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Social Support, Depression, Self-Esteem, and Coping Among LGBTQ Adolescents Participating in Hatch Youth

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Evidence-based interventions that increase social support have the potential to improve the health of lesbian, gay, bisexual, transgender, and queer (LGBTQ) youth. Hatch Youth *is a group-level intervention that provides services four nights a week to LGBTQ youth between 13 and 20 years of age. Each* Hatch Youth *meeting is organized into three 1-hour sections: unstructured social time, consciousness-raising (education), and a youth-led peer support group. Youth attending a* Hatch Youth *meeting between March and June 2014 (*N = *108) completed a cross-sectional survey. Covariate adjusted regression models were used to examine the association between attendance, perceived social support, depressive symptomology, self-esteem, and coping ability. Compared to those who attended Hatch Youth for less than 1 month, participants who attended 1 to 6 months or more than 6 months reported higher social support (*$\beta_{1\text{-}6mo.}$ *= 0.57 [0.07, 1.07];* $\beta_{6+mo.}$ *= 0.44, 95% confidence interval [CI; 0.14, 0.75], respectively). Increased social support was associated with decreased depressive symptomology (*β = *−4.84, 95% CI [−6.56, −3.12]), increased self-esteem (*β = *0.72, 95% CI [0.38, 1.06]), and improved coping ability (*β = *1.00, 95% CI [0.66, 1.35]). Hatch Youth is a promising intervention that has the potential to improve the mental health and reduce risk behavior of LGBTQ youth.*

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INTRODUCTION

There is an urgent need to develop and disseminate tailored evidence-based interventions that improve the health of lesbian, gay, bisexual, transgender, and queer (LGBTQ) youth. LGBTQ youth rarely have control over their daily schedules and the people with whom they interact (e.g., family, classmates), forcing many to live in environments in which they are subject to regular experiences of discrimination. The relationship

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between discrimination and psychological distress is mediated by a lack of social support for one's same-sex attraction or gender variation (Hatzenbuehler, 2009; Hatzenbuehler, Dovidio, Nolen-Hoeksema, & Phills, 2009; Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010; Hatzenbuehler, McLaughlin, & Xuan, 2012). This article reports the findings from an evaluation of *Hatch Youth*, a group-level intervention in Houston, Texas, developed to provide youth with safe environments to interact with similar others, thereby improving the mental health and decrease risk behavior of LGBTQ youth.

BACKGROUND

When seeking to understand how the environment affects the health and well-being of LGBTQ youth, researchers have found it useful to ground their research in minority stress theory and social ties theory. For LGBTQ youth, the minority stress theory posits that their health is affected by the degree to which their social environment stigmatizes sexual and gender minorities and the extent to which LGBTQ youth in these environments are expected to hide their nonconformity (Meyer, 2003, 2007). To understand the mechanisms explaining how living in stigmatizing environments and hiding one's nonconformity might contribute to poorer health outcomes, researchers have come to rely on social ties theory (Israel, 1982; Thoits, 2011). This theory posits that the health of LGBTQ youth is affected by the strength of primary (family members and close friends) and secondary (members of organizations and coworkers) social ties. When facing intolerance from their primary social ties, LGBTQ youth can experience a loss of social support. The social support construct can be further broken down into the components of informational, emotional, and instrumental assistance. Overall, the absences of social support can create a loss of perceived control and a perceived loss of self-efficacy. The end result is a lowering of self-esteem and an increase in stress levels and other undesirable health outcomes. Theoretically, these undesirable outcomes could be moderated by supportive secondary ties, especially when these ties include other individuals experiencing and coping with similar issues (Thoits, 2011).

There is research that estimates the extent to which environments that stigmatize sexual and gender nonconformity can affect the physical and mental health outcomes of LGBTQ youth. For instance, Shilo and Savaya (2011) found that lesbian, gay, and bisexual youth experienced greater self-acceptance and had a higher sense of well-being and less mental distress when they perceived their family and friends accepted their sexual orientation and supported their decision to be open (out) about their same-gender attraction. To explore the notion that LGBTQ youth of color and transgender and bisexual youth, regardless of race and ethnicity, might experience more intolerance than other lesbian and gay youth, Mustanski, Garofalo, and Emerson (2010) conducted a study to identify differences in mental health outcomes of LGBTQ youth in Chicago. Though they found more homogeneity than hypothesized, they cautioned that more research was needed.

Both the Society for Adolescent Health and Medicine (Hosek et al., 2013) and the Centers for Disease Control and Prevention (2012) suggest that interventions targeting LGBTQ youth increase communication about health topics and reduce the stigma experienced by LGBTQ persons. A systematic review of the literature (Gavin, Catalano, David-Ferdon, Gloppen, & Markham, 2010) found that, in general, the 15 most effective sexual health education interventions targeted social competence (100%), social bonding (80%), cognitive competence (67%), emotional competence (67%), self-determination (47%), belief in the future (47%), self-efficacy (40%), social norms (40%), moral competence (33%), and identity development (27%). When developing programs for LGBTQ youth specifically, researchers have recommended that interventions include access to role models or mentors and assistance with setting goals and developing an action plan to meet the goals (Bird, Kuhns, & Garofalo, 2012; Lyons, Johnson, & Garofalo, 2013).

Persons who live in family environments and attend school in environments that stigmatize homosexuality or gender variation experience greater psychological distress, depressive symptoms, suicidal ideation, avoidant coping, substance use, and riskier sexual behavior (Bradford, Reisner, Honnold, & Xavier, 2013; Budge, Adelson, & Howard, 2013; Doty, Willoughby, Lindahl, & Malik, 2010; Goldblum, Testa, Hendricks, Bradford, & Bongar, 2012; Hatzenbuehler, Pachankis, & Wolff, 2012; Herek, 2009; Liu & Mustanski, 2012; Nadal, Davidoff, Davis, & Wong, 2014; Robinson & Espelage, 2013; Russell, Ryan, Toomey, Diaz, & Sanchez, 2011; Ryan, Huebner, Diaz, & Sanchez, 2009; Testa et al., 2012; Toomey, Ryan, Diaz, Card, & Russel, 2013), likely because they have less social support from primary or secondary social ties. In contrast, youth who live and attend school in a more tolerant environment experience less psychological distress and substance use and higher perceived social support, higher self-esteem, and, in general, better overall health (Hatzenbuehler, 2011; Hatzenbuehler, Birkett, Van

Wagenen, & Meyer, 2014; Herek, 2009; Ryan, 2010; Ryan, Russell, Huebner, Diaz, & Sanchez, 2010; Simons, Schrager, Clark, Belzer, & Olson, 2013). While it is unclear whether it is primary or secondary social ties that have a more powerful effect on LGBTQ youth's health outcomes, the loss of support from either justifies a need for interventions for LGBTQ youth living in stigmatizing environments.

There is a deficiency in group-level interventions targeting the mental and general health well-being of LGBTQ youth. *The EXPLORE* study for instance, which involved a national cohort, was an individual-level intervention (Salomon et al., 2009). The *Life Skills* program, though a small group-level intervention, only focused on transgender women (Garofalo et al., 2012), and there is also *Queer Sex Ed*, which is an online intervention (Mustanski, Greene, Ryan, & Whitton, 2015). *Hatch Youth*, a social support group for youth residing in the Houston, Texas, area, provides a supportive environment where youth can learn about their health, interact with LGBTQ adult mentors, and, perhaps most important, interact with other LGBTQ youth. Through weekly discussion groups, youth can develop mental health– and gender-affirming action plans and receive regular feedback on efforts to meet the goals of their plans. Given the focus of *Hatch Youth* on adult and peer support, the purpose of this study was to examine the association between the duration of *Hatch Youth* attendance, perceived social support, depressive symptoms, self-esteem, and coping ability.

METHOD

Intervention

Hatch Youth is a drop-in center designed to improve mental health and reduce behavioral risk outcomes by increasing social support, an approach that the research suggests should be effective (Gavin et al., 2010; Hatzenbuehler, 2009; Hatzenbuehler et al., 2009; Hatzenbuehler et al., 2010; Hatzenbuehler, McLaughlin, et al., 2012). *Hatch Youth*, formed in 1987 as the Houston Area Teen Coalition of Homosexuals, hosts weekly social and peer support meetings for LGBTQ youth. Each *Hatch Youth* meeting lasts 3 hours and is divided into three sections. During the *social hour*, new visitors are welcomed and oriented to the center and its services. As part of the intake process, new visitors are asked to create a unique identification code, which they can use to sign-in when attending future meetings. Participants are encouraged to socialize, talk to facilitators, use computer stations, play games, and enjoy refreshments. This is followed by a *consciousness-raising hour*. Facilitators or invited guests lead a presentation or activity about a relevant topic, including substance use, sexuality, HIV/STIs, healthy relationships, general health/wellness, LGBTQ current issues, and history of LGBTQ culture and oppression. These presentations follow a 3-month rotating schedule to maximize participants' exposure to key topics. The final hour consists of a *youth-led peer support group* where participants talk about the events and issues in their lives and/or process a specific topic. The topics for discussion are not predetermined; rather, they emerge organically as the youth engage each other in conversations. Examples of topics discussed include self-awareness and acceptance, coming out and relating to family or peers, bullying, dating, and if transgender or gender nonconforming, advice on successfully transitioning to one's preferred gender. Adult facilitators are volunteers from the community who have completed a 2-day training developed by paid *Hatch Youth* staff. Facilitators monitor the group and contribute only when needed to halt or prevent disrespectful or abusive behavior. Facilitators also watch for signs of, and screen for symptoms of abuse, depression, substance use, and self-harm/suicide.

The organization came under the auspices of the Montrose Center, the largest LGBTQ mental health service provider in Houston, Texas, in 2003. Apart from fortifying the program with formal policies and procedures, very few changes were made to the program's original model. In 2012, the program's title was changed to *Hatch Youth*, removing the acronym to reflect inclusion of all sexual minorities but keeping the name "Hatch" due to its unique and well-known local brand identity. The meetings are open to all LGBTQ identifying youth. The Montrose Center promotes *Hatch Youth* through its website and by distributing brochures to schools and other youth-serving organizations in the area. As part of *Hatch Youth*, the Montrose Center also sponsors a local radio show that is cohosted by youth participating in the program. The radio show provides another opportunity to promote the program.

Study Design

The Montrose Center contracted with the first author to conduct an independent program evaluation of *Hatch Youth*, the institutional review board of the first author's home institution approved secondary data analysis of *Hatch Youth* data. Between March and June 2014, *Hatch Youth* asked participants to complete a survey developed by *Hatch Youth* staff covering a variety of health indicators, including perceived social support, depressive symptoms, self-esteem, and ability

to handle problems. To protect the confidentiality and ensure understanding of participants, *Hatch Youth* did not obtain parental consent or written assent. Instead, when youth were invited to participate, a *Hatch Youth* staff member or volunteer verbally reviewed information normally covered in a consent document, including the purpose of the study, risk and benefits, and the option to not complete the survey. To ensure understanding, the staff member or volunteer asked participating youth to quickly summarize what they had been told and answered questions posed by the youth. Completion of the survey was accepted as assent. The survey took approximately 10 minutes to complete. Youth were not offered compensation for completing the survey.

Measures

Duration of Hatch Youth Attendance. One item asked participants how long they had been attending *Hatch Youth* meetings. Response options included *less than 1 month, 1 to 3 months, 3 to 6 months, 6 months to 1 year*, and *more than 1 year*. For analysis, responses were collapsed into three categories: *less than 1 month, 1 to 6 months*, and *6 or more months*.

Perceived Social Support. Participants were asked to respond to a twelve 5-point Likert-type items from the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988). Response options ranged from 1 = *strongly disagree* to 5 = *strongly agree*. The items address three aspects of perceived social support, family, friends, and significant others. Responses were averaged to create an overall score for each respondent; a higher score was indicative of more perceived social support. In this sample, Cronbach's alpha for the entire scale was .91.

Depressive Symptoms. Participants were asked to respond to ten0 4-point Likert-type items from a short form of the Center for Epidemiological Studies Depression Scale (Zhang et al., 2012). Responses options ranged from 0 = *rarely or none (<1 day)* to 3 = *all of the time (5-7 days)*. Responses were summed to create an overall score for each respondent; a higher score was indicative of more depressive symptoms. In this sample, Cronbach alpha for the entire scale was .87.

Self-Esteem. One item asked participants to indicate what extent the statement, "I have high self-esteem" was true. Response options ranged from 1 = *not very true of me* to 5 = *very true of me*. Robins, Hendin, and Trzesniewski (2001) compared this single-item measure to the Rosenberg Self-Esteem Scale (Rosenberg, 1965) and found the single item to have moderate to high convergent validity, providing a useful measure to assess self-esteem without increasing participant burden.

Coping. One item asked participants indicate what extent the statement, "In the past 90 days, I have been able to handle my problems," was true. Response options ranged from 1 = *not very true of me* to 5 = *very true of me.*

Covariates. Individual-level variables were included as covariates in the adjusted regression models. Age was entered into models as a continuous variable. Gender, sexual orientation, and race-ethnicity were entered as categorical variables. To assess gender identity, participants were asked whether they identified as *male, female, transman, transwoman*, or *gender queer*; transgender and gender queer identities were collapsed for analyses. To assess sexual orientation, participants were asked if they *were gay, lesbian, bisexual, queer, unsure or questioning*, or *straight or heterosexual*; unsure or questioning and straight or heterosexual were collapsed for analyses and labeled as "other." To assess race, participants were asked if they identified as *Black or African American, Native American, Caucasian or White, Asian or Pacific Islander*, or *Biracial or Mixed*. To assess ethnicity, participants were asked if they identified as *Hispanic or Latino/a* (yes/no). For race/ethnicity analyses, these two items were collapsed to create a race/ethnicity variable. Because most participants were Latino or White, for analyses all other racial-ethnic identities were placed into one category labeled as "other."

Statistical Analysis

An adjusted linear regression model was used to identify differences between participant characteristics, *Hatch Youth* attendance, and perceived social support. Adjusted linear regression models were also used to assess associations between duration of *Hatch Youth* attendance, perceived social support, and the psychosocial characteristics (depression, self-esteem, and ability to handle problems in the past 90 days). The Baron and Kenny (1986) method was used to test whether social support mediates the relationship between duration at *Hatch Youth* and psychosocial characteristics. The method requires four steps: (1) establish a correlation between the duration of *Hatch Youth* attendance and each outcome variable, (2) establish a correlation between duration of *Hatch Youth* attendance and perceived social support, (3) establish a correlation between

TABLE 1
Participant Characteristics (*N* = 108)

Demographic Characteristics	n *(%)*
Age, *M* (*SD*), years	16.76 (1.84)
Gender	
Female	34 (34.69)
Male	43 (43.88)
Transgender/gender queer	21 (21.43)
Sexual orientation	
Gay	39 (40.63)
Lesbian	15 (15.63)
Bisexual	23 (23.96)
Other	19 (19.79)
Race/ethnicity	
Latino	24 (26.67)
White	40 (44.44)
Other	26 (28.89)
Duration of *Hatch Youth* attendance, months	
<6	66 (61.11)
6+	42 (38.89)
Psychosocial Characteristics	M *(*SD*)*
Perceived social support	4.05 (0.77)
Depressive symptoms	12.51 (7.50)
Self-esteem	3.02 (1.34)
Coping ability, past 90 days	3.05 (1.44)

NOTE: Differences in counts the result of missing values. Other sexual orientation includes queer (*n* = 11), unsure or questioning (*n* = 4), straight or heterosexual (3), or something else (1 entered another identify into an open field). Other race-ethnicity includes Black or African American (*n* = 3), Native American (*n* = 2), Asian or Pacific Islander (*n* = 4), and Biracial or Mixed (*n* = 17). Perceived social support, self-esteem, and coping ranged from 1 to 5; depressive symptoms ranged from 0 to 3.

the perceived social support and each outcome variable, and (4) establish complete or partial mediation by observing a significant change in the correlation between duration of *Hatch Youth* attendance and each outcome after controlling for perceived social support. All analyses were conducted using STATA IC Version 13.

RESULTS

Participant characteristics are reported in Table 1. Participants were an average of 16.76 (*SD* = 1.84) years of age (range 13-20). While most participants (78.57%) identified as cisgender (i.e., their gender identity matches their assigned sex at birth), 21.43% identified as transgender. While most (80.22%) participants identified as gay, lesbian, or bisexual, 19.79% identified as queer, unsure or questioning, heterosexual or straight, or something else that they wrote into an open field. Nearly a quarter of participants identified as Latino (26.67%), and 44.44% of the participants identified as White. The majority (61.11%) reported that they had attended *Hatch Youth* for fewer than 6 months. The assessment of social support was relatively high (*M* = 4.05, *SD* = 0.77). Despite having relatively high social support, the assessment of depressive symptoms indicated that on average, participants were experiencing significant or mild depressive symptomatology (*M* = 12.51, *SD* = 7.50, using 11 as the cutoff score). Self-esteem and coping ability in the past 90 days were normally distributed (*M* = 3.02, *SD* = 1.34; and *M* = 3.05, *SD* = 1.44, respectively).

TABLE 2
Adjusted Parameter Estimates of the Associations With Indicators of Social Support (*N* = 108)

Independent Variables	*Multidimensional Perceived Social Support Scale,* β *[95% Confidence Interval]*
Age	0.00 [−0.08, 0.08]
Gender	
Female	**0.48 [0.07-0.89]**
Male	Reference
Transgender/gender queer	−0.29 [−0.70, 0.12]
Sexual orientation	
Gay	Reference
Lesbian	**0.58 [0.07, 1.10]**
Bisexual	0.20 [−0.19, 0.60]
Other	**0.54 [0.07, 1.01]**
Race/ethnicity	
Latino	−0.30 [−0.74, 0.14]
White	Reference
Other	0.01 [−0.34, 0.36]
Duration of *Hatch Youth* attendance, months	
<1	Reference
1-6	**0.57 [0.07, 1.07]**
6+	**0.44 [0.14, 0.75]**

NOTE: Boldface indicates statistical significance at $p < .05$.

Duration of attendance in *Hatch Youth* was associated with increased perceived social support (Table 2) after adjusting for age, gender, sexual orientation, and race/ethnicity. Compared to those who attended *Hatch Youth* for less than 1 month, participants who attended for 1 or more months reported higher social support.

TABLE 3
Adjusted Parameter Estimates of the Associations Between Duration of *Hatch Youth* Attendance, Social Support, Depression, Self-Esteem, and Ability to Handle Problems (*N* = 108)

Independent Variables	*Depression,* β *[95% CI]*	*High Self-Esteem,* β *[95% CI]*	*Coping Ability, Past 90 Days,* β *[95% CI]*
Duration of *Hatch Youth* attendance, months			
<1	Reference	Reference	Reference
1-6	**4.33 [0.07, 8.59]**	0.08 [−0.75, 0.92]	−0.13 [0.99, 0.74]
6+	0.57 [−2.17, 3.31]	0.30 [−0.24, 0.85]	−0.16 [−0.71, 0.40]
Perceived social support	**−4.84 [−6.56, −3.12]**	**0.72 [0.38, 1.06]**	**1.00 [0.66, 1.35]**

NOTE: CI = confidence interval. Boldface indicates statistical significance at $p < .05$. Models adjusted for age, gender, sexual orientation, and race/ethnicity.

Parameter estimates of the association between the covariates and social support indicates higher social support among females when compared to males (β = 0.48, 95% confidence interval [CI; 0.07, 0.89]), and among lesbians (β = 0.58, 95% CI [0.07, 1.10]) and participants in the other sexual identity category (β = 0.54, 95% CI [0.07, 1.01]) when compared to gay participants.

Table 3 summarizes adjusted parameter estimates for associations between duration of *Hatch Youth* attendance, social support, and related psychosocial characteristics. After adjusting for social support and demographic characteristics, the only significant association between duration of *Hatch Youth* attendance and psychosocial characteristics was the association between attendance and depression (β = 4.33, 95% CI [0.07, 8.59]). However, increased social support was associated with all psychosocial characteristics. With increased social support, depression decreased (β = −4.84, 95% CI [−6.56, −3.12]), and self-esteem (β = 0.72, 95% CI [0.38, 1.06]) and ability to handle problems (β = 1.00, 95% CI [0.66, 1.35]) increased. We used the Baron and Kenny (1986) method to test for possible mediation of social support between duration in *Hatch Youth* and psychosocial characteristics. There was no evidence of mediation, possibly because the measure to assess duration of *Hatch Youth* attendance was categorical rather than continuous or because of the small sample size.

DISCUSSION

For almost three decades, *Hatch Youth* has provided services to LGBTQ youth throughout Houston, Texas. It was designed to improve mental health of LGBTQ youth, including depression, self-esteem, and coping ability, and reduce subsequent behavioral risks. This study represents the first empirical evaluation of *Hatch Youth*. Youth participating in this study reported improved social support within the first 6 months of participating in the program. Youth with higher perceived social support reported lower depressive symptomology and increased self-esteem and coping, results that are consistent with existing research (Gavin et al., 2010; Hatzenbuehler, 2009; Hatzenbuehler et al., 2009; Hatzenbuehler et al., 2010; Hatzenbuehler, McLaughlin, et al., 2012). The success of the program may lie in the combination of providing youth with a means to interact with other LGBTQ youth, learn about specific social and health issues affecting them, and take part in facilitated discussions that highlight the issues faced by their colleagues. It is possible that this broad approach of the *Hatch Youth* program strengthens the secondary social ties of participating youth, making up for the absence of social support they may experience elsewhere and leading to the positive changes we observed in our evaluation.

Through enhanced social support, *Hatch Youth* has the potential to improve the mental and physical health of LGBTQ youth who participate in the program. In the future, these results may help improve the program, allowing it to focus additional resources to strengthen and expand the aspects that provide emotional and coping assistance to LGBTQ youth who experience a loss of support from their primary social ties, because they are open (out) about their sexual orientation or gender identity and expression. On a larger scale, these results provide support for the development of interventions that can capitalize on the *Hatch Youth* framework in similar environments across Texas and the United States. The results may also have implications for policy makers interested in crafting policy to positively affect the sexual and mental health education needs of LGBTQ youth in Texas.

A limitation of this study was the cross-sectional design. Without longitudinal data, we were unable to explore the temporal relationship between duration of attendance, social support, and other psychosocial characteristics. Although our analyses suggest social support increases between 1 and 6 months, future research should employ a longitudinal design to determine the amount of sessions needed to affect perceived social support and subsequent psychosocial outcomes. A longitudinal study design would also help address retention biases, as various participants could be tracked effectively over time and analysis could account for the reasons behind participant attrition. In addition to employing a longitudinal study design, future research should employ an experimental method with a comparison group or, if no group can be identified, a cohort design in which participants with differing levels of participation are followed over time to detect differences in social support and the psychosocial characteristics. The categorical measurement of duration of attendance was also a limitation. Future research should measure duration of attendance continuously. Future research should also examine the association between social support and physical and sexual health outcomes as this analysis focused only on depression, self-esteem, and coping.

Our findings suggest that youth participating in the *Hatch Youth* program may experience improved social support, which can decrease depressive symptoms, increase self-esteem, and raise coping ability. While additional program evaluation research is needed, *Hatch Youth* is a promising intervention that has the potential to be replicated by other community-based organizations, wishing to improve the perceived social support and mental health sequelae of LGBTQ youth.

CONSISTENCY WITH MISSION OF THE JOURNAL

Consistent with the journal's mission, this article reports the findings from a program evaluation of a drop-in program for LGBTQ youth that will be useful to practitioners and researchers working in similar environments. It also provides LGBTQ advocates and policy makers looking to effect policy change with an example of an intervention that helps address some social and health needs of LGBTQ youth.

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