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Gay-Straight Alliances as Settings to Discuss Health Topics: Individual and Group Factors Associated with Substance Use, Mental Health, and Sexual Health Discussions

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Gay-Straight Alliances as settings to discuss health topics: individual and group factors associated with substance use, mental health, and sexual health discussions

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Abstract

Sexual minority (e.g. lesbian, gay, bisexual, questioning; LGBQ) and gender minority (e.g. transgender) youth experience myriad health risks. Gay-Straight Alliances (GSAs) are school-based settings where they may have opportunities to discuss substance use, mental health, and sexual health issues in ways that are safe and tailored to their experiences. Attention to these topics in GSAs could aid in developing

programming for these settings. Among 295 youth from 33 Massachusetts high-school GSAs (69% LGBQ, 68% cisgender female, 68% White, $M_{\rm age}$ = 16.06), we examined how often youth discussed these topics within their GSA and identified factors associated with having more of these discussions. Youth and GSAs as a whole varied in their frequency of discussing these topics. Youth who accessed more information/resources in the GSA and did more advocacy more frequently engaged in discussions around substance use, mental health and sexual health. Youth who reported greater victimization more often discussed substance use and mental health, but not sexual health. Finally, GSAs whose members collectively reported greater victimization more frequently discussed these topics. These findings can assist the development of health programming to be delivered within GSAs.

Introduction

Sexual and gender minority youth (SGMY; e.g. youth identifying as lesbian, gay, bisexual, questioning or transgender) experience greater substance use, mental health concerns and sexual risk behaviors than their heterosexual and cisgender peers [1–5]. Although these issues are sometimes discussed in schools (e.g. in health class), discussions often fail to represent SGMY [6, 7]. It is critical for SGMY to have access to inclusive resources on these topics and opportunities to discuss them. Such access could allow SGMY to acquire knowledge or support around challenges that they may face related to these issues and ultimately reduce health disparities. Gay-Straight Alliances (GSAs) are one setting where SGMY may discuss these specific health topics in ways that are non-stigmatizing and tailored to their experiences (e.g. by informally raising the issue to ask a personal question or to have a group conversation about the topic, or through more planned and structured conversations guided by adults or youth leaders). Given the disparities documented around these specific issues, we examine how frequently youth discuss topics around substance use, mental health and sexual risk behavior within their GSAs, the extent to which GSAs vary in having these discussions, and we identify factors that could account for how frequently members discuss these topics.

Discussing health topics in GSAs

GSAs are school-based groups that provide support, socializing, advocacy and access to information and discussions on SGMY-related issues and are welcoming of SGMY as well as heterosexual and cisgender youth members [8-11]. Indeed, a hallmark of GSAs is their aim to bring together SGMY and allies (i.e. heterosexual and/or cisgender youth) to address issues faced by SGMY. GSAs often meet during or after school for 30 min to 1 h and have an adult advisor (e.g. a teacher, guidance counselor or school nurse) [8, 10]. Meetings can vary in their focus: some time may be spent learning about a particular topic (e.g. discussing health risks associated with heavy alcohol use based on information students bring to the meeting) whereas other time might be spent planning for an advocacy event (e.g. an awareness-raising campaign on the harmful effects of homophobic bullying), and still other time might be reserved for providing emotional support to members (e.g. for students facing parental rejection). GSAs are grounded in empirically supported models that stipulate qualities of successful youth programs (e.g. supportive environments, opportunities for peer interaction and leadership roles, adult role modeling) [12, 13]. Specifically, GSAs provide a safe and supportive setting where youth can interact and take on leadership roles with adult guidance [8-11]. Youth in schools with GSAs—not only SGMY but also heterosexual cisgender youth—report less substance use, fewer mental health concerns, and less sexual risk-taking than peers in schools without GSAs [14–16] These benefits may be attributable to opportunities youth have in GSAs to discuss substance use, mental health and sexual health. Yet, even in the broader youth programs literature virtually no studies examine the frequency of discussions around particular topics. Given that the effects of youth programs stem from youth interactions within them [13], the lack of attention to the content of their interactions is striking.

GSA members may broach health topics as part of regular meeting discussions. Alternatively, GSAs may be ideal settings to facilitate these discussions because advisors could ensure that discussions draw on information from qualified sources [17]. In addition, because substance use, mental health concerns and sexual health risk behaviors are associated with victimization [18, 19], these issues may naturally arise within GSAs because GSAs regularly address victimization [20, 21]. Yet, some GSAs may provide fewer opportunities for talking about these topics because of the stigma and vulnerability such discussions might raise or because of concerns about parent or administrator disapproval [22, 23]. Therefore, it would be helpful to identify how often youth do discuss these topics within their GSA and how these discussions might be tied to certain functions within the GSA (e.g. support/socializing opportunities, information/resource provision, advocacy efforts).

Variability in discussing health issues in GSAs

Individual and GSA characteristics may be associated with how frequently GSA members discuss health topics. For example, SGMY might discuss these topics more frequently than heterosexual or cisgender youth because heterosexual and/or cisgender youth may have more outlets to access information on these topics. Given research suggesting that racial/ethnic minority youth may perceive less support within GSAs than White youth [24, 25], and research suggesting that racial/ethnic minority youth face greater health risks [26, 27], there may be race/ethnicity-based differences in how frequently youth discuss these topics in their GSA.

Youth vary in how they participate in their GSA (e.g. in relation to socializing or advocacy) [10, 28]. Some members prioritize socializing or seeking support (e.g. to make more friends or to secure emotional support when coming out to parents), while others prioritize advocacy (e.g. to raise awareness about discrimination or to advocate for protective policies in schools) [28]. Still, across these GSA functions, each provides opportunities for youth to interact and connect with one another through discussions and activities tied to them [10]. Building on the knowledge that youth vary in their GSA participation, this could account for how frequently some members participate in health-related discussions. Youth who more frequently access GSAs for support/socialization may discuss these topics as part of doing so (e.g. they may discuss substance use in relation to current distress). Similarly, youth who participate in more advocacy-based activities in their GSA may more frequently discuss these topics (e.g. they may converse about mental health issues while planning an awareness-raising activity on the effects of discrimination).

Most GSA research has focused on their support and advocacy functions [11, 28–30]; however, discussions may have a strong link to their educational function [31]. Members seeking information and resources from their GSA may more frequently discuss health issues during this process because they may feel that GSAs can cover these topics in ways that are sensitive to their unique needs.

In addition, youth who experience greater levels of victimization may report discussing more health topics in a GSA. Substance use, mental health and sexual health disparities are often a consequence of victimization [18, 19]. Therefore, more victimized GSA members may discuss these issues with greater frequency. For example, some youth might talk about feelings of depression as a result of their victimization or discuss their substance use as a coping mechanism.

Finally, GSA members collectively decide what topics to discuss [10, 11]. The extent to which the GSA as a whole focuses on support/socializing, advocacy or receiving information/resources may predict what topics members discuss. Similarly, GSAs whose members collectively experience greater victimization may discuss these issues more than GSAs whose members experience less victimization.

Hypotheses

Few studies have considered GSAs as venues for discussing health topics [31]. We hypothesize that GSA members will vary in how frequently they discuss substance use, mental health and sexual health topics. We examine differences based on sexual orientation, gender and race/ethnicity for exploratory purposes. We include heterosexual cisgender youth because they often are a sizable presence as allies in the GSA; they, along with SGMY, likely shape the nature of group discussions; and they, too, could benefit from discussing these health issues. Further, while controlling for youths' level of overall engagement in the GSA, we hypothesize that youth who have accessed more support/socializing, information/resources and advocacy will discuss these topics more frequently. We control for overall engagement to provide a more refined sense of how participating in these specific functions—versus simply by virtue of more frequent attendance—could relate to participating in these discussions. Also, we hypothesize that more victimized members will discuss these topics more frequently than less victimized members.

When considering differences between GSAs, we hypothesize that GSAs whose members report greater levels of support/socializing, information/resources received and advocacy will discuss these topics more frequently than other GSAs. Finally, we hypothesize that GSAs with more victimized members will discuss these topics more often than GSAs comprised of fewer victimized members.

Materials and methods

Participants and procedures

Our sample of 295 youth from 33 GSAs comes from the 2014 Massachusetts GSA Network survey, which assessed a broad range of GSA-based experiences and health indicators [32, 33]. GSAs ranged in size from 3 to 21 members (M = 8.94, SD = 5.45). Youth ranged in age from 13 to 20 years ($M_{\rm age} = 16.06$, SD = 1.13). Table I presents demographic information. Data were collected at Network conferences across Massachusetts and through postings to their GSA advisor listserv. In both situations, first the survey's purpose and content were described by proctors or the GSA advisor. Then, youth signed assent forms and completed the survey if their advisor first granted adult consent. The Network uses adult rather than parental consent to avoid potential risks of outing SGMY to parents. This is a common research practice to ensure SGMY safety and confidentiality [34]. Youth were told by proctors or advisors that their responses were anonymous and voluntary and could be used for research reports. Youth returned completed surveys to designated proctors (at conferences) or their advisor (for those mailed to GSAs). Surveys administered at conferences were given at their beginning; advisors who requested surveys collected and mailed back completed surveys within 2 weeks of receiving them. We secured IRB approval for secondary data analyses.

Table I.

Participant demographics

Demographic factor	N (%)
Sexual orientation	
Heterosexual	87 (29.5)
Lesbian or gay	73 (24.8)
Bisexual	59 (20.0)
Questioning	18 (6.1)
Other self-reported sexual orientations	55 (18.6)
Not reported	3 (1.0)
Gender	
Cisgender female	200 (67.8)
Cisgender male	66 (22.4)
Gender-queer	9 (3.0)
Transgender	11 (3.7)
Other self-reported gender identities	7 (2.4)
Not reported	2 (0.7)
Race/Ethnicity	

Demographic factor	N (%)
White	201 (68.1)
Biracial/multiracial	32 (10.9)
Latino/a	18 (6.1)
Asian/Asian American	16 (5.4)
Black or African American	16 (5.4)
Native American	4 (1.4)
Other self-reported racial/ethnic identities	5 (1.7)
Not reported	3 (1.0)

Note. Total sample size: n = 295.

Measures

GSA functions involvement

Youth completed a 17-item assessment of the extent to which they personally received support/engaged in socializing in their GSA (7-items; e.g. "emotional support", "hang out with others"; α = 0.90), received information/resources in their GSA (3-items; e.g. "learn ways to deal with stress"; α = 0.84) and did advocacy in their GSA (7-items; e.g. "Organize school events to raise awareness of LGBT issues"; α = 0.87) [32]. Response options ranged from 1 (*not at all*) to 5 (*a lot*). Higher average scores indicated receiving more support/socializing, information/resources or doing more advocacy. Also, we computed average group scores for each GSA to represent overall levels of these functions among members of the GSA.

Victimization

Seven items assessed youths' experiences of victimization in the last 30 days, including physical (e.g. "I got hit or pushed around by others"), verbal (e.g. "I got picked on, teased or made fun of by others") and relational (e.g. "Others excluded me from their group") victimization (0 times, 1-2 times, 3-4 times, 5-6 times and 7 or more times; scaled 0–4). Higher average scale scores represent more victimization (a = 0.87). Also, we computed average group scores for each GSA to represent overall levels of victimization among members of the GSA.

Topics discussions

Youth reported how frequently they personally talked about topics during their GSA meetings (*never*, *rarely*, *sometimes*, *often* and *very often*; scaled 0–4). Items were preceded by the stem, "How often do <u>you</u> talk about these topics in your GSA meetings". Three items assessed substance use: (a) alcohol or drinking, (b) smoking and (c) other substance misuse (a = 0.96). Three items assessed mental health: (a) depression or anxiety, (b) self-harm and (c) self-care, examples: exercise, meditation (a = 0.91). One item related to sexual health: sexual health topics, examples: safer sex, STIs. We computed average scale scores for the three substance use and three mental health items; higher average scale scores represent more frequently discussing these topics.

Covariates

Youth reported their sexual orientation, gender, race/ethnicity and age. Sexual orientation responses were dichotomized (heterosexual, SMY) because of the limited representation of youth in specific groups. Race/ethnicity also was dichotomized (White, racial/ethnic minority) for similar reasons. Gender responses were categorized as male, female or trans/gender-queer (transgender [male-to-female], transgender [female-to-male], gender-queer and non-cisgender write-in responses were placed into the trans/gender-queer group). Five items assessed general participation levels in the GSA (e.g. "I participate in conversations at GSA meetings", "I attend GSA meetings or other GSA events"; α = 0.89; *never*, *rarely*, *sometimes*, *often* and *all the time*; scaled 0–4). Higher average scores represent greater general GSA engagement. Also, we computed average group scores for each GSA to represent overall engagement among members of the GSA.

Analytic strategy

Preliminary analyses examined descriptive information, response distributions and frequencies of discussing each topic and examined demographic differences and bivariate correlations. Primary analyses tested three multilevel models, one for each health topic. First, we tested unconditional null models to determine the amount of variability between the GSAs in how frequently their members discussed each topic within the GSA. In the multilevel models, at the individual level, we included any demographic factors for which there were differences identified from our preliminary analyses and the following group-mean centered variables: support/socializing, information/resources, advocacy, general engagement level, age and victimization. At the GSA level, we included the following variables to account for differences between GSAs: number of participants from the GSA, average victimization level among members of the GSA, and average support/socializing, information/resources and advocacy among members of the GSA.

Results

Preliminary analyses

Table II includes descriptive information and response distributions for health topic discussion items. A repeated-measures ANOVA indicated significant differences in how frequently youth discussed each topic in their GSA, Wilks' $\Lambda = 0.60$, F(2, 274) = 92.62, P < 0.001, $\eta 2p\eta p2 = 0.40$. Paired-samples t-tests indicated youth discussed sexual health more frequently than substance use in their GSA (t = 10.95, P < 0.001) and mental health more frequently than substance use in their GSA (t = 11.56, P < 0.001). They did not differ in their frequency of discussing sexual and mental health (t = 1.19, t = 0.24).

Table II.Response percentages and distributions for health topic discussion items

	Never	Rarely	Sometimes	Often	Very often	M(SD)	Skewness	Kurtosis
Substance use								
Alcohol/drinking	37.3	28.0	22.3	6.5	6.1	1.16 (1.17)	0.84	-0.07
Smoking	40.9	26.5	20.8	6.8	5.0	1.08 (1.16)	0.89	-0.01
Other substance misuse	41.2	28.0	17.6	9.3	3.9	1.07 (1.15)	0.88	-0.14
Mental health								
Depression, anxiety	17.1	20.7	26.9	21.8	13.5	1.94 (1.28)	0.01	-1.04
Self-harm	25.4	22.6	24.0	17.2	10.8	1.65 (1.32)	0.27	-1.06
Self-care	27.6	22.6	23.7	15.8	10.4	1.59 (1.32)	0.34	-1.02

	Never	Rarely	Sometimes	Often	Very often	M(SD)	Skewness	Kurtosis
Sexual health	19.9	21.0	28.5	20.2	10.5	1.80 (1.26)	0.09	-1.00

Note. Values in the columns for Never, Rarely, Sometimes, Often, and Very often are percentages of participants who indicated this response option.

MANOVAs assessed demographic differences on all measures: sexual orientation-based differences were not significant, Wilks' Λ = 0.95, F(8, 243) = 1.63, P = 0.12; nor were gender-based differences, Wilks' Λ = 0.92, F(16, 488) = 1.29, P = 0.20; however, race/ethnicity-based differences were significant, Wilks' Λ = 0.91, F(8, 244) = 3.02, P < 0.01, η 2p η p2 = 0.09. From follow-up ANOVAs, racial/ethnic minority youth more frequently discussed substance use-related topics than White youth, and White youth reported greater general engagement and advocacy than racial/ethnic minority youth (Table III).

Table III.Race/ethnicity-based differences on variables

	White	Racial/ethnic minority	F	η_p^2
Substance use discussions	0.99 (1.06)	1.31 (1.19)	4.49*	0.02
Mental health discussions	1.66 (1.21)	1.80 (1.21)	0.87	_
Sexual health discussions	1.75 (1.32)	1.93 (1.14)	1.09	_
General engagement	2.95 (0.87)	2.53 (1.13)	10.10**	0.04
Support/socializing	4.49 (0.63)	4.34 (0.83)	2.50	_
Information/resources	3.59 (1.03)	3.75 (1.12)	1.15	_
Advocacy	3.22 (0.91)	2.90 (1.01)	6.21*	0.02

	White	Racial/ethnic minority	F	η_p^2
Victimization	0.51 (0.65)	0.64 (0.86)	1.88	_

Note. Values represent the means and standard deviations (in parentheses) of scores for each demographic group.

**

Table IV.

P < 0.01. *P < 0.05.

Table IV displays bivariate associations. As hypothesized, GSA members who reported more support/socializing, receiving more information/resources, and doing more advocacy in their GSA reported more frequently discussing all health topics during their GSA meetings. These associations were small to moderate in size (r = 0.16-0.44). Only the association between support/socializing and substance use discussions was non-significant. Notably, youths' general GSA engagement level (i.e. not tied to specific GSA functions) was not associated with their frequency of discussing these topics in their GSA. Also as hypothesized, youth who reported greater victimization more frequently discussed each topic, though correlations were small (r = 0.14-0.22). Finally, the frequencies of discussing the three topics were significantly associated, but not to the degree that would warrant collapsing them into a single variable.

Bivariate correlations and descriptive statistics

	1	2	3	4	5	6	7	8
1. Substance use discuss	-							
2. Mental health discuss	0.70***	_						
3. Sexual health discuss	0.60***	0.61***	_					

	1	2	3	4	5	6	7	8
4. General engagemen t	-0.12	-0.05	0.06	-				
5 Support, socializing	0.10	0.22***	0.16**	0.34***	_			
6. Information , resources	039***	0.44***	0.30***	0.09	0.58***	-		
7. Advocacy	0.23***	0.27***	0.23***	0.39***	0.44***	0.47***	_	
8. Victim	0.22***	0.18**	0.14*	-0.05	0.04	0.05	0.02	_
9. Age	-0.09	-0.05	-0.03	0.26***	0.05	-0.03	0.12*	-0.06
Individual- level <i>M</i> (SD)	1.10 (1.12)	1.73 (1.20)	1.80 (1.26)	2.77 (1.00)	4.46 (0.67)	3.68 (1.05)	3.12 (0.96)	0.54 (0.72)
GSA- level <i>M</i> (SD)	1.00 (0.49)	1.57 (0.68)	1.69 (0.69)	2.98 (0.54)	4.45 (0.35)	3.62 (0.59)	3.13 (0.46)	0.48 (0.28)

Note. Substance use discuss, mental health discuss and sexual health discuss = extent to which youth personally participated in discussions of these topics during GSA meetings; General engagement = overall levels of engagement in the GSA; Support, socializing = amount of support and socializing opportunities received in GSA; Information, resources = amount of information and resources received in GSA; Advocacy = amount of advocacy done in GSA; Victim = frequency of victimization; Age = youth's age. Means and standard deviations (in parentheses) of scores for each variable are reported for the overall sample.

P < 0.001. **P < 0.01. *P < 0.05.

Multilevel models

GSAs varied in how frequently they each discussed substance use (χ^2 = 61.23, P < 0.01), mental health (χ^2 = 109.48, P < 0.001), and sexual health (χ^2 = 107.36, P < 0.001) during their meetings. The proportion of variance between GSAs was 9.68% for substance use (Level 1 variance: 1.12; Level 2 variance: 0.12), 20.98% for mental health (Level 1 variance: 1.13; Level 2 variance: 0.30) and 20.38% for sexual health (Level 1 variance: 1.25; Level 2 variance: 0.32).

Next, we tested our multilevel models. Table V includes all coefficient estimates. In the substance use model, members who more frequently discussed substance use topics in their GSA were those who received more information/resources in their GSA (b = 0.43, P < 0.001), did more advocacy in their GSA (b = 0.21, P < 0.01) and experienced more victimization (b = 0.21, P < 0.05). GSAs that more frequently discussed substance use among themselves had members who reported more victimization than other GSAs ($\gamma = 0.82$, P < 0.01). The pseudo- R^2 indicated that the model accounted for 20.5% of Level 1 variance and 75% of Level 2 variance.

Table V.Unstandardized coefficient estimates from multilevel models for topic discussions

	Substance use discussions	Mental health discussions	Sexual health discussions
Level 1			
Race/ethnicity	0.17	_	_
Age	-0.11	-0.10	-0.10
General engagement	-0.13	-0.13	0.12
Support/socializing	-0.16	-0.17	0.09
Info/resources	0.43***	0.44***	0.28***
Advocacy	0.21**	0.21**	0.19**
Victimization	0.21*	0.23*	0.14

	Substance use discussions	Mental health discussions	Sexual health discussions
Level 2			
Number of members	0.00	0.00	0.01
Group avg. engagement	-0.17	-0.17	0.02
Group avg. support/socializing	-0.43	-0.53*	-0.59
Group avg. info/resources	0.31	0.36	0.35
Group avg. advocacy	0.21	0.22	0.00
Group avg. victimization	0.82**	0.81**	0.83*

Note. Race/ethnicity = racial/ethnic minority (1) or White (0); race/ethnicity was only included in the substance use discussions model because no racial/ethnic differences were identified for mental health or sexual health discussions; Age = youth's age; General engagement = overall levels of engagement in the GSA; Support/socializing = amount of support and socializing opportunities received in GSA; Info/resources = amount of information and resources received in GSA; Advocacy = amount of advocacy done in GSA; Victimization = frequency of victimization; Number of members = number of participants in the GSA; Group avg. engagement, Group avg. support/socializing, Group avg. info/resources, Group avg. advocacy, and Group avg. victimization = collective average levels of these variables among members of the GSA.

P < 0.001. **P < 0.01. *P < 0.05.

In the mental health model, members who more frequently discussed mental health topics in their GSA were those who received more information/resources in their GSA (b = 0.44, P < 0.001), did more advocacy in their GSA (b = 0.21, P < 0.01) and experienced more victimization (b = 0.23, P < 0.05). GSAs that more frequently discussed mental health among themselves had members who reported more victimization than other GSAs ($\gamma = 0.81$, P < 0.01) and whose members reported less support/socialization than other GSAs ($\gamma = -0.53$, $\gamma = -0.53$). The pseudo- $\gamma = -0.53$ 0 indicated that the model accounted for 21.2% of Level 1 variance and 90% of Level 2 variance.

In the sexual health model, members who more frequently discussed sexual health topics in their GSA were those who received more information/resources in their GSA (b = 0.28, P < 0.001) and did more advocacy in their GSA (b = 0.19, P < 0.01). GSAs that more frequently discussed sexual health among themselves had members who reported more victimization than other GSAs ($\gamma = 0.83$, $\gamma = 0.05$). The pseudo- $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$). The pseudo- $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.05$). The pseudo- $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.05$). The pseudo- $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.05$). The pseudo- $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.05$). The pseudo- $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.05$). The pseudo- $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$). The pseudo- $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$). The pseudo- $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$). The pseudo- $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their GSAs ($\gamma = 0.83$) and $\gamma = 0.83$ per one in their

Discussion

As hypothesized, youth who accessed more information/resources in their GSA and who participated more in advocacy discussed substance use, mental health and sexual health topics with greater frequency. Also as hypothesized, members who experienced greater victimization more often discussed substance use and mental health but not sexual health topics. GSAs whose members reported greater victimization more often discussed health topics than other GSAs. Our findings provide foundational knowledge of how often these topics are raised in this setting. Further, they suggest that these topics could be linked to several major functions of GSAs; this suggests potential acceptability and feasibility of increasing such discussions within GSAs. Finally, findings highlight one particular group that could benefit from discussing these topics, namely youth who are more victimized. These findings may assist in tailoring programming for GSAs on these topics.

Member variability in discussing health topics

Youths' sexual orientation, gender and race/ethnicity generally did not characterize who more often discussed these topics. As one exception, racial/ethnic minority youth more frequently discussed substance use, though with a small effect size. Studies have been mixed in documenting racial/ethnic disparities in substance use [35, 36]; in the case of this study it would be important to further probe demographic similarities and differences with greater nuance (e.g. whether discussions center around their own, others' or their community's experiences; whether the advisor or racial/ethnic minority youth themselves initiate this topic; the content of or reasons for such discussions; amount of time spent on each discussion). Now that these and other findings show these topics are indeed discussed within GSAs [31], research should attend to this more contextualized approach to capture greater distinctions.

Members' involvement in specific GSA functions predicted the extent to which they discussed each topic. Notably, this did not simply reflect that some members were more involved than others in their GSA, as general engagement level was not associated with frequency of discussing any of these topics. Rather, members who were more involved in accessing information/resources and in advocacy in their GSA more frequently discussed health-related topics in their GSA. Regarding advocacy, youth may have talked about health issues with other members while preparing awareness-raising campaigns, which often involve presenting information on discrimination and health disparities [8]. Although much research has focused on GSA advocacy [11, 22, 28, 30], health topic discussions in GSAs were most strongly associated with the educational function of GSAs. Thus, although this GSA function has been given less attention, our findings highlight its relevance to important health issues for which there are sizable SGMY disparities [1–5].

Members who reported more victimization participated in more discussions of substance use and mental health. Given recent efforts to deliver health programming to members of GSAs [37], our finding suggests GSAs should ensure sufficient time for learning about and discussing health-related topics

within this setting; such programs should seek to teach skills for coping with victimization in healthy ways and strategies that may reduce future victimization and health concerns.

GSA variability in discussing health topics

GSAs varied from one another in how frequently their members discussed health-related issues among themselves. GSAs with members who experienced greater victimization engaged in these health discussions among themselves more often than members of other GSAs. Not only may members have discussed health topics in connection to their own victimization—as suggested by individual-level findings—but also they may have discussed these topics when others in their GSA recounted their experiences. Also, because GSAs often decide collectively on the focus of meetings [10, 25], GSAs in which more youth reported victimization may have been more likely to decide among themselves to discuss health concerns related to victimization during their meetings.

Variability between GSAs in their specific functions (e.g. information/resources) did not characterize which GSAs engaged in more health discussions than others. It could be that advisors have one-on-one conversations with members or facilitate smaller group discussions when circumstances bring these topics to the forefront for some members, while others participate in separate activities. Such a dynamic might explain why the associations between GSA functions and health discussions were more evident at the individual level of our statistical models. As one exception, GSAs whose members reported more support/socializing among themselves less frequently discussed mental health during their meetings. This factor captured a mix of socializing and support; perhaps after accounting for other variables (e.g. victimization), this factor may have come to be more representative of the socializing function. If so, this could suggest that GSAs more focused on socializing (e.g. playing games) may less frequently integrate mental health discussions during their meetings.

Strengths, limitations and future directions

One strength of this study is its representation of a statewide sample of GSAs. Also, it included current members as well as identified and accounted for variability among members. Other studies have relied on adult retrospective reports or have only considered GSA presence versus absence or membership versus non-membership in a simple dichotomized manner [15, 16, 38]. Nevertheless, we also note several limitations. All GSAs were in Massachusetts. Future research should compare GSAs across the U.S., as they may further vary (e.g. according to political climates). We identified limited group-level differences in this study, which could be due to the limited variability across GSAs. The majority of GSA members identified as White; research should determine the generalizability of findings to more diverse samples. In addition, data were self-reported from GSA members attending conferences or completing surveys available from their advisors. These members could differ from those who are less involved in their GSA. Finally, although our study highlighted the frequency of health-related discussions occurring during GSA meetings, it could not capture the specific content or context across instances of these discussions.

There are several areas for future research. First, qualitative research may highlight circumstances in which health-topic discussions arise—including whether discussions are student- or advisor-initiated; whether they are of a general or more personal nature; and how they are resolved. Second, studies should identify other factors that explain why members vary in having these discussions (e.g. fear of administrator backlash, religiously-influenced restrictions, assurance of confidentiality). It is notable that

many youth reported "never" or "rarely" discussing these topics. It would be important to identify why certain youth do not participate in these discussions, as this could carry implications for program development. For example, if students abstain from discussions because they perceive inadequate guidance for having such conversations, then more guidance could be built into programming. On the other hand, if this is because they feel they already have sufficient information on the topics, then more advanced programming might be developed. Finally, research should consider how health discussions fit within a model of how GSA-based programming promotes positive health outcomes among members. For instance, guided discussions within GSAs could have a major role in promoting outcomes such as gaining greater knowledge of health risks, learning healthy coping strategies, or reducing substance use or the frequency of high-risk sexual behavior. These efforts could ultimately increase the effectiveness of GSAs in promoting the health of their members.

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