LGB students with and without an adult connection on the same substance use outcomes.⁴⁰

LGBT Community

Measurement limited the interpretation of results for this group of studies. Both studies (5, 16) used the measure of LGBT community “connectedness”,^{43,50} which might approximate social support but may not represent a comprehensive measure for social support.

With this limitation in mind, one study (5) reported that connection with the LGBT community was associated with significant reductions in risk for some substance use outcomes. Specifically, the relationship between LGBT community connectedness and reduced smoking was particularly strong, with protection against both the risk of being a smoker and the risk of being a heavy smoker for emerging adult lesbian and bisexual women.⁵⁰ Shilo et al. (study 16) found no association between community connectedness and mental distress in LGBQ adolescents.⁴³

Social Stress

Studies 14 and 19 examined social stress, defined as a negative consequence arising from social interactions. These two studies were limited to youth ages of 11-21 and both employed a longitudinal study design. These studies looked at indicators of depression (depressed mood and depressive symptoms) and found that social stress contributed significantly to an increase in the risk of mental illness.^{18,47} Teasdale et al. (study 19) found that social support and social stress together explained 42% of the variance in the relationship between same-sex attraction and depression.⁴⁷ Rosario et al. (study 14) investigated social stress among homeless LGBT youth and found that homeless youth with greater negative social relationships experienced the greatest increase in anxiety symptoms during the longitudinal study, but homeless youth with low levels of negative social relationships did not differ from non-homeless youth on anxiety symptoms.¹⁸ More negative relationships also uniquely contributed to depressive symptoms in this study.¹⁸

Patterns and Comparisons

Adolescents Compared to Emerging Adults

The hierarchy of importance of sources of social support for LGBT youth seems to shift over time both between and within studies, favoring family support in earlier adolescence and peer support in emerging adulthood. As noted in the family support section, while this source of support was most influential in the five studies that made comparisons to other sources such as peers, teachers, and significant others,^{39,42,43,46,47} the two studies with the oldest age groups found peer support on par with¹⁷ or more influential than family support.⁵³ Doty et al. (study 2), examining a somewhat middle-range age group of 18-21, noted that sexuality-specific support was highest from peers, and highest from LGBT peers specifically, but parental support was still the most protective against emotional distress.³⁹ The McConnell et al. studies (8 and 9) examined the same longitudinal cohort over time and noted this trend, pointing out that LGBT youth with

low parental support but high support from peers and significant others ended up with very similar levels (and with statistically non-significant comparisons) of psychological distress by the later years of emerging adulthood.^{17,42} Additionally, the later McConnell et al. study (9) noted that adolescents with high peer and significant other support but low parental support early on ended up with higher parental support in emerging adulthood when compared to adolescents with low support from all sources.¹⁷ The mechanism of this observation represents a useful area of research for future longitudinal studies on the subject. This pattern supports the idea that “families of choice”, even at a young age, can improve young LGBT people’s wellbeing.^{17,54}

Social Support and a More Nuanced Relationship to Substance Use

The relationship between social support and substance use appears more nuanced than the relationship between social support and mental illness or suicidality (see Table 3). While a similar number of studies examined suicidality and substance use, only two studies out of the seven examining suicidality found that peer support specifically had no effect or an increase in risk.^{42,47} On the other hand, three out of the six studies examining risk of substance use found mixed results (no effect and significant protective effects)^{48,52} or an increase in risk⁵¹ with a wider range of sources – family, peer, and school. This suggests that the relationship between social support and substance use may be more complex for LGBT youth and may vary by the substance used. In one study, social support increased risk of substance use.⁵¹ This study (1) specifically examined whether cohabitation in the late 1990s and early 2000s – when marriage equality was still largely nonexistent – was as protective as marriage for heterosexual couples and did not consider quality of relationship, only relationship status.⁵¹

Gender and Identity

Studies that examined gender (3, 13, 17) or LGBT identity (12) or both (6) often made comparisons in heterogeneous ways, such as comparing gay and lesbian youth in one study and comparing bisexual and same-sex attracted youth in another.^{13,44,46,48,55} This heterogeneity of comparisons obscured patterns in this group of studies, although significant differences were often observed. No studies examined differences between gender minorities and sexual minorities when considering the relationship between social support and health outcomes. Additionally, none of the studies asked about transgender identity, so these findings may not apply to transgender youth. Pearson and Wilkinson (study 13) found that while parental support reduced disparities between same-sex attracted adolescents and only other-sex attracted adolescents in binge drinking, depression, and illegal drug use, the magnitude of this reduction was greater for girls than for boys – 40% vs. 9% for depressive symptoms and 18% vs. 13% for drug use, respectively.⁴⁴ Hatzenbuehler et al. (study 3) found that the relationship between social isolation and depression was stronger for same-sex attracted boys than for same-sex attracted girls.¹³ Shilo and Savaya (study 17) examined friend and family support and found no significant gender differences in relation to mental health and these sources of support.⁵⁶ Langhinrichsen-Rohling et al. (study 6) found that social support buffered the effects of depression on suicidality more strongly for youth with exclusive same-sex attraction than for bisexuals.⁵⁵ Needham and Austin (study 12) found that parental support fully mediated the association between same-sex attraction and high depression symptoms, marijuana use, and hard drug use for emerging adult bisexuals and lesbians, and partially mediated suicidality in this group of youth.⁴⁸ Parental support partially mediated disparities between gay and heterosexual male emerging adults in depressive symptoms and suicidal thoughts as well, but no substance use disparities were found for male youth.⁴⁸

Discussion

Findings from this critical review indicate that social support from a variety of sources is most often significantly associated with reduced risk of mental illness, suicidality, and substance use in LGBT youth. Over half of the 19 studies investigated parental/family support and peer support and found that both sources significantly protected against the risk of mental illness and suicidality in all the studies examining the relationship. Parental support appeared to be most protective for adolescents, with peer support becoming more important in emerging adulthood. Social support from a significant other was a difficult source to interpret due to incomplete measurements, but this source was also associated with reduced mental health symptoms in three studies, had no observed effect on mental health in two studies, and increased the risk of substance use in one study. Only two studies investigated school support, but both found significant reductions in risk across the health outcomes of interest. The studies in this review examined substance use in relation to social support less often, and although a majority of studies found significant protective effects from a variety of sources, half the studies found mixed or detrimental results. Support from the LGBT community had no significant association with mental illness, but it was significantly associated with reduced substance use in some cases. Social stress from relationships was associated with both risk of mental illness and suicidality.

Some results showed adverse effects from social support. The importance of parental and peer support in reducing mental illness, suicidality, and adolescent drug use is well supported,^{10,12,14,15,57} however, peer and parent drug use and norms are also implicated in increased risk of drug use for adolescents and may help to explain some of the mixed results regarding social support and substance use.^{14,15,22} Notably, LGBT-community support protected against some types of substance use, and this evidence helps clarify an area of uncertainty, as

some historical (and current) safe meeting places like gay bars centered around alcohol, smoking, and other drugs.⁵⁸ Regarding the finding that peer social support increased risk of suicidality in one study, evidence supports the notion that suicide spreads through adolescent social circles almost like a contagion, and peers represent the most salient source of suicidal influence in these social circles.⁵⁹

Limitations and Future Directions

Many opportunities exist to build on this research. For LGBT youth, parental support and peer support are most studied and most frequently associated with improved health, but school support and LGBT community support, while less frequently studied, also show promising findings. Both represent effective community-level resiliency structures already popular throughout the U.S and may be especially important for LGBT youth who lack parental support or supportive peer relationships. The effects of LGBT peer support throughout the transition from adolescence to adulthood in one study also warrants more research given the potential longitudinal influence on both psychological distress and parental support. More accurate measurements of significant-other support, including both relationship status and quality of the relationship, are needed in future research to adequately determine the effect of this source on the outcomes of interest.

In addition to examining intersectionality beyond descriptive statistics in future research, researchers should use validated measurements for social support whenever possible. While a majority of the studies used validated measures, incomplete measures limited this review, particularly in assessing social support from significant others. Researchers should also follow established guidelines^{5,38,61} for measuring sexual orientation and gender identity to avoid the appearance of unintentional discrimination, such as excluding transgender or bisexual

individuals either before or after the data collection process without providing reasoning.

Comparisons among LGBT identities would greatly enrich future research, as each identity has a unique health outcome profile and may have a unique social support makeup as well.

The literature included in this study all incidentally pursued research quantitatively. The most common reason for exclusion of qualitative work was the lack of health outcome considerations, which is in some ways a quantitative framework. This absence represents another important limitation in this review, as qualitative work studying social support may offer a deeper understanding of some underlying mechanisms, such as the influence of peer support on parental support over time.

Conclusion

This review found that many sources of social support can protect against adverse health outcomes for LGBT youth, and these sources may have more or less impact depending on developmental stage in a youth's trajectory or the specific targeted health outcome. Understanding these relationships creates an opportunity for practitioners to influence the "environment of opportunity" for LGBT youth.³¹ Healthcare practitioners should offer family counseling for LGBT youth experiencing low parental support, encourage youth with low social support to connect with accepting peers and teachers, and encourage accessing LGBT community resources like GSAs and community centers. Practitioners should note the growing importance of peer support for health and well-being in emerging adults and potential affects for adolescents, as this avenue of support may offer more options for youth with unaccepting families. Peer support groups may fit best with emerging adults based on this research, while family counseling, when possible, may represent the best first approach for adolescents with low

social support. Substance use, although not always influenced by social support, still sees positive reductions when GSAs are present in a school and youth are involved with the LGBT community. As such, this research affirms and supports the growth and funding of programs that connect LGBT youth in these settings. Practitioners can also act as agents of change by advocating for or implementing new LGBT programs rooted in social connection. Activism for promoting an environment of opportunity should always extend upstream to the social structures that influence the quality and quantity of relationships for LGBT youth, which includes policies that protect and affirm LGBT people, inclusive curriculums, and trainings for practitioners seeking to affirm LGBT youth.

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Table 1. Included studies and their identification numbers

<i>ID</i>	<i>Author(s) and (year)</i>	<i>Title</i>
1	Austin, Bozick (2012)	Sexual orientation, partnership formation, and substance use in the transition to adulthood
2	Doty, Willoughby, Lindahl, Malik (2010)	Sexuality related social support among lesbian, gay, and bisexual youth
3	Hatzenbuehler, McLaughlin, Xuan (2012)	Social networks and risk for depressive symptoms in a national sample of sexual minority youth
4	Heck, Livingston, Flentje, Oost, Stewart, Cochran (2014)	Reducing risk for illicit drug use and prescription drug misuse: High school gay-straight alliances and lesbian, gay, bisexual, and transgender youth
5	Johns, Pingel, Youatt, Soler, McClelland, Bauermeister (2013)	LGBT community, social network characteristics, and smoking behaviors in young sexual minority women
6	Langhinrichsen-Rohling, Lamis, Malone (2011)	Sexual Attraction Status and Adolescent Suicide Proneness: The Roles of Hopelessness, Depression, and Social Support
7	Liu, Mustanski (2012)	Suicidal ideation and self-harm in lesbian, gay, bisexual, and transgender youth
8	McConnell, Birkett, Mustanski (2015)	Typologies of Social Support and Associations with Mental Health Outcomes Among LGBT Youth
9	McConnell, Birkett, Mustanski (2016)	Families matter: Social support and mental health trajectories among lesbian, gay, bisexual, and transgender youth
10	Mustanski, Liu (2012)	A longitudinal study of predictors of suicide attempts among lesbian, gay, bisexual, and transgender youth
11	Mustanski, Newcomb, Garofalo (2011)	Mental health of lesbian, gay, and bisexual youth: A developmental resiliency perspective
12	Needham, Austin (2010)	Sexual orientation, parental support, and health during the transition to young adulthood
13	Pearson, Wilkinson (2013)	Family relationships and adolescent well-being: are families equally protective for same-sex attracted youth?
14	Rosario, Schrimshaw, Hunter (2012)	Homelessness among lesbian, gay, and bisexual youth: Implications for subsequent internalizing and externalizing symptoms
15	Seil, Desai, Smith (2014)	Sexual orientation, adult connectedness, substance use, and mental health outcomes among adolescents: findings from the 2009 New York City Youth Risk Behavior Survey
16	Shilo, Antebi, Mor (2015)	Individual and community resilience factors among lesbian, gay, bisexual, queer and questioning youth and adults in Israel
17	Shilo, Savaya (2011)	Effects of family and friend support on LGB youths' mental health and sexual orientation milestones
18	Simons, Schrage, Clark, Belzer, Olson (2014)	Parental support and mental health among transgender adolescents
19	Teasdale, Bradley-Engen (2010)	Adolescent same-sex attraction and mental health: the role of stress and support