



# Engagement in Gender-Sexuality Alliances Predicts Youth's Positive and Negative Affect: An 8-Week Weekly Diary Study

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## Abstract

Gender-Sexuality Alliances (GSAs) are school clubs for LGBTQ + youth and peer allies to support one another. This 8-week weekly diary study considered whether a youth's positive and negative affect during a given week could be predicted by experiences in their most recently attended GSA meeting. Ninety-nine GSA members ( $M_{age} = 15.90$ ,  $SD = 1.33$ ; 79% LGBTQ +; 41% trans/non-binary; 59% youth of color) in 11 states completed weekly surveys between January and May 2021. On average, some youth reported higher positive and negative affect than others. Youth also varied notably in their own positive and negative affect from week to week. Youth reported relatively higher positive affect on days following GSA meetings where they were more engaged than in other meetings and had spent time socializing in the meeting. Youth reported relatively higher negative affect on days following GSA meetings where they had discussed personal concerns, and relatively lower negative affect on days following meetings where they were more engaged and perceived greater advisor responsiveness. These findings offer a dynamic portrayal of youth's varied experiences across GSA meetings and the more immediate predictive effects of GSA experiences.

**Keywords** GSA · Sexual orientation · Gender identity · Mental health · Extracurricular groups

## Introduction

During adolescence, youth come to experience their emotions with greater frequency, intensity, and fluidity (Bailen et al., 2019; Steinberg, 2005). Youth's everyday affect is important to consider because negative affect can go on to predict more serious mental health concerns such as depression (Young et al., 2019). In contrast, positive affect can serve as a protective factor and foster one's resilience (Davis & Suveg, 2014; Tugade & Fredrickson, 2004). There is particular importance to consider positive and negative affect among youth who face societal marginalization, including LGBTQ + youth, as studies have documented persistent mental health concerns among them tied to stigma and discrimination (Russell & Fish, 2016; Wilson & Cariola, 2020). However, limited research has considered the lability of LGBTQ + youth's affect over the course of weeks or months at a time (Kiekens & Mereish, 2022). Even fewer studies have considered social settings or interactions that could have a more immediate and positive impact on their affect. With this in mind, the current study considers the experiences of LGBTQ + youth and their peer allies within Gender-Sexuality Alliances (GSAs)—school

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clubs affirming of sexual orientation and gender diversity—and how they may predict youth's positive and negative affect from week to week over an 8-week period.

### GSA as a Setting to Support LGBTQ+ and Ally Youth

School-based clubs and extracurricular groups historically have been spaces for youth to meet and build friendships with peers who hold shared interests, needs, or goals (Larson et al., 2006; Schaefer et al., 2011). Some clubs have come to focus on issues of diversity and social justice, among which are GSAs (Griffin et al., 2004). GSAs aim to provide a welcoming space for LGBTQ+ youth and their peer allies to socialize, seek and provide social-emotional support, access LGBTQ+ affirming resources, and advocate against discrimination (Griffin et al., 2004; Poteat et al., 2017). They are often youth-led and advisor-supported, and generally meet weekly or biweekly, either during or after school, for up to an hour. Based on their structure and function, GSAs are similar to other youth settings oriented around positive youth development models, which emphasize providing youth a space to safely socialize with peers, take on leadership roles, and access supportive adult mentors (Lerner et al., 2015). There is evidence that youth's membership and certain experiences in GSAs are associated with greater perceived safety and lower depressive and anxiety symptoms (Baams & Russell, 2021; Marx & Kettrey, 2016; Poteat et al., 2020).

At the same time, GSA research has been restricted to a relatively static portrayal of youth's GSA experiences in general. This limitation has been due to a reliance on cross-sectional data, or, at most, intermittently collected data (e.g., collected once or twice per school year), to ask youth about their GSA experiences. This constitutes a mismatch with the periodicity of GSA meetings (i.e., typically weekly or biweekly) and the frequency of data collection. Consequently, extant research has been unable to consider how a youth's experiences in any given meeting might predict their more immediate levels of positive or negative affect from week to week. Attention to this more proximal time span may be important when considering youth's GSA experiences in relation to their affect because youth come to experience affect with greater frequency, intensity, and variability during adolescence (Bailen et al., 2019; Steinberg, 2005).

Moreover, research on GSAs has sought principally to identify differences *between* youth in their GSA experiences and their wellbeing (e.g., whether some GSA members report greater wellbeing than others; Poteat et al., 2017). However, there is also likely variability *within* youth in their GSA experiences and wellbeing. How might a youth's *own* involvement in their GSA vary from meeting

to meeting, and how might this variability predict their own relative levels of positive and negative affect in the days following these meetings?

Few daily or weekly diary studies have examined a youth's extracurricular involvements on a meeting-to-meeting basis and in association with wellbeing. Available findings suggest the value of such an approach. Youth report a greater sense of purpose and exhibit less physiological stress on days in which they participated in extracurricular activities (Kiang (2012); McHale et al., 2012). As a limitation, however, these studies have not identified specific experiences within these meetings that underlie their benefits. The current study aims to address this limitation.

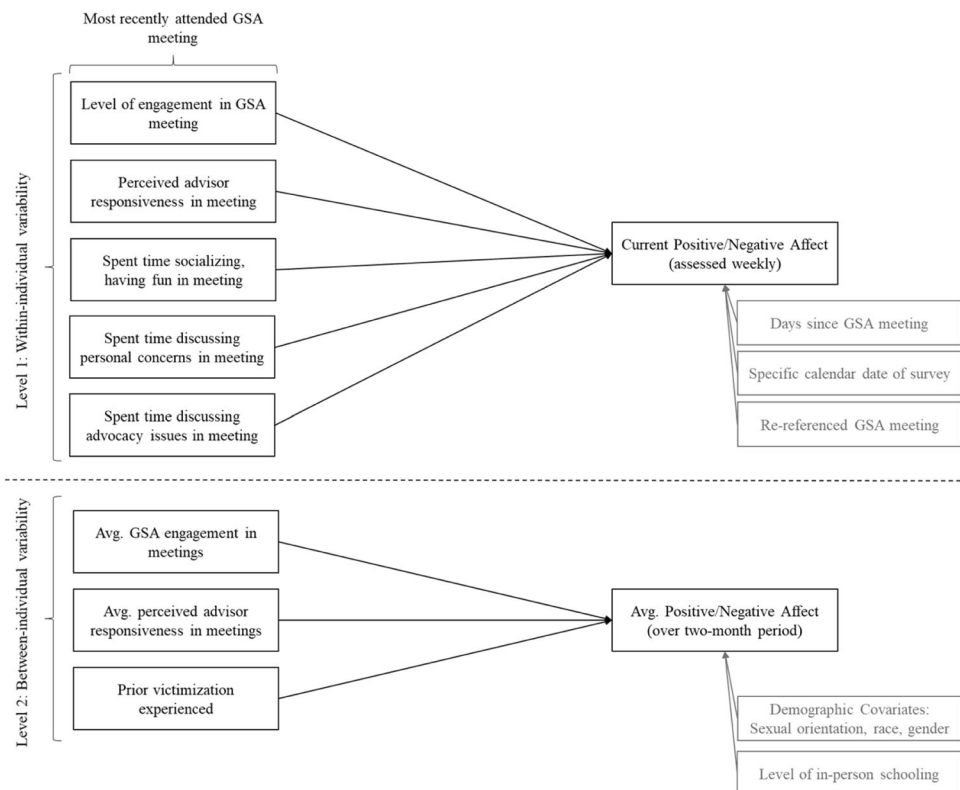
### GSA Experiences that May Predict Weekly Variability in a Youth's Affect

A youth's particular experiences in a GSA meeting could predict their relative level of positive or negative affect in the days that follow. The current study considers a youth's level of active engagement in the meeting, whether a youth spent time socializing, discussing personal challenges, or discussing advocacy efforts in the meeting, and the extent to which a youth felt their advisor was responsive to their needs in the meeting. The conceptual model is depicted in Fig. 1.

Youth may report relatively lower negative affect and higher positive affect following GSA meetings wherein they were more actively engaged. Youth program scholars have argued for the need to consider not simply whether youth are members of clubs, but rather their level of behavioral engagement in them (e.g., how much they contribute to discussions or activities) and how such engagement relates to any beneficial outcomes (Bohnert et al., 2010; Busseri & Rose-Krasnor, 2009; Wang & Eccles, 2013). There is emerging evidence that youth who more actively engage in GSA meetings report a greater sense of empowerment than members who report less engagement (Poteat et al., 2020). Still, while some youth, in general, may participate more in their GSA than others, a youth's own level of behavioral engagement in their GSA could vary from meeting to meeting. When a youth participates more in conversations and activities, they may have additional opportunities to process positive or negative experiences and to receive support or affirmation, which could benefit their affect in the following days.

GSA meetings may address a range of issues that contribute to members' positive and negative affect. Some meetings may center on socializing, wherein members plan or enjoy social events (e.g., hanging out, watching videos; Porta et al., 2017). Other meetings may focus largely on the personal stressors faced by members: youth may share their

**Fig. 1** Conceptual model of GSA meeting experiences predicting variability in youth positive and negative affect



concerns related to parental rejection, identity disclosure, or discrimination (Lee, 2002; Porta et al., 2017). Meetings may also focus on planning collective advocacy efforts, such as raising awareness of LGBTQ+ issues in their schools (Griffin et al., 2004; Mayberry, 2013). GSAs may not cover all of these issues in every meeting, or meetings may include mixed attention to socializing, sharing personal concerns, and advocacy. Cross-sectional research that has taken a broad view of youth's GSA experiences in general cannot capture the potential variability in these experiences from meeting to meeting. Multi-wave data may elucidate whether socializing, sharing personal concerns, or advocacy efforts in a given meeting may predict any immediate benefits for youth in terms of their positive or negative affect in the days that follow. In an exploratory manner, this study considers whether youth report relatively higher or lower levels of positive or negative affect in the days following GSA meetings wherein they devoted a substantive amount of time to each of these areas (i.e., socializing, discussing personal challenges, and advocacy).

Advisors' responsiveness to a youth in a GSA meeting could predict that youth's levels of positive and negative affect in days following the meeting. As highlighted in youth program models, adults play essential roles in these spaces by offering support and mentorship to youth (Lerner et al., 2015; Rhodes & DuBois, 2008). To this end, responsiveness represents an individual's recognition of

another person's feelings and needs, with an ability to respond in a way that matches that person's desired response (Hamre, 2014; Reis & Clark, 2013). Youth in GSAs may see their advisor as a trusted adult in whom they can confide or from whom they can receive trustworthy information or resources (Valenti & Campbell, 2009). At the same time, youth may perceive their advisor to be more responsive at some meetings than at others. Youth attend GSAs for a range of needs and interests (Griffin et al., 2004; Lee, 2002), which could evolve from meeting to meeting. As members may have a range of needs and interests that change from meeting to meeting, advisors may face challenges meeting the needs of multiple members. Ultimately, however, in meetings wherein a youth perceives their advisor to be more responsive than at other meetings, youth may report lower levels of negative affect and higher levels of positive affect in the following days.

### Individual Factors as Predictors of Youth Affect

The primary interest of this study lies in understanding variability in affect *within* individual youth over a 2-month period; however, it also attends to differences *between* individual youth. Certain individual characteristics and experiences could predict which youth generally report lower or higher levels of positive or negative affect than others. One variable includes youth's recent experiences of

peer victimization during the month prior to the study period. There is robust evidence of the psychosocial consequences of victimization among the general youth population and LGBTQ+ youth specifically (Earnshaw et al., 2017; Schoeler et al., 2018). Youth who experienced greater victimization than others immediately prior to the 8-week study period may report overall higher negative affect and lower positive affect during the study.

Second, there may be demographic group differences in youth's affect. Mental health disparities are clear between LGBQ youth and heterosexual youth, as well as between youth of color and White youth, due to discrimination (Castro-Ramirez et al., 2021; Russell & Fish, 2016). Such differences might also be evident among GSA members with regard to their overall positive and negative affect during the study. Likewise, the general youth literature (which has largely considered gender based on binary groups of 'boys' and 'girls') tends to document elevated depressive symptoms among girls relative to boys (Salk et al., 2017). Among transgender and non-binary youth samples, including youth in GSAs, there is evidence that non-binary youth report heightened mental health concerns (Diamond, 2020; Poteat et al., 2021). As such, there could be potential gender identity differences in affect over the study period.

Third, the model will adjust for differences between youth in their overall levels of engagement and perceptions of advisor responsiveness across GSA meetings. Both factors could predict which youth experience higher or lower levels of positive or negative affect, on average, during the study period. Finally, the model will adjust for the extent to which youth were attending school virtually or in-person, as other work has suggested that in-person instruction may carry some benefits during the pandemic (Hawrilenko et al., 2021).

## Current Study

GSAs have the potential to support youth and promote their healthy development, but studies have yet to consider how GSAs may do so on a more meeting-to-meeting basis. This more nuanced approach is important when considering youth's positive and negative affect, given the increasing lability of affect during adolescence. Over an 8-week period of weekly surveys, the current study considered whether a youth's positive and negative affect during a given week could be predicted by experiences in their most recently attended GSA meeting. It was hypothesized that youth would report relatively higher positive affect and relatively lower negative affect on days following GSA meetings wherein they were more actively engaged and felt their advisor was more responsive to them, relative to other meetings. In an exploratory manner, the study also considered whether youth

reported relatively higher positive affect and relatively lower negative affect on days following GSA meetings wherein there was substantive time for them to socialize, share personal concerns, or engage in advocacy, relative to meetings when there was not substantive time given to each focal area. For each of these areas, 'substantive time' constituted at least 5–10 minutes of the GSA meeting, as most GSAs meet for no more than 1 hour. It was further hypothesized that youth who had experienced greater victimization in the month prior to the study period would report more negative and less positive affect during this period than youth who reported less victimization. Finally, potential demographic differences in youth's average levels of positive and negative affect during the study period were considered based on sexual orientation, race or ethnicity, and gender identity.

## Methods

### Participants and Procedures

The current study included 99 youth ages 14 to 19 ( $M_{\text{age}} = 15.90$ ,  $SD = 1.33$ ) who were current GSA members. Among participants, 59% identified with at least one racial or ethnic minority identity; 79% identified with at least one LGBQ+ identity; and 41% identified with at least one gender non-binary identity or as transgender (two transgender female youth and eight transgender male youth). Participants resided in 11 states in the U.S., though over half were located in Massachusetts ( $n = 56$ ). These and other demographic details are provided in Table 1.

Data collection occurred between January and May of 2021, fully online given the restrictions of in-person data collection during this period of the pandemic. To recruit participants, GSA advisors and adults in other LGBTQ+ youth-serving organizations were asked to share information about the study with youth, along with a link to the first online survey. Youth could participate if they considered themselves current members of a GSA that met at least twice per month (in-person or virtually). A waiver of parent consent was granted by the host institution's IRB, given that the study was deemed minimal risk, and because this has become a recommended practice in LGBTQ+ youth research to avoid inadvertently outing LGBTQ+ youth to caregivers (Macapagal et al., 2017). Youth provided their informed assent prior to participating.

To guard against the inclusion of data from "bots" and unreliable responders, a reCAPTCHA item was embedded in the survey (e.g., "choose all squares with a photo of a stoplight"), along with two items instructing participants to select a specific response. Responses to certain pairs of items were also crosschecked (e.g., participants selected the correct time zone for their state). Participants who had any

**Table 1** Participant demographic characteristics

Variable	<i>N</i>	<i>M</i> ( <i>SD</i> )	Range
Sexual orientation			
Gay or lesbian	20		
Bisexual	40		
Questioning	16		
Heterosexual	8		
Pansexual	14		
Queer	18		
Asexual	2		
Gender identity			
Male	21		
Female	52		
Non-binary	23		
Genderqueer	8		
Gender fluid	9		
Agender	1		
Sex assigned at birth			
Female	85		
Male	13		
Unreported	1		
Race or ethnicity			
White or European American	69		
Black or African American	7		
Asian or Asian American	13		
Latina/o/x	23		
Multiracial	11		
Native American	3		
Middle Eastern, Arab, or Arab American	2		
State of residence			
California	3		
Delaware	1		
Florida	12		
Massachusetts	56		
Michigan	2		
New York	7		
North Carolina	2		
Pennsylvania	10		
South Carolina	1		
Texas	4		
Virginia	1		
Schooling modality			
Online the whole time	60		
Online the majority of the time	12		
Online about half the time	16		
In-person the majority of the time	9		
In-person the whole time	2		
Age		15.90 (1.33)	14–19

**Table 1** (continued)

Variable	<i>N</i>	<i>M</i> ( <i>SD</i> )	Range
Victimization		1.16 (1.48)	0.00–5.00
GSA engagement		2.12 (1.28)	0.00–4.00
Perceived advisor responsiveness		4.15 (1.05)	1.00–5.00
Positive affect		9.68 (3.58)	4.00–20.00
Negative affect		8.91 (3.82)	4.00–20.00

The totals within sexual orientation, gender identity, and race or ethnicity categories sum to greater than the total sample size ( $n = 99$ ) because participants could select more than one response option. With the exception of age (reported in the first survey), grand means and standard deviations, as well as the range of responses, are calculated from the responses across all waves of all participants

flagged responses were not sent any further surveys and the data from their first survey were excluded.

After youth completed their first survey, they were assigned to a weekday to complete their remaining seven surveys, once weekly for a total of eight surveys. Each participant received a unique link no earlier than 4:00 pm of their time zone on their assigned day, with a reminder sent at 8:00 pm if they had not yet completed the survey. These timeframes ensured that youth would not receive a notification during school hours and that it would be received after a GSA meeting, if a meeting happened to have been held on that same day (thus preserving the temporal order for the model). Participants received a \$5 Amazon gift card for each survey.

Most participants ( $n = 68$ ) completed at least four of the eight surveys; 22 completed all surveys and 24 completed only the first one ( $M = 4.74$  surveys,  $SD = 2.69$ ). The number of surveys completed was not correlated with youth’s reported level of victimization or their individual means of reported engagement in GSA meetings, advisor responsiveness, positive affect, or negative affect. On average, youth of color completed one more survey than White youth ( $p = 0.03$ ,  $\eta_p^2 = 0.05$ ; White youth:  $M = 4.22$ , youth of color:  $M = 5.39$ ). There were no significant differences based on sexual orientation or gender identity.

**Measures**

In every survey, youth reported their experiences from their most recently attended GSA meeting, along with their current positive and negative affect at the time of completing each survey.

**Demographic factors**

Youth responded to demographic items in their first survey that asked about their sexual orientation, gender identity, sex assigned at birth, race or ethnicity, age, current state of

residence, and the extent to which they attended school in-person or virtually. Response options and frequencies for these items are reported in Table 1. Transgender youth who identified on the binary (man or woman) were included in that respective gender group, while youth who identified beyond the gender binary were included in a gender non-binary group for the purposes of the analyses. In each survey, youth indicated the date of their most recently attended GSA meeting. Their survey completion date was automatically recorded. These data were used to calculate the number of days between their most recently attended GSA meeting and their current survey to include as a covariate in the models.

### Behavioral engagement in GSA meeting

In each survey, youth reported the extent to which they were actively involved in their most recently attended GSA meeting, based on the GSA Engagement scale (Poteat et al., 2020). The items were preceded by the stem, “Please consider your own involvement in your last GSA meeting” and included: (a) I participated in conversations, (b) I took a leadership role in activities, (c) I talked with my GSA advisor, and (d) I helped with events or projects in my GSA. The fifth item from the scale (“I attended GSA meetings or other GSA events”) was not included, as youth were asked to refer to their most recently attended meeting. Response options were *not at all*, *a little bit*, *somewhat*, *a moderate amount*, and *a lot* (scored 0 to 4). At the within-individual level, higher average scores represent greater behavioral engagement in the referenced GSA meeting; at the between-individual level, higher average scores represent greater behavioral engagement across GSA meetings during the study period ( $\alpha_{\text{within}} = 0.78$ ,  $\alpha_{\text{between}} = 0.94$ ).

### Advisor responsiveness

In each survey, youth reported perceptions of their GSA advisor’s responsiveness during their most recently attended GSA meeting. Three items from the 7-item Care subscale of the Tripod survey were used (Ferguson & Danielson, 2014). The items were preceded by the stem, “In my last GSA meeting...” and included: (a) My advisor made me feel that they really cared about me; (b) My advisor encouraged me to do my best; and (c) I liked the way my advisor treated me when I needed help. As is typical in designs involving daily or weekly diary surveys, a smaller set of items from the longer established scale was used to ensure sufficient brevity and reduce potential burnout among participants. These items were selected from the full scale based on their psychometric properties from a pilot study conducted with GSAs in 2019. These three items had the highest factor loadings among all the items in the full scale in an

exploratory factor analysis. Response options range from 1 (*totally untrue*) to 5 (*totally true*). At the within-individual level, higher average scores represent greater perceived responsiveness from the GSA advisor during the referenced meeting; at the between-individual level, higher average scores represent greater perceived responsiveness from the advisor across GSA meetings during the study period ( $\alpha_{\text{within}} = 0.81$ ,  $\alpha_{\text{between}} = 0.98$ ).

### Focus of discussions in GSA meeting

In each survey, youth indicated whether they had devoted at least 5–10 minutes of time to the following issues in their most recently attended GSA meeting: (a) general socializing or hanging out, (b) discussions about personal challenges or concerns, and (c) advocacy activities for LGBTQ issues. Each item was coded as 0 (had not devoted substantive time to the issue) or 1 (had devoted substantive time to the issue).

### Peer victimization

In their first survey, youth responded to three items asking about their experiences of peer victimization in the past month, preceded by the stem, “How often did these things happen to you in the past month, either in-person or online.” The items were: (a) I got hit or pushed by other students, (b) Other students picked on me, made fun of me, or called me names, and (c) Other students left me out or excluded me. Response options were *0 times*, *1 or 2 times*, *3 or 4 times*, *5 or 6 times*, and *7 or more times* (scored 0 to 4). Higher average scale scores indicated experiencing greater peer victimization in the past month ( $a = 0.52$ ).

### Positive and negative affect

In each survey, youth completed the 10-item version of the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988), with five items assessing positive affect (e.g., “inspired” or “determined”) and five items assessing negative affect (e.g., “upset” or “afraid”). They were preceded by the stem, “Please read each item and indicate how much you felt this way today,” with response options of *very slightly/not at all*, *a little*, *moderately*, *quite a bit*, and *extremely* (scored 1 to 5). However, in forming total scale scores for positive affect and negative affect, one item from the positive affect scale (“alert”) and one item from the negative affect scale (“hostile”) was excluded due to participants’ reported confusion over their meaning and their low factor loadings in the earlier pilot study. Thus, each scale score consisted of four items. At the within-individual level, higher total scores represent greater positive affect or negative affect, respectively, during the day youth had completed the survey; at the between-individual level, higher total scores represent greater

positive affect or negative affect, respectively, over the course of the study period (positive affect:  $\alpha_{\text{within}} = 0.56$ ,  $\alpha_{\text{between}} = 0.90$ ; negative affect:  $\alpha_{\text{within}} = 0.63$ ,  $\alpha_{\text{between}} = 0.90$ ).

## Analytic Approach

Given that the data were comprised of multiple observations nested within individuals, multilevel modeling with Mplus 8.5 (Muthén & Muthén, 2017) was used to test the two models (one model for positive affect as the dependent variable, and one model for negative affect as the dependent variable). Maximum likelihood estimation with robust standard errors was specified, and 100 multiply-imputed datasets were used to handle missing data. Thus, there were a total of 792 observations across 99 individuals (i.e., eight observations per participant). In a sensitivity analysis, 24 participants who had only completed the first survey were excluded; the pattern of results and their statistical significance were the same. When the analyses were conducted without any imputation, the pattern of the results were the same, though some estimates were no longer statistically significant (the within-individual effect for advisor responsiveness predicting negative affect was  $\pi = -0.57$ ,  $p = 0.15$  without imputation, and  $\pi = -0.67$ ,  $p = 0.05$  in the multiply-imputed results that we present), possibly due to more limited statistical power. The full model is presented below for positive affect (the model for negative affect was identical; the model is presented graphically in Fig. 1):

$$\begin{aligned} \text{Positive Affect}_{it} = & \pi_{0i} + \pi_{1i}(\text{GSA engagement}_{it}) + \pi_{2i}(\text{advisor responsiveness}_{it}) \\ & + \pi_{3i}(\text{socialized}_{it}) + \pi_{4i}(\text{discussed personal concerns}_{it}) \\ & + \pi_{5i}(\text{discussed advocacy}_{it}) + \pi_{6i}(\text{days since last meeting}_{it}) \\ & + \pi_{7i}(\text{re-referenced meeting}_{it}) + \pi_{8i}(\text{calendar date}_{it}) + e_{it} \end{aligned} \quad (1)$$

$$\begin{aligned} \pi_{0i} = & \beta_{00} + \beta_{01}(\text{Avg. GSA engagement}_i) + \beta_{02}(\text{Avg. advisor responsiveness}_i) \\ & + \beta_{03}(\text{victimization}_i) + \beta_{04}(\text{heterosexual}_i) + \beta_{05}(\text{youth of color}_i) \\ & + \beta_{06}(\text{male gender}_i) + \beta_{07}(\text{non-binary gender}_i) \\ & + \beta_{08}(\text{in-person schooling}_i) + r_{0i} \end{aligned} \quad (2)$$

At the within-individual level (Eq. 1), variables included youth's reported level of behavioral engagement, advisor responsiveness, and whether they had devoted time to socializing, discussing personal concerns, and advocacy at their most recently attended GSA meeting. Covariates included the number of days elapsed since the referenced GSA meeting and the specific calendar date of the completed survey (scaled such that zero represented the earliest date on which the first survey was completed, with a one-unit increase per subsequent calendar day). The day of the week the survey was completed originally was included, but because this effect was not significant, it was removed for a more parsimonious model. Another covariate denoted whether a respondent referenced the same GSA meeting in

a previously completed survey (0 = no; 1 = yes), a possibility for youth whose GSA met biweekly or who may have missed a meeting. This occurred for a small number of cases (88 cases out of the 792 total; 11%).

At the between-individual level (Eq. 2), variables included youth's reported level of behavioral engagement in their GSA and advisor responsiveness based on their responses from all the GSA meetings they had attended during the study period (Mplus partitions the variance in these scores at the within- and between-level of the model). Victimization scores were also included, as were variables for youth's sexual orientation, gender identity, and race or ethnicity. Race or ethnicity and sexual orientation were dichotomized for analyses due to the many different combinations of selected and written-in identities that youth could and did provide for each of these demographic items. This limited the representation of youth in more specific groups for statistical comparison. LGBQ+ youth (who did not also include heterosexual as one of their responses) and monoracial White youth (who did not also include a racial or ethnic minority identity as one of their responses) were the reference group compared to heterosexual youth and youth of color, respectively. Gender identity was included in the analyses based on three groups: male (including cisgender and transgender male youth), female (including cisgender and transgender female youth), and non-binary for youth reporting gender non-binary identities (e.g., agender, genderqueer, non-binary). Female gender youth were the reference group in the models. In sensitivity analyses where gender groups were formed for cisgender male, cisgender female, and trans/non-binary youth, the pattern of results was generally the same, with the exception that cisgender male youth reported greater negative affect, on average, than cisgender female youth in the model for negative affect ( $\beta = 2.63$ ,  $p = 0.01$ ). Finally, as a covariate, models adjusted for the extent to which youth attended school in person or virtually.

## Results

Descriptive data can be found in Table 1. The intraclass correlation (ICC) for positive affect indicated that 56% of the total variance in youth's positive affect was between individuals (i.e., Level 2), while 44% was variability within individuals from week to week. The ICC for negative affect indicated that 52% of the total variance in youth's negative affect was between individuals (i.e., Level 2), while 48% was variability within individuals from week to week. Thus, while individuals did vary from one another in their levels of positive and negative affect over the study period, there was also nearly equally substantial variability in an individual youth's own positive and negative affect from week to week during this period. Positive and negative affect scores

**Table 2** Multilevel models predicting variability in youth's positive and negative affect

Predictors	Model 1: Positive affect		Model 2: Negative affect	
	Coefficient estimate	95% CI	Coefficient estimate	95% CI
Level 1: Within-individual				
Behavioral engagement in meeting	0.57**	(0.14, 1.00)	−0.70**	(−1.13, −0.27)
Perceived advisor responsiveness in meeting	0.31	(−0.27, 0.88)	−0.66 <sup>†</sup>	(−1.32, 0.00)
Socialized in meeting	0.99**	(0.34, 1.65)	0.02	(−0.82, 0.86)
Discussed personal concerns in meeting	−0.18	(−0.77, 0.42)	0.69*	(0.08, 1.31)
Discussed advocacy in meeting	0.26	(−0.31, 0.82)	−0.26	(−0.86, 0.35)
Days since last meeting	−0.02	(−0.06, 0.01)	0.01	(−0.03, 0.04)
Re-referenced meeting	−0.30	(−0.96, 0.36)	−0.21	(−0.93, 0.50)
Calendar date	−0.01*	(−0.03, 0.00)	−0.01	(−0.03, 0.00)
Level 2: Between-individual				
Avg. engagement across meetings	0.42	(−0.11, 0.95)	−0.41	(−1.00, 0.18)
Avg. advisor responsiveness across meetings	0.73	(−0.16, 1.62)	−0.22	(−1.04, 0.61)
Prior peer victimization	0.06	(−0.38, 0.50)	0.66**	(0.21, 1.11)
Extent of in-person schooling	0.57*	(0.05, 1.10)	0.21	(−0.26, 0.67)
Heterosexual youth	0.05	(−2.43, 2.53)	0.53	(−2.13, 3.19)
Youth of color	0.54	(−0.53, 1.61)	−0.42	(−1.56, 0.73)
Male gender identity	0.20	(−1.30, 1.71)	1.47	(−0.22, 3.16)
Non-binary gender identity	−0.96	(−2.33, 0.41)	1.09	(−0.30, 2.48)
Explained Variance ( $R^2$ )				
Level 1	0.11**		0.08**	
Level 2	0.26**		0.28**	

Unstandardized coefficient estimates and their 95% confidence intervals (CI) are reported. White youth, LGBQ+ youth, and female youth were the reference group for race/ethnicity, sexual orientation, and gender identity, respectively

\*\* $p < 0.01$ , \* $p < 0.05$ . <sup>†</sup> $p = 0.05$

spanned the full range, and the grand means for positive affect ( $M = 9.68$ ,  $SD = 3.58$ ) and negative affect ( $M = 8.91$ ,  $SD = 3.82$ ) both fell somewhat below the midpoint, which would generally reflect a response of “a little” or “moderately” to the items on the scale. Across observations and individuals, positive and negative affect were negatively, but not strongly, correlated ( $r = -0.27$ ,  $p < 0.001$ ).

The analyses and results for the multilevel models are reported in Table 2. In the model for positive affect (model 1), youth reported relatively higher positive affect on days following GSA meetings wherein they had reported more behavioral engagement in the meeting than in other meetings ( $\pi = 0.57$ ,  $p = 0.009$ ) and spent time socializing in the meeting ( $\pi = 0.99$ ,  $p = 0.003$ ). Also, youth who reported more in-person schooling reported more positive affect, on average, over the study period ( $\beta = 0.57$ ,  $p = 0.03$ ). Finally, youth tended to report slightly less positive affect over the progression of the study period ( $\pi = -0.01$ ,  $p = 0.04$ ).

In the model for negative affect (model 2), youth reported relatively higher negative affect on days following GSA meetings wherein they had discussed personal concerns ( $\pi = 0.69$ ,  $p = 0.03$ ). They reported relatively lower negative affect on days following GSA meetings wherein they had reported more behavioral engagement ( $\pi = -0.70$ ,  $p = 0.002$ ) and had perceived greater advisor responsiveness ( $\pi = -0.66$ ,  $p = 0.05$ ) than in other meetings. Youth who had experienced greater victimization in the month prior to the study period reported more negative affect, on average, over the study period ( $\beta = 0.66$ ,  $p = 0.004$ ).

## Discussion

Although studies have identified several potential benefits of GSAs, they have tended to offer a static portrayal of a youth's experience in them without attention to how a youth's



experiences could vary from meeting to meeting and in relation to their wellbeing. The current study addressed this limitation to show that, over an 8-week period, youth's experiences in their GSA meetings predicted weekly variability in their positive and negative affect. By utilizing multiple waves of data to consider within-individual variability among youth in their affect and GSA meeting experiences, these findings offer a more dynamic portrayal of youth's time in their GSA and the benefits of their involvement within a more proximal time period.

### Capturing Variability in Youth's Positive and Negative Affect

There was a fairly even distribution of variance within and between youth in their positive and negative affect over 8 weeks. Thus, on the one hand, some youth reported higher positive or negative affect than others, on average, over the study period. This adds to existing GSA research that has documented differences among members on various indicators of wellbeing (Baams & Russell, 2021; Poteat et al., 2017; Wright et al., 2022). On the other hand, there was notable variability within youth in their own relative levels of positive or negative affect from week to week. The proportion of within- and between-individual variance in youth's positive and negative affect from the current study was quite comparable to a recently published daily diary study of positive and negative affect among LGBTQ+ youth (Kiekens & Mereish, 2022). These findings also align with the broader adolescent development literature, which has shown that youth come to experience their affect with greater variability, frequency, and intensity at this developmental period (Bailen et al., 2019; Steinberg, 2005).

The finding for within-individual variability in affect underscores the need for GSA research, and research in youth settings more broadly, to attend to youth's affect and wellbeing closer in time to when these groups meet. Doing so would expand upon studies that have considered youth's extracurricular involvement in clubs and wellbeing over longer periods (e.g., several months or a year), but which have missed such nuance (Busseri et al., 2006; Mueller et al., 2011; Zarrett et al., 2021). Importantly, for example, even among youth who tended to experience less negative affect than others, there was notable variability in their degree of negative affect from week to week. This suggests that GSA advisors should check on all members at a given meeting, even those who they may consider to be doing relatively well compared to other members, as these youth may nonetheless struggle from time to time.

The current findings also indicate the value of considering both positive affect and negative affect. As described below, a youth's GSA experiences predicted each in some ways that were similar and in other ways that

were distinct and uniquely informative. The correlation between youth's positive and negative affect was modest, suggesting that youth experience their feelings in complex and mixed ways. This, too, is important for GSAs to recognize as they seek to provide a space for youth to process both positive and negative experiences, which could co-occur for an individual.

### The Effects of Youth Engagement and Advisor Responsiveness in GSA Meetings

Youth reported feeling more positive affect and less negative affect on days after GSA meetings wherein they had reported greater behavioral engagement, relative to days after meetings where they were less engaged. Because GSA meetings are social in nature, youth's greater engagement may have provided more time or space for them to connect with their peers and process positive or negative experiences that they were having around the time of those meetings. In turn, this may have led them to feel less negative affect (e.g., feeling less upset) and more positive affect (e.g., feeling more inspired) in the days following those meetings. This finding builds on those that have documented ties between youth's overall GSA involvement and a sense of empowerment and wellbeing (Poteat et al., 2020; Russell et al., 2009; Wright et al., 2022). This finding also supports calls from scholars to give greater attention to youth's level of engagement in extracurricular settings rather than comparing youth based only on their membership status (Bohnert et al., 2010; Busseri & Rose-Krasnor, 2009). Furthermore, this finding emphasizes the need to consider how a youth's engagement is not static but rather varies from meeting to meeting, as this was linked to how they felt in subsequent days. Future research might identify facilitators and barriers to a youth's level of engagement in a GSA meeting to identify how GSAs may provide sufficient opportunities for each member to participate.

Youth also reported less negative affect on days after GSA meetings where they felt their advisors were more responsive to them than days after meetings where they felt their advisors were less responsive. Perceived advisor responsiveness did not predict a youth's positive affect. GSA advisors often are a source of support when youth experience discrimination or other stressors (Valenti & Campbell, 2009). An advisor's greater responsiveness in a given meeting may have helped a youth to process and feel equipped to face an immediate stressor, thereby leading them to feel relatively less negative affect in days after these meetings compared to other meetings. The youth development literature has identified adult mentors as an important element of successful youth programs (Lerner et al., 2015; Rhodes & DuBois, 2008), and this current finding adds evidence to support the importance of a

responsive adult. This finding also adds to the limited research that has considered how GSA advisors' efforts are associated with youth's wellbeing (Poteat et al., 2022; Valenti & Cambell, 2009) and underscores the need for greater attention to advisors. For instance, many GSA advisors report that they have not received mentorship or professional development to serve in this role (Poteat et al., 2022). Support for advisors (through consultation or professional development) could include a focus on how to provide consistent responsive care to youth.

### The Importance of Specific GSA Meeting Discussions and Activities

Youth reported more negative affect on days after GSA meetings where they had spent some time discussing personal concerns, relative to days after meetings where they did not spend substantive time on this. Discussing personal concerns did not predict positive affect. Providing social-emotional support to youth is a major aim of GSAs (Griffin et al., 2004). Youth ultimately may find these opportunities for support empowering (Poteat et al., 2020; Russell et al., 2009), but the current finding suggests that processing these experiences in the moment may be difficult, with some negative affect that may carry over in days after the meeting. The item that asked about this focus did leave some ambiguity as to whether the personal concern was the individual's own or another member's personal concern. Still, recounting one's own personal struggles or hearing the struggles faced by one's friends could both elicit similar negative affective responses. In some ways, this could be understood within the framework of minority stress models, which underscore how direct or more distal experiences of discrimination underlie health concerns for sexual and gender minority youth (Goldbach & Gibbs, 2017). It may be important, then, for GSA advisors or student leaders to follow-up with youth in the days following GSA meetings where youth discussed difficult experiences. Doing so could ensure some continuity of care for youth, especially for youth who may have few sources of support beyond the GSA.

Youth reported more positive affect on days after GSA meetings where they had spent some time socializing, relative to days after meetings where they did not have substantive time to socialize. Socializing did not predict negative affect. Time for socializing may have provided youth opportunities to savor moments with their friends, to share positive updates, or to relax from an otherwise stressful day of school. Extensive research has documented the benefits of positive interactions with peers in adolescence, whether those interactions are with close friends or with acquaintances (Way et al., 2018). A core aim of clubs in general is to provide a space for youth to make friends,

socialize, and have fun (Larson et al., 2006; Schaefer et al., 2011). Whereas youth may have sought their advisors for support in response to a stressor, youth's socializing time with peers may have enhanced their positive feelings, thus predicting relatively higher positive affect in subsequent days. This socializing element has received little attention in GSA research, which has focused more on their social-emotional support and advocacy aims (Poteat et al., 2017). Still, this finding indicates the value of reserving time during GSA meetings for youth to simply 'hang out' with one another in what might otherwise appear to be unstructured or unproductive meeting time. Again, this highlights the need for GSA research to attend not only to youth's negative affect and mental health concerns, but also to their positive affect and other indicators of flourishing.

### Accounting for Differences Between GSA Members

Although the current study focused on GSA experiences predictive of *within*-individual differences in a youth's affect, two variables predicted differences between youth in their average positive or negative affect during the 2-month period. First, youth who had experienced greater peer victimization in the month prior to the 8-week study period reported greater negative affect. This adds to the extensive research on victimization and its psychosocial consequences among adolescents in general and LGBTQ+ youth specifically (Earnshaw et al., 2017; Schoeler et al., 2018). This finding remains important to note, as negative affect can predict more serious downstream concerns such as depression and suicidality (Selby et al., 2013; Young et al., 2019).

Second, youth who reported more in-person instruction reported more positive affect, on average, over the study period than youth who reported a greater degree of online instruction. The current study was conducted during one of the initial peaks of the pandemic, and there has been attention to how its disruption to schooling has affected students (Kuhfeld et al., 2020). This finding may reflect some of the broader challenges that school administrators have faced in balancing protection of their students' physical health while attending to their social-emotional health when providing in-person or virtual instruction.

### Considering Certain Statistically Non-Significant Effects

Several variables did not predict youth's positive or negative affect. Although advocacy is a major focus for many GSAs, discussing advocacy issues in a given meeting did not predict a youth's positive or negative affect in the ensuing days. Advocacy often entails longer-term commitments and work outside of a single meeting (Mayberry, 2013). It may indeed carry benefits for youth (Ioverno &

Russell, 2021; Russell et al., 2009), but its effects may be less immediate.

Also, there were not statistically significant demographic group differences in youth's average levels of positive or negative affect over the study period. Although some studies have documented demographic group differences in mental health and wellbeing among GSA members (Baams & Russell, 2021; Poteat et al., 2021), those studies also suggested elevated concerns among GSA members in general. It may be that group differences are more pronounced for enduring mental health concerns than for everyday positive and negative affect.

### Limitations, Strengths, and Future Directions

There are several limitations to the current study that could carry implications for interpreting the findings. First, the sample was not representative of a defined population of LGBTQ+ youth, whether at a local, state, or national level. It would be important for future research to consider the degree to which these findings generalize to youth in different states or regions of the country. The roles of GSAs in addressing youth's social-emotional health could vary based on the sociopolitical context in which GSAs are embedded. Second, as the study's primary aim was to give greater attention to within-individual variability among youth in their GSA experiences and affect over time, the study was underpowered to detect between-individual effects. As such, null findings at that level should be interpreted with caution. Ongoing GSA research would benefit from larger samples with multiple observations from individuals nested within GSAs within different geographical contexts. This expansive view could serve to identify strategies for supporting both individual youth members as well as GSAs as collective groups. Finally, although sensitivity analyses suggested that the reported findings were fairly robust to the missingness in the data, the amount of missing data should still be considered. Data were collected during an initial peak of the pandemic, which may have limited many youth from participating as fully as they would have under pre-pandemic conditions.

There are also several strengths to the current study. It marks a major shift in GSA research, and in much of the youth program literature, by attending to *within*-individual variability in a youth's GSA experiences from meeting to meeting and their affect assessed weekly. Whereas most GSA research has utilized cross-sectional data or, as an incremental advance, two waves of data, this study utilized eight waves of data over 2 months. Though labor-intensive, doing so allowed the opportunity to capture nuance in the dynamic experiences that youth had in their GSA from meeting to meeting and attend to the substantial variability within and between youth in how they experienced their

affect on a timescale more aligned with the periodicity of GSA meetings. In addition, the study considered youth's positive and negative affect. Research on GSAs and among LGBTQ+ youth more broadly has tended to focus on psychosocial concerns and health disparities, with considerably less attention to positive indicators of wellbeing (Fish, 2020). Yet, GSAs and similar youth settings aim to promote youth's resilience and thriving, outcomes which cannot be fully captured simply by a youth's lower levels of negative affect or fewer health concerns.

### Conclusion

To date, research has offered a promising but relatively static portrayal of youth's involvement in GSAs, often presenting cross-sectional snapshots of differences between members in their GSA experiences 'in general' and their overall wellbeing. This approach has been unable to capture within-individual differences in a youth's GSA experiences from meeting to meeting and how this could predict variability in their wellbeing over time. The current study addressed this gap in the literature by identifying specific experiences from meeting to meeting that predicted youth's relative levels of positive and negative affect over the course of 8 weeks. The present findings underscore the need for GSA research to adopt a lens with attention to variability both within individual youth and between youth members in their GSA experiences, and to the immediate and more prolonged effects of youth's involvement in GSAs. Research capturing these nuanced and dynamic experiences could inform GSAs and similar youth settings on how to be flexible and responsive to the experiences that youth contend with in their everyday lives while supporting their overall development.

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## Compliance with Ethical Standards

**Conflict of Interest** The authors declare no competing interests.

**Ethical Approval** All procedures were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. All study procedures were approved by the Boston College IRB, protocol 19.280.01.

**Informed Consent** Informed assent was obtained from all youth participants included in the study. A waiver of parental consent was obtained from the IRB.

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