

The Impact of GSA Membership on Academic Outcomes

Background

There is evidence that sexual and gender minority youth are disproportionately more likely than heterosexual and cisgender peers to experience truancies and achieve lower grades. (Birkett, Russell, & Corliss, 2014; Poteat, Mereish, DiGiovanni, & Koenig, 2011). Given the range of educational concerns faced by sexual and gender minority (SGM) students, it is imperative for research to identify how schools could improve the academic outcomes of SGM students. Few studies have considered whether school-based programs can address such disparities. Genders and Sexualities Alliances (GSAs), are school-based support and advocacy groups for SGM and their allies. We focus on GSAs as a school-based program with strong potential to improve academic success among members.

Non-experimental, cross-sectional comparisons indicate that students in schools with GSAs report lower truancy than students in schools without GSAs, but findings for grades are mixed (Poteat, Sinclair, DiGiovanni, Koenig, & Russell, 2013; Toomey & Russell, 2013). However, no studies have compared youth in the same school based on their GSA membership status. In this study, we conduct such a comparison, and use propensity score matching to estimate the effects of GSA membership on academic outcomes.

Research Question

Do GSA members report higher grades, fewer days of truancy, and more confidence in accessing resources about academics at school and in the community than nonmembers?

Setting

39 schools from across a Northeastern state were sampled with attention to diversity on a range of school, demographic, and geographic characteristics.

Participants

Data were gathered from 2,557 youth in grades 6-12, including 561 GSA-attending youth. To form the non-GSA member comparison group, data were collected from the entire student membership of four randomly selected classes (one per grade level) in the schools of participating GSAs. See Table 1 for descriptive statistics of the sample.

Program

GSAs are typically student-led, teacher-supported groups that meet regularly (usually weekly) either during or after school (Griffin et al., 2004). Meetings may be spent learning about a particular topic (e.g., healthy coping strategies, attributes of healthy relationships), planning for an advocacy event (e.g., an awareness-raising campaign on the harmful effects of homophobic bullying in school), providing emotional support (e.g., for students facing parent rejection or peer victimization) and/or socializing with peers.

Research Design and Data Collection

Baseline data on variables in the propensity score models and GSA membership were collected at Time 1 (Fall 2016 or 2017). At Time 2 (Spring 2017 or 2018), outcome data were collected.

Data Analysis

Missingness ranged from 0% to 26.5%. We used imputation by nearest neighbor hotdecking (Andridge & Little, 2010) to account for the missing data and limit to one dataset for propensity score analyses.

We conducted propensity score matching using preferential within-cluster matching, which outperforms fixed-effects propensity score models, random-effects propensity score models, and within-cluster matching in simulations of clustered data (Arpino & Cannas, 2016). After matching, all covariates achieved balance (See Table 3; Austin, 2011). In the resulting matched sample, we ran multilevel regressions with random effects for schools and weighted to investigate the effect of GSA membership on members.

Measures

Outcomes. Youth reported average report card grades during the last report card period on an eight-point scale (1 = Mostly below Ds to 8 = All As), confidence in accessing resources about academics (at school and in the community) on a five-point scale (1 = Not at all confident to 5 = Very confident), and number of days absent without permission in the past four weeks as a write-in response. We dichotomized the truancy variable due to low baseline rates.

Covariates and matching variables. We matched on grade, LGBTQ status, race/ethnicity, first- or second-generation immigrant status, whether participant receives free or reduced-price lunch (as a proxy of SES), other club involvement, and experiences of victimization (all measured via self-report). Victimization was measured with the 4-item Victimization scale (Espelage & Holt, 2001). In addition, multilevel analyses adjusted for the same matching variables as covariates.

Results

GSA members were more likely to report a greater level of confidence in accessing resources about academics at school (OR = 2.00, SE = 0.56, $p < .05$), adjusting for individual-level covariates. GSA members' odds of reporting a greater level of confidence in accessing resources about academics in the community was not statistically significantly different than non-members (OR = 1.00, SE = 0.37, $p = 0.99$), adjusting for individual-level covariates. GSA members' odds of reporting truancy was not statistically significantly different than non-members (OR = 1.61, SE = 0.94, $p = 0.42$), adjusting for individual-level covariates. Differences between GSA members and non-members on self-reported grades were not statistically significant, $b = -0.22$, SE = 0.20, $p = 0.24$, adjusting for individual-level covariates.

Conclusions

Previous work has compared students in schools with GSAs to students in schools without GSAs. This paper utilized quasi-experimental methods to test the effects of GSA membership on academic outcomes. We found that GSA members were more likely to report higher confidence in accessing resources about academics in school, but not in their community. We did not find evidence to suggest that GSA membership has an effect on truancy and self-reported grades.

The temporality of the study design that made it difficult to meet the assumptions required by the causal inference methods used in this study. However, there are virtually no data on how GSAs might promote positive outcomes like academic achievement nor attenuate negative outcomes like truancy. A major concern is that GSAs operate without empirically supported strategies.

There is a pressing need for these data in order to develop effective GSA-based interventions. This study showed that GSA membership improved confidence to access academic resources in school, but not self-reported grades or truancy. There may be opportunities to be more intentional about the time spent in a GSA meeting regarding learning and not just well-being outcomes of SGM youth.

References

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Table 1

Descriptive statistics for the original and matched samples

	Full Sample Mean (SD) or %	Matched Sample Mean (SD) or %
<i>n</i>	2,577	244
Outcomes		
Grades	6.35 (1.28)	6.59 (1.16)
% Truant in last 4 weeks	19.79	16.80
Confidence to access support for academic performance		
At school	4.18 (0.99)	4.18 (0.94)
In neighborhood/town	3.03 (1.28)	2.88 (1.27)
Matching variables		
Age	15.68 (1.42)	15.73 (1.10)
Gender Identity		
% Female	53.24	64.75
% Male	39.62	25.00
% Trans female	0.23	0.00
% Trans male	0.81	3.28
% Transgender, not otherwise specified	0.78	1.23
% Non-binary (e.g. genderqueer, gender fluid)	4.70	5.33
% Questioning gender identity	0.23	0.00
% Other responses for gender identity	0.39	0.41
Sexual Orientation		
% Heterosexual	73.22	46.31
% Gay or lesbian	5.16	12.30
% Plurisexual (e.g., bisexual, pansexual)	13.85	26.64
% Queer	1.01	0.41
% Questioning sexual orientation	4.15	8.61
% Asexual	2.02	4.51
% Another sexual orientation	0.58	1.23
% Free- or reduced-price lunch	34.23	40.16
% Did not know FRP status	8.04	6.56
% Nonwhite	29.61	22.95
% Immigrant ¹	29.38	16.39
Victimization ²	0.35 (0.68)	0.10 (0.23)

¹Immigrants includes both first- and second-generation immigrants²Victimization was measured on a 0-4 scale (Espelage & Holt, 2001), with higher average scale scores representing greater peer victimization.

Table 2

Covariate balance, pre-matching

	Mean		STD Difference	Ratio of Variances	Meets Criteria?
	GSA Members	Non- Members			
Age	15.59	15.71	-8.67	1.01	Yes
Nonwhite	0.30	0.29	3.32	1.03	Yes
Free/reduced price lunch (FRP)	0.58	0.27	63.01	1.24	No
Did not know FRP status	0.09	0.08	3.89	1.13	No
LGBTQ	0.78	0.10	166.65	1.89	No
Number of clubs	2.75	1.85	68.07	0.86	No
Immigrant	0.24	0.30	-14.21	0.87	No
Victimization	0.57	0.29	33.51	2.05	No

Table 3

Covariate balance, post-matching

	Mean		STD Difference	Ratio of Variances	Meets Criteria?
	GSA Members	Non- Members			
Age	15.73	15.73	0.00	1.00	Yes
Nonwhite	0.23	0.23	0.00	1.00	Yes
Free/reduced price lunch (FRP)	0.40	0.40	0.00	1.00	Yes
Did not know FRP status	0.07	0.07	0.00	1.00	Yes
LGBTQ	0.07	0.07	0.00	1.00	Yes
Number of clubs	0.54	0.54	0.00	1.00	Yes
Immigrant	0.16	0.16	0.00	1.00	Yes
Victimization	0.10	0.10	0.00	1.00	Yes