Greater Engagement in Gender-Sexuality Alliances and GSA Characteristics Predict Youth Empowerment and Reduced Mental Health Concerns

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Abstract

Extracurricular groups can promote healthy development, yet the literature has given limited attention to indirect associations between extracurricular involvement and mental health or to sexual and gender minority youth. Among 580 youth (M_{age}=15.59, range=10 to 20 years) and adult advisors in 38 Gender-Sexuality Alliances (GSAs), multilevel structural equation models showed that greater engagement in GSAs over the school year predicted increased perceived peer validation, self-efficacy to promote social justice, and hope (baseline adjusted). Through increased hope, greater engagement indirectly predicted reduced depressive and anxiety symptoms at the year's end (baseline adjusted). GSAs whose members had more mental health discussions and

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more meetings reported reduced mental health concerns. Findings suggest how groups addressing issues of equity and justice improve members' health.

Keywords

School-based extracurricular groups have strong potential to promote healthy development among children and adolescents. Meta-analytic reviews of youth programs (Durlak et al., 2011; Lauer et al., 2006) and school-based extracurricular groups specifically (Farb & Matjasko, 2012) have documented support for their ability to promote prosocial behavior and social connection among youth. Still, as evident in these reviews and as noted by other scholars, this literature has given limited attention to youth from marginalized populations (Farb & Matjasko, 2012; Fredricks & Simpkins, 2012), particularly to sexual and gender minority (SGM) youth (Poteat, Yoshikawa, Calzo, Russell, & Horn, 2017). This limitation is important because many SGM youth experience discrimination at school, which is linked to poorer mental health, such as depression, suicidality, and poorer life satisfaction into adulthood (Martin-Storey & Fish, 2019; Russell & Fish, 2016). Scholars have called for attention to school-based resources for SGM youth that could promote their resilience, including SGM-supportive extracurricular groups (Russell, Horn, Kosciw, & Saewyc, 2010).

Here we give focus to Gender-Sexuality Alliances (GSAs, also referred to as Gay-Straight Alliances), which are school-based clubs that bring together youth across sexual orientations and gender identities to address SGM issues (Griffin, Lee, Waugh, & Beyer, 2004). Now in 38% of high schools and 17% of middle schools in the U.S. (CDC, 2015), GSAs are positioned to reach and support many youth. We build on emergent GSA research to test a model of specific processes through which youth's greater engagement in their GSA could predict reduced depressive and anxiety symptoms, and examine group-level factors that might predict reduced depressive and anxiety symptoms among members over the school year.

Foundational Support for GSAs

As extracurricular clubs, GSAs serve multiple functions for youth and typically meet weekly during lunch or immediately after school for up to an hour. Meeting time can be spent socializing; discussing topics such as bullying or coming out; sharing concerns and offering social and emotional support; or planning and hosting events such as Day of Silence or National Transgender Day of Remembrance (GLSEN, n.d.; Griffin et al., 2004; Poteat et al., 2015). These efforts generally align with reasons why youth have reported joining their GSA, such as a need for support, a desire to support others, an interest in socializing, or an interest in social justice (Miceli, 2005). Some of these intentions mirror reasons why youth join school clubs and extracurricular groups in general (e.g., to socialize and make or maintain friendships; Schaefer, Simpkins, Vest, & Price, 2011). Finally, most GSAs are youth-led and supported by an advisor who is often a teacher, counselor, or school nurse (Graybill, Varjas, Meyers, & Watson, 2009). This follows youth program models that

emphasize providing youth with opportunities to lead with adult mentorship (Eccles & Gootman, 2002; Rhodes & DuBois, 2008).

GSAs are distinct from other school clubs oriented toward socializing around a shared academic, creative, or special interest (e.g., history, yearbook, or gaming clubs; music or art groups), and support groups where youth leave after their own needs have been meet (e.g., peer counseling or tutoring; Eccles & Barber, 1999; Knifsend & Juvonen, 2017; Larson, Hansen, & Moneta, 2006). Rather, GSAs are similar to cultural clubs and a growing number of student groups oriented around larger societal issues (e.g., racial justice groups; Taines, 2012). These groups aim not only to encourage socializing and support among their members but also to counteract injustice in their schools and society.

Foundational research has documented cross-sectional differences in youth's well-being based on GSA existence or membership therein. Youth in schools with GSAs report less substance use, fewer suicide attempts, and greater perceived safety than youth in schools without GSAs (Davis, Stafford, & Pullig, 2014; Heck, Flentje, & Cochran, 2011; Marx & Kettrey, 2016; Walls, Kane, & Wisneski, 2010). However, comparisons based only on GSA presence give no indication as to why GSA presence may relate to better well-being for youth in these schools. They rarely have adjusted for other relevant covariates, and nearly all have been cross-sectional. Studies further comparing youth based on membership (i.e., youth who have ever vs. never been a GSA member) have identified some, but less consistent, differences on these same indicators of well-being (Heck et al., 2011; Toomey, Ryan, Diaz, & Russell, 2011). Scholars have critiqued this approach, which also has been used in the broader extracurricular literature (Bohnert, Fredricks, & Randall, 2010). Comparisons based only on youth's membership status overlook variability among members in their experiences. Thus, binary comparisons may be less informative of whether or how membership could promote these outcomes. Scholars have argued instead for more focused attention on members themselves and to dimensions of their involvement in these groups, such as their level of active participation and engagement (Busseri & Rose-Krasnor, 2009).

Some studies have begun to consider this variability in youth's active engagement in their GSA (e.g., the extent to which they contribute to conversations, take on responsibilities, help with projects, or attend meetings; Poteat, Heck, Yoshikawa, & Calzo, 2016) and how it may relate to variability in members' well-being. These studies suggest that greater GSA engagement is linked to self-esteem, general mastery and self-efficacy, and social connection (Mayberry, 2013; Poteat et al., 2015; Russell et al., 2009). However, these studies also have relied on single time-point data. Hence, it is unclear whether more engaged members are already more resilient, or if greater engagement predicts improved mental health over time. It would be important to determine whether GSA engagement does predict reduced mental health concerns for members and, if it does, to identify factors which might contribute to this process. Doing so would provide more rigorous support for the potential benefits of GSAs and begin to offer empirical guidance on specific mechanisms for GSAs and similar groups to target to promote mental health.

Individual Processes by which GSAs may Reduce Mental Health Risks

Research examining the benefits of extracurricular involvement has a basis within the relational developmental systems paradigm, a meta-theory of development (Lerner, Lerner, Bowers, & Geldhof, 2015). This paradigm emphasizes the need to examine individuals within context and points to the mutual influence between youth and their environments over time. This paradigm argues that individuals show great plasticity and adaptability during adolescence (Lerner et al., 2015), a strength which can be leveraged to promote healthy development. Positive youth development can be enhanced when youth are in contexts such as extracurricular groups that meet their needs, build upon their strengths, and foster prosocial and supportive relationships (Lerner et al., 2015).

Although extracurricular involvement is associated with well-being (Farb & Matjasko, 2012), in their review of research on school-based extracurricular clubs and activities, Farb and Matjasko (2012) noted that few studies have considered factors that mediate this association. Some studies suggest an indirect association between extracurricular involvement and well-being through greater perceived school belonging, affiliating with more prosocial peers, and more adult support (Fredricks & Eccles, 2005; Knifsen, Camacho-Thompson, Juvonen, & Graham, 2018; Oosterhoff, Kaplow, Wray-Lake, & Gallagher, 2017; Simpkins, Eccles, & Becnel, 2008). These emerging findings align with the relational developmental systems paradigm's emphasis on fostering positive social connections to promote youth's well-being.

Building on these studies and on the emphasis of the relational developmental systems paradigm on cultivating youth's strengths, we draw more specifically on youth empowerment models to propose that greater engagement in GSAs could predict improved mental health through an empowerment process. Empowerment is broadly understood as an individual's gained sense of confidence, agency, and control over factors that affect them, and an increased ability to set and achieve goals (Christens, Winn, & Duke, 2016; Zimmerman, 2000). Empowerment can exist at multiple levels, including community, organizational, and individual psychological levels (Peterson & Zimmerman, 2004; Zimmerman, 2000). At the organizational level, extracurricular groups are described as empowering when they aim to promote a sense of agency, self-efficacy, and connection among youth (Zimmerman et al., 2018). There is some evidence that youth involved in empowerment-oriented programs report greater self-esteem, prosocial behavior, and less aggressive behavior (Moody, Childs, & Sepples, 2003; Zimmerman et al., 2018). Qualitative reports from some youth in GSAs also have described their GSAs as empowering (Mayberry, 2013; Russell et al., 2009).

At the individual level, psychological empowerment includes emotional, cognitive, behavioral, and relational dimensions (Christens et al., 2016; Zimmerman, 2000). The emotional dimension reflects a youth's sense of efficacy to influence and change social systems, whereas the cognitive dimension reflects their perceived knowledge of pathways by which they can achieve their goals, overcome obstacles, or change their own circumstances or broader social systems (Christens et al., 2016). The behavioral dimension encompasses a youth's actions to change social systems, such as discussing political issues with peers or

participating in groups (e.g., GSAs) intended to counteract injustice (Christens et al., 2016; Zimmerman, 2000). Finally, the relational dimension reflects a youth's sense of mutual connection, encouragement, and reinforcement received from and provided to peers (Christens et al., 2016; Russell et al., 2009). Youth in GSAs have described their empowerment in terms of having knowledge (e.g., cognitive empowerment), a sense of confidence and feeling good about themselves (e.g., emotional empowerment), and feeling solidarity with their peers (e.g., relational empowerment; Mayberry, 2013; Russell et al., 2009).

Based on these models of empowerment and youth's descriptions of empowerment specifically in their GSA, at the individual level of our model (Figure 1, Level 1) we suggest that greater GSA engagement may directly predict three indicators of empowerment related to relational, emotional, and cognitive dimensions of empowerment: perceived peer validation (relational empowerment), self-efficacy to promote social justice (emotional empowerment), and hope (cognitive empowerment). Each factor reflects a dimension of empowerment that may be important for GSAs to promote among members. As such, we consider each factor directly, as opposed to a single general factor of empowerment.

We consider perceived peer validation in terms of reassured worth and approval (Furman & Buhrmester, 2009), as this reflects a core facet of the relational dimension of empowerment (encouragement and reinforcement; Christens et al., 2016) and peer validation is described in this manner by youth in GSAs (a sense of mutual connection and encouragement; Russell et al., 2009). This indicator of relational empowerment is also highly relevant to consider in the context of GSAs because many SGM youth face rejection in society due to their stigmatized minority sexual orientation and gender identities (Russell & Fish, 2016). Greater engagement in GSAs over the year may predict an increase in youth's sense of peer validation because meetings often include time for youth to share concerns and to receive support from one another (Griffin et al., 2004; Poteat et al., 2015; Russell et al., 2009). From these experiences, youth may come to feel greater validation from peers and thus greater relational empowerment. Validation in turn may counteract the invalidating effects of stigma and promote mental health (Russell & Fish, 2016). Peer validation is also important for health among heterosexual cisgender youth, as adolescence is a period when peer belonging is important (Furman & Buhrmester, 2009).

Greater GSA engagement may also empower youth in building their self-efficacy to promote social justice. This reflects the emotional dimension of psychological empowerment, wherein youth feel able to change social systems (Christens et al., 2016). Self-efficacy to promote social justice is defined as one's perceived competence to take action to promote equity in society, to empower individuals from marginalized groups, and to counteract discrimination (Torres-Harding, Siers, & Olson, 2012). We focus on this specific type of self-efficacy (versus a general index of efficacy) because it is a core type of competence that GSAs and other equity and justice clubs intend to cultivate. Indeed, youth have emphasized feeling a greater sense of knowledge and control from their GSA involvement (Russell et al., 2009). Greater engagement in the GSA over the year, whether in discussing SGM issues and current events or in advocacy, therefore could predict increased self-efficacy to promote social justice.

Increasing youth's sense of hope may be an important means by which greater GSA engagement predicts improved mental health. As defined and widely used in the psychological literature, hope is one's belief that one has the ability to pursue and achieve one's goals and the knowledge of ways in which to do so (Snyder et al., 1996). In this way, hope reflects the cognitive dimension of empowerment (i.e., an individual's knowledge of how to improve personal circumstances or societal challenges; Christens et al., 2016). Through their provision of support, resources, and advocacy opportunities, GSAs may foster youth's beliefs that they can improve their social conditions and accomplish long-term goals (e.g., by receiving emotional support or advocating against discrimination). Hope predicts lower depressive symptoms among youth in general (Schmid et al., 2011), and scholars have argued that cultivating hope is a way to heal from discrimination (Duncan-Andrade, 2009; Ginwright, 2015). Thus, hope is relevant to consider in how GSAs may promote youth's mental health.

We expect that greater GSA engagement over the school year will predict improved mental health indirectly through peer affirmation, self-efficacy to promote social justice, and hope. We expect an indirect association between GSA engagement and mental health as opposed to a direct association because youth are not receiving formal therapeutic services or manualized treatment in GSAs. Furthermore, there has been mixed support for direct associations between youth program involvement and mental health in the larger extracurricular group literature (Berg et al., 2009; Farb & Matjasko, 2012; Zimmerman et al., 2018), suggesting that any association may be more indirect. Instead, GSAs aim to empower youth directly on the three domains we consider (i.e., validation, efficacy, hope). In turn, these variables have the potential to reduce depressive and anxiety symptoms, as suggested by limited evidence from more formal youth programs based on empowerment (Moody et al., 2003; Zimmerman et al., 2018).

GSA Contextual Predictors of Reduced Mental Health Concerns

Up to this point we have focused on individual-level processes by which a youth's level of GSA engagement may promote their mental health. Little extant research has considered factors at the group level that could distinguish GSAs whose members, on average, report better mental health than other GSAs. This limitation applies even to the broader literature on youth's experiences in extracurricular groups (Berg et al., 2009; Farb & Matjasko, 2012). Certain contextual characteristics of GSAs may predict improved mental health among their members (Figure 1, Level 2). We consider advisor self-efficacy to address SGM issues, conversations within GSAs on mental health, and frequency of GSA meetings.

Adults have a guiding role in extracurricular programs, clubs, and activities (Rhodes & DuBois, 2008). Like advisors in other clubs, GSA advisors may provide support, scaffold decision-making, and mentor youth, while also advocating on behalf of members to other adults at school, or co-facilitating group conversations and activities (Graybill et al., 2009; Poteat et al., 2015). At the same time, advisors vary in how equipped they feel to address SGM issues (Poteat & Scheer, 2016). Given the major focus on SGM issues within GSAs and the important role of advisors in mentoring and scaffolding during this developmental period, we anticipate that members of GSAs whose advisors report greater self-efficacy to

address SGM issues will report more improved mental health at the end of the school year than members of other GSAs.

Conversations in GSAs often cover serious concerns that stem from members' experiences of discrimination (Miceli, 2005; Poteat et al., 2015). Consequently, it may be important for GSAs to have group conversations on mental health concerns that arise from discrimination. These conversations provide opportunities for youth to solicit support or learn about coping strategies or resources as a group (Lapointe & Crooks, 2018). Members of GSAs that discuss mental health issues more often over the school year could benefit from these discussions, and may report greater improved mental health than members of other GSAs.

In addition to their own level of active engagement in GSAs, youth may benefit from being in GSAs that meet more frequently over the year. It may be reassuring for youth to know that there is a reliable, regularly convening group from whom they can access support (Heck, Lindquist, Stewart, Brennan, & Cochran, 2013). More frequent meetings also could ensure continuity of care or enable larger-scale projects that require multiple meetings to plan and execute (e.g., National Coming Out Day or lobbying for school policies; GLSEN, n.d.).

Current Study and Hypotheses

Extant research suggests potential benefits of GSAs, but remains limited in its near-complete reliance on cross-sectional data and no indication of individual or group factors that account for how GSA engagement may improve mental health. The extracurricular literature has given limited attention to groups focused on social justice issues, most often combining them with other academic or special interest clubs. With their basis in a relational developmental systems paradigm, some studies have begun to show that peer and adult social connections partly account for associations between extracurricular involvement and well-being, but few studies have considered other individual-level processes such as empowerment. This could be a salient mental health-promoting mechanism in social justice-oriented groups. Finally, relatively few studies have focused on contextual factors of extracurricular groups that contribute to the improved well-being of their members.

To address these limitations, we test a multilevel model (Figure 1) of how GSAs may reduce depressive and anxiety symptoms among members. At the individual level, we consider whether youth's greater engagement in their GSA over the school year predicts reduced depressive and anxiety symptoms at the year's end through three factors that reflect dimensions of empowerment. At the group level, we consider three contextual factors that may directly predict reduced depressive and anxiety symptoms of GSA members. To do so, we collected data at two time points, once at the beginning of the school year and once at the end of the school year, from youth members and adult advisors of 38 GSAs across Massachusetts.

We hypothesized that more active engagement in the GSA over the year (based on initial levels at wave 1 and levels recalled since then at wave 2) would predict residualized increases in youth's perceived peer validation, efficacy to promote social justice, and hope, after adjusting for their perceptions at the beginning of the year. For exploratory purposes,

we considered whether the magnitude of these associations varied based on youth's sexual orientation, race or ethnicity, and gender identity. In turn, we hypothesized that peer validation, efficacy to promote social justice, and hope would predict residualized decreases in depressive and anxiety symptoms at the end of the year, after adjusting for symptoms at the beginning of the year. Ultimately, we hypothesized a significant indirect association between greater GSA engagement and improved mental health through each of our empowerment indicators. At Level 2, we hypothesized that members of GSAs whose advisors reported greater self-efficacy to address SGM issues, members of GSAs that discussed mental health issues more frequently over the year, and members of GSAs that met more often over the year would report greater residualized decreases in depressive and anxiety symptoms at the end of the year.

Method

Participants

Our sample was drawn from a two-wave (fall and spring) study of 580 high school students (M_{age} = 15.59 years, SD = 1.39 years; range = 10 to 20 years) in 38 GSAs across Massachusetts (range of 4 to 34 students per GSA; M = 15 students, SD = 6.62). There were 366 youth members and 58 advisors (M_{age} = 43.58 years, SD = 10.50 years; range = 27 to 62 years) who completed surveys at both waves. Twenty-one GSAs had one advisor and 17 had more than one (15 had two, one had three, and one had four advisors). Of the 580 youth who completed surveys at wave 1, at least 85 youth (14.7% of the original sample) discontinued their GSA involvement between waves 1 and 2 (as reported by some advisors; advisors of eight GSAs did not provide this information). The remaining 129 youth who did not complete surveys at wave 2 (22.2% of the original sample) either were not present during data collection, did not complete the survey that was left for them prior to the end of the school year, or were in GSAs whose advisors did not provide feedback on whether they had discontinued their involvement. Thus, 73.9% of the original sample who were potentially still active GSA members at the end of the year completed surveys at wave 2.

To consider potential differential attrition, we conducted a MANOVA to compare youth retained vs. lost at wave 2 on our set of variables at wave 1. The MANOVA was marginally significant, Wilks' Λ = .98, $F(5, 493)$ = 2.23, p = .05, η_p^2 = .02. Follow-up ANOVAs indicated that, with small effect sizes, the group differences were significant for wave 1 perceived peer validation, $F(1, 497)$ = 5.49, p = .02, η_p^2 = .01, and hope, $F(1, 497)$ = 7.54, p = .006, η_p^2 = .02. Participants retained at wave 2 reported greater perceptions of peer validation (retained: M = 3.65, SD = 0.94; lost: M = 3.43, SD = 0.95) and hope (retained: M = 4.70, SD = 1.77; lost: M = 4.21, SD = 1.72) at wave 1 than those we lost at wave 2 who were still in the GSA. There was no differential attrition based on gender (χ^2 = 0.48, p = .79), but there was greater attrition for heterosexual than sexual minority youth (χ^2 = 13.72, $p < .001$; 43% vs 24%) and for racial or ethnic minority youth than White youth (χ^2 = 11.49, p = .001; 43% vs 23%). The amount of missing data for youth who participated at both time points was minimal (0% to 1.6% across measures). As we note later in our analytic approach, our models adjust for covariates related to missingness and we used

multiple imputation to include all youth in our analyses. Table 1 presents demographic data and descriptive data for our variables.

Procedures

We identified GSAs in consultation with the Massachusetts Safe Schools Program for LGBTQ Students. Among the schools were traditional public schools, charter public schools, and vocational schools. We purposively sampled GSAs across Massachusetts for geographic diversity, variable population density, and diversity in the size, racial, and socioeconomic composition of the schools. We secured permission from GSA advisors and principals to work with their GSA. We asked youth members to participate in a study about their experiences in the GSA, stating that their answers would be confidential and that we would not share their individual responses with their peers, parents, or other adults. Advisors gave consent for all youth to participate, and all youth subsequently assented. We used advisor adult consent over parent consent to avoid risks of inadvertently outing SGM youth to their parents. This consent method is common in research with SGM youth to protect their safety (Mustanski, 2011). Advisors consented to complete their own survey (all who were recruited agreed). Procedures were approved by the primary institution's IRB and by each participating school.

We planned the project to include 19 GSAs in one year and a separate set of 19 GSAs the next year, for 38 total GSAs. This was done for feasibility: it ensured that in a given year we could visit all GSAs within a close time frame at each wave, as they were located across the state and many met on the same days. At wave 1, we distributed and collected surveys at a GSA meeting. The survey took 30 minutes to complete and proctors were present to answer questions. Youth and advisors returned their surveys to the proctors at the end of the meeting. Each participant received a $10 gift card. The first visit occurred between mid-September and late-October. At wave 2, we distributed and collected surveys using identical procedures. Each participant received a $20 gift card. Wave 2 visits occurred between late-April and late-May.

Youth Measures

Demographic information.—Youth reported their sexual orientation, gender identity, and race or ethnicity, with response options and patterns reported in Table 1. Because of the small representation of youth within some of the specific sexual minority, racial or ethnic minority, and gender minority subgroups, we used binary indicators of sexual orientation (heterosexual, sexual minority), race or ethnicity (White, racial or ethnic minority) and three categories for gender identity (cisgender female, cisgender male, and gender expansive) in our analyses.

GSA engagement level.—At wave 1, youth reported the extent to which they had been actively engaged in their GSA up to that point (generally reflecting the first three to four meetings of the year), and at wave 2, youth reported their active engagement throughout the school year since the first visit (generally covering a 6-month period) using the 5-item GSA Engagement scale (e.g., "I participated in conversations at GSA meetings" and "I helped with events or projects in my GSA"; Poteat et al., 2016). Response options were *never*,

rarely, *sometimes*, *often*, and *very often* (scaled 0 to 4). Higher average scale scores represent greater active engagement in the GSA. The coefficient alpha reliability estimates were $a = .86$ (wave 1) and $a = .88$ (wave 2). Based on youth's reports at waves 1 and 2, we computed a weighted average of their GSA engagement for the year, proportional to the time spans which those waves referenced (one month for wave 1, six months for wave 2). We used this score in our analyses.

Perceived peer validation.—We assessed peer validation using the combined 3-item Reassurance of Worth (e.g., "How much do your peers treat you like you're admired and respected?") and 3-item Approval (e.g., "How often do your peers praise you for the kind of person you are") scales from the Network of Relationships Inventory (Furman & Buhrmester, 2009). Response options ranged from 1 (*very little/never*) to 5 (*the most/ always*) and higher average scale scores represent greater perceived validation. At wave 1, youth were asked to respond to the items based on their current relationships with their peers. At wave 2, youth were asked to respond to the items based on their relationships with their peers over the past month. The coefficient alpha reliability estimate was $a = .93$ (wave 1) and $a = .94$ (wave 2).

Self-efficacy to promote social justice.—Youth reported their efficacy to promote social justice using the 5-item perceived behavioral control subscale of the Social Justice Scale (e.g., "I feel confident in my ability to talk to others about social injustices and the impact of social conditions on health and well-being" and "I am certain that I possess an ability to work with individuals and groups in ways that are empowering"; Torres-Harding et al., 2012). Response options ranged from 1 (*strongly disagree*) to 7 (*strongly agree*), and higher average scale scores represent greater confidence in one's ability to promote social justice. The coefficient alpha reliability estimate was $a = .91$ (wave 1) and $a = .92$ (wave 2).

Hope.—Youth completed the 6-item State Hope Scale (Snyder et al., 1996) to assess their sense of hope (e.g., "I can think of many ways to reach my current goals"). Response options ranged from 1 (*definitely false*) to 9 (*definitely true*), and higher average scale scores represent a greater sense of hope. At wave 1, youth were asked to respond to the items based on how they currently felt about themselves. At wave 2, youth were asked to respond to the items based on how they had felt about themselves over the past month. The coefficient alpha reliability estimate was $a = .92$ at both waves.

Depressive symptoms.—Youth completed the 10-item Center for Epidemiological Studies Depression Scale (brief version; Radloff, 1991) to report depressive symptoms (e.g., "I felt lonely," and "I felt depressed"). Response options were *rarely or none of the time (less than one day)*, *some or a little of the time (one to two days)*, *occasionally or moderate amount of the time (three to four days)*, and *all of the time (five to seven days)*, which are scored 0 to 3 with two reverse-scored items. At both waves, youth were asked to respond based on how they felt over the past week. Higher total scale scores indicate greater depressive symptoms. The coefficient alpha reliability estimate was $a = .85$ (wave 1) and $a = .87$ (wave 2).

Anxiety symptoms.—Youth completed the 21-item Beck Anxiety Inventory (Beck & Steer, 1993) to report anxiety symptoms (e.g., "heart pounding/racing," and "shaky/ unsteady"). Response options were *not at all*; *mildly, but it didn't bother me much*; *moderately, it wasn't pleasant at times*; and *severely, it bothered me a lot* (scored 0 to 3). At both waves, youth were asked to respond based on how they felt over the past month. Higher total scale scores indicate greater anxiety symptoms. The coefficient alpha reliability estimate was $a = .95$ at both waves.

Advisor Measures

Number of meetings.—At wave 2, advisors reported the total number of GSA meetings held since November (i.e., the period following our wave 1 visit).

Self-efficacy to address SGM issues.—At wave 1, advisors completed 9 items to assess their perceived competence to address issues related to sexual orientation and gender identity (e.g., "talk about unique experiences that LGBQ students face" or "talk about unique experiences that transgender students face"). Response options ranged from 1 (*not at all*) to 5 (*very*). Average scale scores represented greater confidence in addressing SGM issues. The coefficient alpha reliability estimate was $a = .92$.

Mental health-related discussions.—At wave 2, advisors completed 4 items to report the number of times their GSA had discussed mental health-related issues: depression, anxiety, mental health issues in general, and self-care or coping strategies. Response options were *never*, *1 time*, *2 times*, *3 to 5 times*, and *more than 5 times* (scored 1 to 5). Higher total scale scores indicated that the GSA had more frequent discussions of mental health issues. The coefficient alpha reliability estimate was $a = .91$.

Analytic Approach

Table 2 presents bivariate correlations among the variables for descriptive purposes. We tested our hypothesized models using multilevel structural equation modeling (MSEM) with maximum likelihood estimation in Mplus 8.1 to account for the interdependence of youth within GSAs. We tested two separate models for each outcome variable: one for depressive symptoms and one for anxiety symptoms. We grand-mean centered our continuous predictors at Level 1. Centering is recommended for variables in multilevel modeling to give scores of zero an interpretable meaning; in the case of grand-mean centering, scores represent the deviation of an individual from the overall sample's mean. We used multiple imputation in Mplus with 50 multiply imputed datasets to test our models with all participants.

At Level 1, youth's reported GSA engagement over the school year (from their wave 1 and wave 2 scores) predicted their perceived peer validation, self-efficacy to promote social justice, and hope at wave 2, while adjusting for scores on each of these mediators at wave 1. Thus, GSA engagement predicted residualized change in each mediator. We allowed the three mediators to covary. In turn, our three mediators at wave 2 predicted youth's depressive symptoms or anxiety symptoms at wave 2 while adjusting for these symptoms at

wave 1. Our mediators thus predicted residualized change in depressive or anxiety symptoms.

As covariates at Level 1, we included youth's sexual orientation, race or ethnicity, and gender identity to predict mental health at wave 2. Sexual orientation and race/ethnicity were binary variables (0 = heterosexual, 1 = sexual minority; 0 = White, 1 = racial or ethnic minority), and two dummy variables were included to indicate whether participants identified as cisgender male (1 = cisgender male) or gender expansive (1 = gender expansive), making cisgender females the referent group. Written-in responses for demographic variables were confirmed to reflect sexual, racial, or gender minority identities and were coded as such.

In addition to reporting the direct effects, for each mental health outcome we calculated three indirect associations between GSA engagement and the outcome (one indirect association tested for each mediator). These analyses relied on the data from youth who participated at both waves, as indirect effects cannot be calculated when using the multiple imputation procedure in Mplus. Next we used the Monte Carlo simulation method, based on 10,000 simulated indirect effects, to compute the empirical sampling distribution of the three indirect effects; from this we calculated their 95% confidence intervals (Preacher & Selig, 2012).

At Level 2, we included advisors' reported self-efficacy to address SGM issues, number of GSA meetings held, and frequency of mental health-related discussions over the school year to predict aggregate levels of depressive or anxiety symptoms among group members at wave 2, while adjusting for the group's aggregate depressive or anxiety symptoms at wave 1. In doing so, our three variables at Level 2 predicted residualized change in depressive or anxiety symptoms at the group level. For GSAs in which there was more than one advisor, we used the average of scores on their reported measures in our models. For diagnostic purposes, we also tested models in which we included the "best" score among the multiple advisors (e.g., the score of the advisor reporting the highest level of SGM self-efficacy); the results were comparable. Using Monte Carlo simulation, we conducted diagnostics of coverage and power and found that our coverage was adequate for both models, but statistical power ranged from high to low (see supplemental Table 8). Thus, we could be relatively confident in the parameter estimates but less in their statistical significance. For parameters with power estimates under 80%, non-significant results could be due to an underpowered study. Thus, we interpret our Level 2 results as more tentative and with more attention to the direction and size of the estimates than statistical significance.

To test whether the association between GSA engagement and residualized change in our three mediators differed for youth based on sexual orientation, race or ethnicity, or gender identity, we added interaction terms to our model. For example, we added a *GSA engagement × sexual orientation* interaction term to predict residualized change in hope in order to test whether GSA engagement was a stronger predictor of increased hope for sexual minority youth than heterosexual youth. We then included this interaction term to predict self-efficacy to promote social justice and peer validation (for three total sexual orientation interaction models). In these models we continued to adjust for the main effects of race/

ethnicity and gender identity. We used this same approach with a *GSA engagement × race or ethnicity* interaction term to predict our three mediators. For our test of moderation based on gender identity, we reduced our categories to two (0 = cisgender, 1 = gender expansive), rather than our original three groups in which cisgender males and cisgender females were separated, due to the complexity of the model.

Results

MSEM Model for Depressive Symptoms

Our MSEM model for depressive symptoms reflected an overall good fit to the data (CFI = .92, TLI = .87, RMSEA = .08, SRMR = .08). All coefficient estimates, their standard errors, and confidence intervals in our Level 1 model are reported in Table 3.

As we hypothesized, greater engagement in the GSA throughout the school year predicted residualized increases in youth's sense of peer validation (b = 0.213, $p < .001$), self-efficacy to promote social justice (b = 0.331, $p < .001$), and hope (b = 0.227, $p = .006$) at wave 2 while adjusting for reports of validation, self-efficacy, and hope at the beginning of the school year (wave 1). Also, as hypothesized, youth's increased hope predicted residualized decreases in their depressive symptoms at the year's end (b = −1.633, $p < .001$). Contrary to our hypotheses, neither youth's sense of peer validation nor their self-efficacy to promote social justice predicted residualized change in their depressive symptoms at the year's end (b = 0.291, $p = .34$ and b = 0.092, $p = .68$, respectively). At Level 1, the model accounted for 18% of the variance in youth's reported perceptions of peer validation at wave 2; 30% of the variance in youth's self-efficacy to promote social justice at wave 2; 29% of the variance in youth's reported hope at wave 2; and 59% of the variance in youth's reported depressive symptoms at wave 2.

As hypothesized, the indirect association between greater GSA engagement and decreased depressive symptoms was significant through increased hope (b = −0.365, SE = 0.100, $p < .001$, 95% CI [−0.577, −0.182]). In contrast, however, the indirect association between GSA engagement and depressive symptoms was not significant through perceived peer validation (b = 0.023, SE = 0.054, $p = .66$, 95% CI [−0.080, 0.137]) or self-efficacy to promote social justice (b = 0.037, SE = 0.062, $p = .55$, 95% CI [−0.088, 0.159]).

At the group level, as hypothesized, having more mental health-related discussions in the GSA throughout the year predicted residualized decreases in depressive symptoms among members at the year's end (b = −0.530, $p = .05$). Similarly, youth in GSAs that met more frequently over the year reported greater residualized decreases in their depressive symptoms at the year's end (b = −0.107, $p = .03$). Contrary to our hypothesis, advisor self-efficacy to address SGM issues did not predict residualized change in members' depressive symptoms at the year's end (b = 0.682, $p = .28$). At Level 2, the model accounted for 50% of the variance in depressive symptoms across GSAs at wave 2.

MSEM Model for Anxiety Symptoms

Our MSEM model for anxiety symptoms also reflected an adequate fit to the data (CFI = .93, TLI = .89, RMSEA = .07, SRMR = .08). All coefficient estimates, their standard errors, and confidence intervals in our Level 1 model are reported in Table 4.

The results for Level 1 of our model mirrored those for our Level 1 model predicting depressive symptoms. The association between greater GSA engagement and increased perceptions of peer validation, self-efficacy to promote social justice, and hope at wave 2 were comparable in both models. In addition, as hypothesized, youth's increased hope predicted residualized decreases in their anxiety symptoms at the year's end (b = −3.073, p < .001). However, as with our model for depressive symptoms, neither youth's sense of peer validation nor their self-efficacy to promote social justice predicted residualized change in anxiety symptoms at the year's end (b = −0.372, p = .53 and b = 0.642, p = .22, respectively). At Level 1, the model accounted for 60% of the variance in youth's reported anxiety symptoms at wave 2.

As hypothesized, the indirect association between greater GSA engagement and decreased anxiety symptoms was significant through increased hope (b = −0.668, SE = 0.198, p = .001, 95% CI [−1.098, −0.314]). However, as with the depression model, the indirect association between GSA engagement and anxiety symptoms was not significant through perceived peer validation (b = −0.058, SE = 0.111, p = .60, 95% CI [−0.278, 0.169]) or self-efficacy to promote social justice (b = 0.238, SE = 0.154, p = .12, 95% CI [−0.042, 0.571]).

At the group level, neither mental health-related discussions nor advisor self-efficacy to address SGM issues predicted residualized changes in youth's anxiety symptoms at the year's end (b = −0.216, p = .75 and b = 1.115, p = .36, respectively). Still, similar to the depressive symptoms model, youth in GSAs that met more frequently throughout the year reported greater residualized decreases in anxiety symptoms at the year's end (b = −0.252, p = .007). At Level 2, the model accounted for 75% of the variance in anxiety symptoms across GSAs at wave 2. The results between the two models for depressive and anxiety symptoms may have been comparable because of the strong association between depressive and anxiety symptoms (r = .75 and .77 for waves 1 and 2, respectively).

Exploratory Tests of Moderation of GSA Engagement Associations

Finally, we tested our exploratory questions of whether associations between greater GSA engagement and residualized change in perceived peer validation, self-efficacy to promote social justice, and hope differed for youth based on their sexual orientation, race or ethnicity, or gender identity. The magnitudes of the associations between GSA engagement and our mediators were not statistically significantly different for SGM vs. heterosexual youth, racial or ethnic minority vs. White youth, or gender expansive vs. cisgender youth (see Supplemental Table 1).

Discussion

The results of the study indicate that youth's greater engagement in GSAs over the school year predicts greater empowerment along multiple dimensions—perceived peer validation,

self-efficacy to promote social justice, and hope—and that, through increased hope, greater GSA engagement predicts reduced depressive and anxiety symptoms at the year's end. The magnitude of associations between GSA engagement and these indicators of empowerment did not differ significantly based on sexual orientation, race or ethnicity, or gender identity. Finally, having more mental health discussions in the GSA predicted reduced depressive symptoms and having more frequent meetings predicted reduced depressive and anxiety symptoms among members. Our findings carry implications for how GSAs and similar groups oriented around issues of social justice might seek to promote the mental health of their members.

GSA Engagement, Peer Validation, and Self-Efficacy to Promote Social Justice

Greater GSA engagement over the school year predicted youth's increased perceived peer validation and self-efficacy to promote social justice, adjusting for their perceptions at the beginning of the year. These findings expand the extant GSA literature to provide stronger evidence that GSAs play a role in the relational and emotional empowerment of youth.

Members who were highly engaged in their GSA over the year (e.g., in discussions or activities) likely received support from peers through such engagement. In turn, this could have led them to feel an increased sense of validation and reassured worth. Given the strong emphasis and value placed on relational empowerment during this developmental period (Christens et al., 2016; Russell et al., 2009), youth's increased perception of peer validation represents an important outcome associated with greater GSA engagement for SGM and ally members. Although GSAs are not the only setting in which youth may receive support or validation from peers, greater GSA engagement predicted an increased sense of peer validation in general (i.e., we did not limit youth to consider peers only in their GSA). It is possible that the GSA was a salient context, and for highly engaged members it may comprise their primary referent group of friends from whom they receive validation. Also, practicing prosocial peer interactions in the GSA could have carried benefits into other peer settings. This finding aligns with the significant associations between extracurricular involvement and perceptions of peer and adult connection in the broader extracurricular literature (Fredricks & Eccles, 2005; Knifsen et al., 2018; Oosterhoff et al., 2017; Simpkins et al., 2008).

Our attention to self-efficacy to promote social justice (i.e., emotional empowerment) expands the usual focus on peer or adult connection as immediate outcomes or mediators of extracurricular involvement. Youth's efficacy could have been built in GSAs by engaging in advocacy (Griffin et al., 2004; Russell et al., 2009). Indeed, social action can empower youth (Ginwright, 2015; Watts & Hipolito-Delgado, 2015). Highly engaged GSA members may have built skills through their participation in various initiatives such as Day of Silence or National Transgender Day of Remembrance (GLSEN, n.d.). As a result, these members may have gained more self-efficacy. Also, through greater participation in group dialogues, youth may have gained a greater understanding of certain SGM issues, thereby increasing their self-efficacy. This finding is relevant to the growing number of extracurricular clubs addressing issues of equity and justice (Taines, 2012). These groups have been included in the extracurricular literature, but often they have been combined with other clubs for

academic, creative, or recreational interests (Eccles & Barber, 1999; Knifsend & Juvonen, 2017; Larson et al., 2006). It will be important for future developmental research to focus on these clubs directly in order to identify how they can build youth's capacity to engage in efforts to address societal issues.

Contrary to our hypotheses, perceived peer validation and self-efficacy did not predict changes in depressive or anxiety symptoms, nor did GSA engagement predict reduced mental health concerns indirectly through them. Perhaps perceived peer validation might have prevented some youth's mental health from worsening, but it might not have been sufficient to reduce symptoms. It may be necessary for youth to feel validated from a wider range of sources (e.g., their family, faith community, or other adults) in addition to their peers, or may require more formal therapeutic services, in order to see significant reductions in clinical symptoms of depression and anxiety. Also, for some members, their connection with peers may not have extended to interaction beyond the GSA setting. It would be useful to consider how GSAs operate in concert with other sources to foster youth's relational empowerment to a level that could improve their mental health.

Likewise, several factors might explain why greater self-efficacy to promote social justice did not predict reduced depressive or anxiety symptoms. On the one hand, scholars have noted that this form of empowerment is important and carries benefits (e.g., action to change social systems; Watts & Hipolito-Delgado, 2015). On the other hand, some youth who report higher sociopolitical efficacy than others also report elevated stress (e.g., feeling discouraged, burnout, or lower well-being; Christens, Collura, & Tahir, 2013; Godfrey, Burson, Yanisch, Hughes, & Way, 2019). Thus, while our results suggest that greater GSA engagement could promote this form of psychological empowerment, GSAs may need to consider how best to leverage youth's increased efficacy such that it carries a health-promoting effect versus stress. GSAs may need to carefully identify advocacy efforts that youth could feasibly achieve with scaffolded support from advisors and with the time, resources, and specific skills of youth.

Hope as a Significant Mechanism of Mental Health Promotion

Greater GSA engagement over the school year predicted increased hope among youth, adjusting for their level of hope at the beginning of the year. Hope is an important reflection of cognitive empowerment in that it captures an individual's sense of agency and ability to engage in sustained efforts to achieve goals (Christens et al., 2016; Snyder et al., 1996; Zimmerman, 2000). Given that GSAs aim to empower youth along these lines (Mayberry, 2013; Russell et al., 2009), more engaged GSA members may have gained a sense of hope through a range of GSA experiences over the year, from receiving emotional support from peers and advisors, to receiving information and resources, to engaging in advocacy. This finding adds to a body of qualitative reports and cross-sectional associations that have suggested that GSA involvement relates to youth's sense of agency and their anticipation that their GSA efforts will lead to better school experiences (Mayberry, 2013; Poteat et al., 2016; Russell et al., 2009).

Increased hope further predicted reduced depressive and anxiety symptoms at the year's end. This aligns with other findings that hope predicts lower depressive symptoms among youth

in general (Schmid et al., 2011). It also resonates with the goals of other groups and social media efforts that have aimed to reduce health risks among SGM youth, particularly suicidality, by strengthening their sense of hope (e.g., It Gets Better Project, The Trevor Project). Our finding adds emphasis to assertions from scholars that engendering hope may be an important means by which to promote healing among youth who experience marginalization (Duncan-Andrade, 2009; Ginwright, 2015). This represents a novel outcome from other variables that have been considered in the general extracurricular literature and warrants closer attention.

Moreover, we identified a significant indirect effect whereby greater GSA engagement predicted reduced depressive and anxiety symptoms through its association with increased hope. This finding marks an important expansion on the youth extracurricular literature, which has remained limited in documenting specific mechanisms by which extracurricular involvement predicts developmental outcomes (Farb & Matjasko, 2012). Whereas emerging research has pointed to the role of peer, adult, or school connection (Knifsen et al., 2018; Oosterhoff et al., 2017; Simpkins et al., 2008), our findings also highlight psychological empowerment—in this case cognitive empowerment reflected by hope—as a key facilitator. This finding also advances GSA research, which only more recently has begun to consider variability among members in their experiences and how this may relate to their well-being (Poteat et al., 2017). Our findings suggest that greater GSA engagement can play a significant role in reducing mental health risks, in part by fostering hope. The definition of hope in the psychological literature highlights specifically what GSAs and other extracurricular groups should target in order to engender hope: encourage youth to identify future goals, work with youth to identify pathways to reach them, and build youth's capacity to do so (Snyder et al., 1996). This finding could inform the design of programming for GSAs and similar groups to improve youth's mental health and promote positive developmental outcomes.

Potential Benefits of GSA Engagement Across Members

Our exploratory analyses suggested that the associations between GSA engagement and our three indicators of empowerment did not differ significantly based on youth's sexual orientation, gender identity, or race or ethnicity. There are several possible explanations for these non-significant moderations. Although members from privileged and marginalized groups may have been involved for different reasons, GSAs still may have been able to meet those diverse needs. This may have been possible given the range of aims of GSAs to provide support, information and resources, and advocacy opportunities (Griffin et al., 2004). Alternatively, members from different backgrounds may have been involved for similar reasons (e.g., an interest in SGM issues, need for support, desire for advocacy) and thus had similar potential to benefit from involvement. Moderated associations related to GSA engagement may be tied less to a youth's marginalized or privileged position, and more to issues of fit and youth's perceived responsiveness of the GSA to their needs. Given the aspiration of GSAs to be inclusive of youth across diverse identities, the current exploratory findings could be viewed as positive and encouraging. Still, they warrant further careful consideration in future studies.

GSA Contextual Predictors of Reduced Mental Health Concerns

We documented mixed support for the association between the number of mental health conversations held within the GSA over the school year and members' depressive and anxiety symptoms at the year's end. These conversations predicted reduced depressive symptoms among members, but the trend for anxiety was not statistically significant (although the statistical power to detect a significant effect was far lower in our anxiety model). The measure of depression tended to capture more affective and social symptoms (e.g., fear, loneliness) whereas the measure of anxiety captured more physiological symptoms (e.g., shakiness, tingling, heart pounding). Conversations in the GSA on mental health may have been aimed more at addressing the former, given the focus of GSAs on social and emotional support. The mixed results also may reflect that GSAs are not intended to provide formal therapeutic services and that it may be important to consider not simply the number of discussions but the quality of these discussions. For instance, having a few discussions with inadequate support or follow-up could exacerbate symptoms for some youth. Still, more frequent mental health conversations may have provided opportunities for youth in these GSAs to discuss unique sources of stress (e.g., discrimination), identify coping strategies, or receive referrals to SGM-affirming agencies in the community (Lapointe & Crooks, 2018). Further research is warranted and might consider conditions under which these conversations carry greater benefits (e.g., based on advisor or youth leader training) and for whom these conversations carry greater benefits (e.g., based on youth's initial levels of symptomology).

Advisors' self-efficacy to address SGM issues did not predict change in members' depressive or anxiety symptoms at the year's end. Although advisors did vary in their reported efficacy to address SGM issues, similar to past studies (Poteat & Scheer, 2016), advisors on average reported relatively strong efficacy. This may underlie the non-significant findings, in addition to limitations of statistical power. At the same time, adult mentors play key roles in extracurricular groups and programs (Rhodes & DuBois, 2008). It would be useful for research to consider advisors' expertise in other ways that might distinguish GSAs whose members report better mental health outcomes than others. For instance, researchers might consider advisors' professional background (e.g., as a teacher or counselor) or training on mental health concerns. Also, researchers might consider youth members' perceptions of their advisor's abilities or responsiveness in their role, apart from the advisor's own self-assessment of their knowledge and skills to address SGM issues.

Youth in GSAs that met more frequently over the year reported greater reductions in depressive and anxiety symptoms, in line with findings that SGM adults retrospectively attribute positive experiences in their GSA to having more regular meetings (Heck et al., 2013). The number of GSA meetings in our sample ranged noticeably from 5 to 28 between November and May. There may have been a collective mental health benefit for youth in GSAs that met more regularly. It may have been important for youth to know that there was a regularly available SGM-affirming space for them to connect with their peers and adult advisors. Frequent meetings could be important for GSAs and similar school-based groups that may be the only explicitly affirming setting in the school for youth from marginalized populations.

Finally, although we focused on the experiences of youth in GSAs and GSA factors that could relate to variability in members' health, there remains little research on how school practices might shape the opportunities available to youth in GSAs and how active they may be. From this broader stance, future research might consider how the school's encouragement for extracurricular involvement in general, or administrators' support for the GSA specifically, might relate to which youth join GSAs, how active they may be in the GSA, and how school-level factors apart from GSA involvement (e.g., school climate, safety, or SGM-based policies) may contribute to youth's mental health.

Strengths, Limitations, and Future Directions

We note several strengths of our study. It is one of a limited number of studies in the extracurricular literature to consider mechanisms by which youth's greater engagement in these settings predicts improved mental health, and among the first studies to consider potential benefits of GSA involvement using data from more than a single time point. We used advanced MSEM techniques to provide a rigorous test of a complex model to capture these processes, including predictors at the individual and group level. Further, we used multi-informant data from youth and advisors from well-established measures. Finally, we used purposive sampling to increase the representativeness of GSAs located in different types of schools (traditional public schools, charter public schools, vocational and technical public schools), and in schools that varied in terms of their size, SES, race or ethnicity, and population density.

We also note several limitations. Although we can speak of prediction based on data from two waves, it would have been even better to assess youth's engagement periodically over the year to shorten the retrospective recall time span. Similarly, although we moved beyond cross-sectional data, we could not consider more complex developmental trajectories requiring more than two waves of data. Future studies with such data could capture even more dynamic interplay among GSA engagement, empowerment, and mental health. Also, we note that our measure of depression assessed symptoms over the past week, while our measure of anxiety assessed symptoms over the past month, due to the standardized measures that we used. Our statistical power was limited for our predictors at the group level. Our diagnostics indicated good coverage for these factors (in that the path coefficients were estimated well), but future research with more GSAs would give greater assurance about their statistical significance. Likewise, we had limited power to detect associations between GSA-level predictors and mental health through more nuanced mediated processes. Similarly, at the individual level we could not consider specific sexual, racial, and gender minority groups or attend to their intersection. In addition, our moderation analyses based on these demographic factors were exploratory. Future research should continue to consider how experiences in GSAs may vary for youth, to ensure that GSAs are inclusive and supportive of youth from many sociocultural backgrounds.

Our findings point to several avenues for ongoing research. While our models focused on variables that could be relevant for all GSA members (e.g., both SGM and heterosexual cisgender members), future research should also consider variables that might be uniquely relevant for SGM members, such as self-acceptance related to their SGM identity or level of

outness. Similarly, while we considered youth's general sense of peer validation, it could be important among SGM youth to consider their perceived peer validation of their SGM identities specifically. Whereas a general sense of peer validation may not have predicted reduced mental health concerns in this study, youth's sense of validation of an otherwise marginalized identity could have a more significant role in promoting their mental health. Future studies also might consider whether an empowerment-focused model like the one we tested applies to other extracurricular groups similar to GSAs (e.g., those with a focus on racial or economic justice) and whether our findings generalize to GSAs in other parts of the country. Likewise, as GSAs increasingly are being established in middle schools (CDC, 2015) and comparable groups are active on many university campuses, research might consider whether the processes by which GSA involvement promote health may differ according to age or developmental period. It would also be informative to include additional indicators of the broader school or community contexts in which GSAs exist, and how these factors might promote or impede GSAs in fostering youth's healthy development. In addition, we focused on affective, cognitive, and relational empowerment as mediators leading to improved mental health. Ongoing work might consider additional indicators of these dimensions of empowerment as well as indicators of behavioral empowerment beyond GSA engagement (e.g., whether greater GSA engagement predicts youth's later involvement in other organizations or civic action). Finally, research also might consider designing tailored mental health interventions and piloting their delivery within GSAs.

In sum, extracurricular settings such as GSAs have strong potential to reach a large number of youth, many of whom are marginalized in school, to promote their mental health and development. As such, it is important for ongoing research to identify empirically-supported practices for these groups to maximize their benefits for a diverse range of members.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

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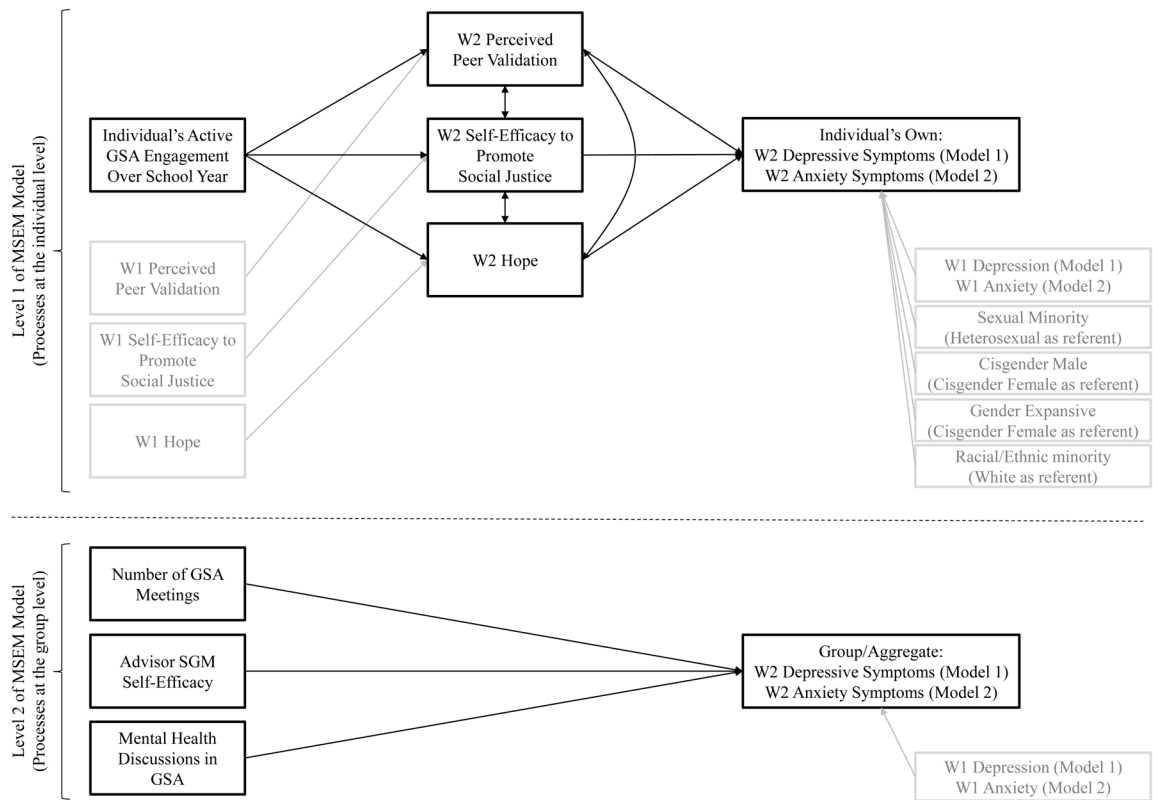
Figure 1.
Multilevel SEM conceptual model where (a) individuals' greater GSA engagement predicts their decreased mental health concerns through three indicators of empowerment (Level 1), and (b) GSA and advisor characteristics directly predict decreased mental health concerns of the group (Level 2).

Table 1

Youth Demographics and Variable Descriptive Data

Variable	*N* (%)	*M* (SD)	Range
Sexual orientation			
Bisexual	119 (20.5)		
Pansexual	115 (19.8)		
Heterosexual	115 (19.8)		
Gay or Lesbian	100 (17.2)		
Questioning	38 (6.6)		
Queer	26 (4.5)		
Asexual	20 (3.4)		
Other written-in response	43 (7.4)		
Not reported	4 (0.7)		
Gender identity			
Cisgender Female	330 (56.9)		
Cisgender Male	95 (16.4)		
Non-Binary	35 (6.0)		
Transgender	44 (7.6)		
Genderqueer	13 (2.2)		
Gender Fluid	14 (2.4)		
Other written-in response	47 (8.1)		
Not reported	2 (0.3)		
Race or ethnicity			
White, non-Hispanic	397 (68.4)		
Biracial or Multiracial	63 (10.9)		
Latino/a	63 (10.9)		
Asian or Asian American	21 (3.6)		
Black or African American	20 (3.4)		
Middle Eastern, Arab, or Arab American	3 (0.5)		
Other written-in response	7 (1.2)		
Not reported	3 (0.5)		
GSA Engagement W1		2.57 (1.00)	0.00 – 4.00
GSA Engagement W2		2.47 (1.03)	0.00 – 4.00
GSA Engagement Year, Weighted W1 and W2		2.52 (0.97)	0.26 – 4.00
Perceived Peer Validation W1		3.59 (0.94)	1.00 – 5.00
Perceived Peer Validation W2		3.56 (0.99)	1.00 – 5.00
Self-Efficacy to Promote Social Justice W1		5.33 (1.37)	1.00 – 7.00
Self-Efficacy to Promote Social Justice W2		5.29 (1.39)	1.00 – 7.00
Hope W1		4.62 (1.78)	1.00 – 8.00
Hope W2		5.03 (1.69)	1.00 – 8.00
Depressive Symptoms W1		13.95 (6.85)	0.00 – 30.00
Depressive Symptoms W2		13.71 (6.93)	0.00 – 30.00

Variable	*N* (%)	*M* (SD)	Range
Anxiety Symptoms W1		28.29 (16.50)	0.00 – 63.00
Anxiety Symptoms W2		28.83 (16.42)	0.00 – 63.00
Number of GSA Meetings		17.59 (6.84)	5.00 – 28.00
Advisor SGM Self-Efficacy		4.10 (0.65)	2.68 – 5.00
Mental Health Discussions in GSA		3.53 (1.08)	1.00 – 5.00

Note. Demographics and Wave 1 data are presented for the full youth sample (*n* = 580) while Wave 2 data are presented for youth who were not lost to attrition (*n* = 366). W1 = wave 1; W2 = wave 2.

Table 2

Bivariate Correlations among Level 1 (Individual Youth) Variables at Wave 1 and Wave 2

	Engage W1	Engage W2	Engage T	P. Valid W1	SJ Effic. W1	Hope W1	Depress W1	Anxiety W1	P. Valid W2	SJ Effic. W2	Hope W2	Depress W2
Engage W1	—											
Engage W2	.65***	—										
Engage T	.72***	.99***	—									
P. Valid W1	.20***	.11*	.12*	—								
SJ Effic. W1	.28***	.31***	.20***	.43***	—							
Hope W1	.11**	.06	.06	.39***	.55***	—						
Depress W1	.02	.04	.05	-.30***	-.33***	-.57***	—					
Anxiety W1	.02	-.04	-.03	-.17***	-.23***	-.42***	.75***	—				
P. Valid W2	.22***	.23***	.24***	.43***	.36***	.24***	-.11*	-.11	—			
SJ Effic. W2	.30***	.31***	.32***	.33***	.59***	.42***	-.19***	-.15**	.51***	—		
Hope W2	.09	.16**	.15**	.37***	.48***	.59***	-.36***	-.29***	.45***	.66***	—	
Depress W2	.04	-.02	-.01	-.25***	-.30***	-.45***	.67***	.58***	-.21***	-.34***	-.57***	—
Anxiety W2	.02	-.05	-.03	-.19***	-.25***	-.41***	.62***	.73***	-.20***	-.27***	-.48***	.77***

Note. Engage T = weighted average level of engagement in the GSA over the school year; P. Valid = perceived peer validation; SJ Effic. = self-efficacy to promote social justice; Depress = depressive symptoms; W1 = wave 1; W2 = wave 2.

***
p < .001.

**
p < .01.

*
p < .05.

Table 3

Multilevel Structural Equation Model for GSA Engagement and Depressive Symptoms

Estimated Paths	Coefficient	SE	95% CI
GSA Engagement to Wave 2 Mediators			
GSA engagement to perceived peer validation	0.213 ***	0.054	(0.107, 0.319)
GSA engagement to self-efficacy to promote social justice	0.331 ***	0.066	(0.201, 0.461)
GSA engagement to hope	0.227 **	0.082	(0.065, 0.388)
Wave 2 Mediators to Wave 2 Depressive Symptoms			
Perceived peer validation to depressive symptoms	0.291	0.302	(−0.301, 0.884)
Self-efficacy to promote social justice to depressive symptoms	0.092	0.226	(−0.351, 0.536)
Hope to depressive symptoms	−1.633 ***	0.201	(−2.026, −1.240)
Covariance among Wave 2 Mediators			
Peer validation and self-efficacy to promote social justice	0.362 ***	0.067	(0.231, 0.493)
Peer validation and hope	0.432 ***	0.078	(0.279, 0.584)
Self-efficacy to promote social justice and hope	0.795 ***	0.100	(0.598, 0.992)
Autoregressive Associations at Level 1			
W1 perceived peer validation to W2 perceived peer validation	0.350 ***	0.053	(0.245, 0.454)
W1 self-efficacy to promote social justice to W2 self-efficacy to promote social justice	0.430 ***	0.046	(0.341, 0.520)
W1 hope to W2 hope	0.464 ***	0.036	(0.394, 0.534)
W1 depressive symptoms to W2 depressive symptoms	0.533 ***	0.045	(0.445, 0.621)
Demographic Covariates to Wave 2 Depressive Symptoms			
Sexual minority identity to depressive symptoms (heterosexual as referent)	−0.056	0.748	(−1.523, 1.411)
Racial/ethnic minority identity to depressive symptoms (White as referent)	−0.536	0.540	(−1.595, 0.522)
Cisgender male to depressive symptoms (cisgender female as referent)	−2.148 **	0.672	(−3.466, −0.830)
Gender expansive to depressive symptoms (cisgender female as referent)	−0.325	0.573	(−1.448, 0.799)
Group-level Predictors to Wave 2 Group-Level Depressive Symptoms			
W1 depressive symptoms to W2 depressive symptoms	0.249	1.040	(−1.788, 2.287)
Mental health-related discussions to depressive symptoms	−0.530 *	0.280	(−1.079, 0.020)
Advisor self-efficacy to address SGM issues to depressive symptoms	0.682	0.633	(−0.558, 1.923)

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Estimated Paths	Coefficient	SE	95% CI
Number of GSA meetings to depressive symptoms	−0.107[*]	0.048	(−0.201, −0.012)

Note. Values are unstandardized coefficient estimates, their standard errors (SE), and 95% confidence intervals (CI). W1 = Wave 1; W2 = Wave 2.

[***]
$p < .001$.

[**]
$p < .01$.

[*]
p .05.

Table 4

Multilevel Structural Equation Model for GSA Engagement and Anxiety Symptoms

Estimated Paths	Coefficient	SE	95% CI
GSA Engagement to Wave 2 Mediators			
GSA engagement to perceived peer validation	0.208***	0.043	(0.123, 0.292)
GSA engagement to self-efficacy to promote social justice	0.330***	0.059	(0.215, 0.446)
GSA engagement to hope	0.235***	0.076	(0.086, 0.385)
Wave 2 Mediators to Wave 2 Anxiety Symptoms			
Perceived peer validation to anxiety symptoms	−0.372	0.587	(−1.522, 0.778)
Self-efficacy to promote social justice to anxiety symptoms	0.642	0.523	(−0.383, 1.666)
Hope to anxiety symptoms	−3.073***	0.504	(−4.060, −2.086)
Covariance among Wave 2 Mediators			
Peer validation and self-efficacy to promote social justice	0.359***	0.066	(0.230, 0.488)
Peer validation and hope	0.424***	0.074	(0.280, 0.569)
Self-efficacy to promote social justice and hope	0.778***	0.103	(0.577, 0.979)
Autoregressive Associations at Level 1			
W1 perceived peer validation to W2 perceived peer validation	0.346***	0.055	(0.238, 0.454)
W1 self-efficacy to promote social justice to W2 self-efficacy to promote social justice	0.437***	0.045	(0.349, 0.524)
W1 hope to W2 hope	0.457***	0.036	(0.386, 0.527)
W1 anxiety symptoms to W2 anxiety symptoms	0.615***	0.032	(0.553, 0.678)
Demographic Covariates to Wave 2 Anxiety Symptoms			
Sexual minority identity to anxiety symptoms (heterosexual as referent)	−0.367	1.426	(−3.161, 2.427)
Racial/ethnic minority identity to anxiety symptoms (White as referent)	−0.518	1.284	(−3.035, 1.998)
Cisgender male to anxiety symptoms (cisgender female as referent)	−3.239*	1.585	(−6.346, −0.132)
Gender expansive to anxiety symptoms (cisgender female as referent)	−0.917	1.355	(−3.572, 1.739)
Group-level Predictors to Wave 2 Group-Level Anxiety Symptoms			
W1 anxiety symptoms to W2 anxiety symptoms	0.675*	0.288	(0.110, 1.241)
Mental health-related discussions to anxiety symptoms	−0.216	0.685	(−1.558, 1.126)
Advisor self-efficacy to address SGM issues to anxiety symptoms	1.115	1.226	(−1.288, 3.518)

Estimated Paths	Coefficient	SE	95% CI
Number of GSA meetings to anxiety symptoms	−0.252[**]	0.093	(−0.435, −0.069)

Note. Values are unstandardized coefficient estimates, their standard errors (SE), and 95% confidence intervals (CI). W1 = Wave 1; W2 = Wave 2.

[***]
$p < .001$.

[**]
$p < .01$.

[*]
$p < .05$.