Can a school-based civic empowerment intervention support adolescent health?

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1. Introduction

Adolescence is a transitional life stage; young people are figuring out who they are, what is important to them, and how they envision their role in community and society. While adolescents are generally healthy, adolescence is also a sensitive developmental period where health issues can emerge and shape long-term health trajectories (Viner et al., 2015). Notably, these civic and health developmental trajectories may be interconnected. For example, a civic empowerment gap exists, such that young people from structurally marginalized backgrounds are systematically civically disempowered (Levinson, 2012). Specifically, this disempowerment manifests as exclusion from mainstream forms of civic engagement (e.g., voting), and a devaluation of involvement in alternative direct-action, participatory politics (e.g., organizing) (Pope et al., 2019). This empowerment gap has been linked in the literature to health inequities (Wallenstein, 2002). Civic connection and empowerment in one’s community, by contrast, can promote wellbeing among adolescents, perhaps playing an especially important role among populations, such as racially and ethnically minoritized communities, who have been structurally excluded from civic engagement over time (Hope and Spencer, 2017). Relatedly, psychological empowerment may be critical for promoting and sustaining wellbeing (Christens, 2012).

Given this, programs that increase adolescents’ civic self-efficacy and meaningful contribution to one’s community may also promote health and wellbeing (Ballard and Ozer, 2016). From a policy perspective, this may indicate that promoting adolescent health could involve not only specific health-focused initiatives, but empowerment-focused initiatives as well. However, few empirical studies assess the health implications, and especially physical health implications, of civic self-efficacy and meaningful contribution to one’s community.

To our knowledge, the present is the first to directly assess for potential spillover of a civic empowerment intervention on health. We hypothesized that a school-based youth civic empowerment initiative, called Generation Citizen (GC), would be associated with increased mental and physical health, and associations would be stronger for participants who, after the intervention, had higher (1) civic self-efficacy and (2) a sense of having made meaningful contributions to their communities.
2. Method

2.1. Participants

Eligible participants were middle and high school students enrolled in schools across GC’s 4 locations (the metropolitan areas of Providence, Rhode Island; Boston, Massachusetts; New York City, New York; and the San Francisco Bay Area, California) that participated in the GC curriculum in Fall 2014 (N = 1154). Of the eligible participants, our final analytic sample consisted of those who agreed to participate in the study, completed both pre-intervention and post-intervention surveys, and had no missing data on any variables included in analysis (N = 364; mean age = 15.0, SD = 2.2). Participants in the complete case sample were enrolled in 38 classrooms across 22 schools. For those who self-reported their racial/ethnic identity, they primarily identified as Hispanic/Latino (44.4%); African American or Black (19.2%); White (16.5%); Asian and/or Pacific Islander (9.6%); and other (10.2%). Approximately half (53.7%) identified as female, while 46.3% identified as male. Compared to full eligible sample, the analytic sample was similar on reported sex composition (P = 0.286) and slightly younger (eligible sample mean age = 15.6 years; P < 0.001); with a greater proportion of students who identified as White, a smaller proportion who identified as Asian and/or Pacific Islander, African American or Black, and other, and a similar proportion who identified as Hispanic/Latino. This research was approved by the Institutional Review Boards at Tufts University and Wake Forest School of Medicine and conforms to the principles of ethical research.

2.2. Civic intervention

GC offers a semester-long curriculum taught twice weekly by trained college student volunteer “democracy coaches” in partnership with classroom teachers. GC’s curriculum is student-centered, action-oriented, and community-driven, and teaches civic skills through youth empowerment (Cohen et al., 2018; Stolte et al., 2014). GC’s action civics process involves classes collectively choosing a local issue, learning strategies and skills for taking action, and developing and implementing an action plan accordingly (Pope et al., 2011). Examples of issues participants have previously selected include bullying, quality of school lunches, and homelessness in local communities. Participating in GC has been shown to be associated with increased civic self-efficacy (Ballard et al., 2016) and associations with a sense of making meaningful community contributions are unknown.

2.3. Outcomes and effect measure modifiers

Our study’s two outcome measures were self-reported mental health and physical health. Each was measured through a one-item question (Bowling, 2005) answered on a 5-point scale (1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent): “In general, how would you rate your mental/physical health?” (DeSalvo et al., 2006; Eriksson et al., 2001). The two effect measure modifiers under consideration were civic
self-efficacy and community contributions. Items for each were answered on a 5-point scale (1 = strongly disagree to 5 = strongly agree). Civic self-efficacy comprised five items averaged to create a composite score (e.g.: “I believe I can make a difference in my community”) ($a_{pre}$ = 0.84 and $a_{post}$ = 0.85) and community contributions comprised three items averaged to create a composite score (e.g., “I have a meaningful role in my community”) ($a_{pre}$ = 0.87 and $a_{post}$ = 0.88). See Appendix Table 1 for more details.

2.4. Analysis

We conducted a complete case analysis to test the association between GC participation and self-reported mental and physical health. To account for the nested structure of these data (i.e., by classroom, with students nested within classrooms), we fit linear mixed-effects models. We tested for effect measure modification on the additive scale by including interaction terms in our linear-mixed effects models. The interaction terms, civic self-efficacy and community contributions, were mean-centered to facilitate meaningful interpretation. For the main effects models, statistical significance was assessed at an alpha level of 0.05. As recommended for the purposes of increasing power to detect effect measure modification, statistical significance for the interactions was conservatively assessed at an alpha level of 0.10, recognizing that Selvin suggests an alpha level as high as 0.20 (Selvin, 2004). All analyses were conducted in R statistical software version 3.5.1 (R Foundation for Statistical Computing, Vienna, Austria).

3. Results

After accounting for the nested structure of these data, the unadjusted model found no statistically significant difference in self-reported mental health after participating in the GC intervention ($pre = 3.96, post = 3.98, P = 0.657; 95% CI: −0.08–0.12$) (Table 1, Model 1). Participating in the GC intervention was statistically significantly associated with a 0.15-unit increase ($pre = 3.68; post = 3.82$) in self-reported physical health ($P = 0.001; 95% CI: 0.06–0.23$) (Table 1, Model 2).

In the model examining effect measure modification by community contributions of the association between GC participation and self-reported mental health, the interaction between GC participation and community contributions was not statistically significant at the 0.10 alpha level ($P = 0.189; 95% CI: −0.04–0.22$) (Table 1, Model 3). By contrast, there was evidence of effect measure modification by civic self-efficacy. Specifically, we observed a 0.10-unit decrease in self-reported physical health per unit increase in civic self-efficacy post-GC participation compared to pre-GC participation ($P = 0.10; 95% CI: −0.22, 0.02$) (Table 1, Model 4). As illustrated in Fig. 1, this indicates that the mean difference in physical health per unit increase in civic self-efficacy was smaller post-GC intervention compared to pre-intervention.

In the models examining effect measure modification by community contributions of the associations between GC participation and self-reported mental and physical health, the interaction terms were not statistically significant (Table 1, Model 4 and Model 5).

As noted previously, to account for the nested structure of these data, we fit a mixed effect term for varying intercepts by classroom, and for students that are nested within classrooms. In each model, the standard deviation around the mean outcomes at each level was small, suggesting limited variation in the association between GC and health across students within classrooms or across classrooms (Table 1). We then summed the total variance of the random effects to estimate the proportion attributable to each random effect. Estimates suggest that across models, between 49.9% and 59.1% of the total variance of the random effects was attributed to the nested effect of students within classrooms and that the effect of class alone was smaller, ranging from 1.7% to 2.7% of the random effects’ total variance. Put differently, across models, the variance in the outcome between classes is much smaller than the variance among students within classes. This may be expected given that all classrooms in the sample shared similar characteristics (e.g., urban-based school districts, serving primarily low-income students and students of color).

4. Discussion

This analysis provides preliminary evidence that programs designed to empower youth, such as Generation Citizen, could spill over to positively affect health. Specifically, we found that implementation of GC, an empowerment-focused civic program, was associated with an increase in self-reported physical health in the total sample. There was also evidence of effect measure modification by civic-self efficacy such that, on average, as civic self-efficacy increased, the difference in physical health was smaller post-GC intervention compared to pre-intervention. This may suggest that programming to empower youth could be particularly meaningful for young people with lower civic self-efficacy. Thus, while our findings suggest that public health interventions to improve physical health may benefit from centering empowerment opportunities for young people, future research is warranted to better understand the specific role of civic self-efficacy. We discuss the limitations of our analyses and the implications of these observations for future research below.

![Estimated Coefficient of GC Participation on Physical Health by Civic Self-Efficacy](Fig. 1)
4.1. Limitations and future research directions

The present study was limited in important ways. For example, attrition was high (68.5%) and those in the analytic sample were slightly younger and more likely to identify as White compared to GC participants generally. In addition, the health measures were self-reported one-item measures. The relatively small sample size did not provide adequate power to assess for differences by structurally marginalized status (e.g., race/ethnicity) and pre/post data were not available for a comparison group to be able to better isolate the impact of Generation Citizen. Additionally, results should be interpreted in light of the overall small magnitude of associations.

These preliminary findings present many opportunities for future research to rigorously test links between youth empowerment and health. First, studies should include a comparison group using a sample not involved in a civic program or involved in a program focused on civic skills and knowledge as opposed to empowerment. Additionally, analyses should adjust for other potential confounders of the association between the primary intervention (GC) and health. Second, in addition to the one-item measures of self-reported health used here, studies should include multi-item self-report measures of health as well as medical records and/or biomarkers of psychosocial stress. Third, given both the existing literature on civic self-efficacy and the findings of our effect measure modification analysis, a mediation analysis could facilitate a better understanding of the mechanisms underlying these observed associations. Fourth, other potential mediators of the link between civic programs and health should be tested; for example, finding meaning or purpose, increasing social capital, increasing social connectedness, and observing structural change as a result of youth-led action. Fifth, future work can examine whether findings generalize to earlier and later in adolescence and test whether links between civic self-efficacy and health outcomes differ by structurally marginalized status, particularly by race/ethnicity. Sixth, researchers could assess the health effects of different types of student-centered, action-oriented experiential learning programs beyond action civics, including service learning and youth participatory action research. Finally, the potential for threshold effects should be tested given that some activities that are empowering can also present challenges for adolescent health (Ballard et al., 2018).

4.2. Implications for health promotion, public health policy, and evaluation

Many public health and community psychology scholars argue that empowerment, especially among those who have historically been and are currently systematically excluded from civic participation, can promote better health (Ballard and Ozer, 2016; Ballard and Syme, 2016; Ginwright et al., 2006; Wallerstein, 2002; Zimmerman, 1995). While further evidence is needed to test how empowerment programs might produce changes in adolescent health, initial findings from this study may have two implications for public health promotion interventions, policy, and evaluation. First, public health interventions to promote adolescent health could focus on empowering civic engagement that centers civic self-efficacy. These interventions may include both programming at the school- or community-level, as well as youth-led policy change to shift the conditions in which they live, work, and go to school (Tkacik, 2019). Second, interventions meant to build youth empowerment can measure health outcomes to gather evidence regarding whether and how empowerment might itself be a public health intervention for healthy adolescent development. In the context of current philanthropic enthusiasm for understanding and promoting civic engagement, the present study offers an opportunity for public health practitioners and researchers to join this burgeoning interest by considering connections between civic engagement and health and wellbeing.

Supplementary data to this article can be found online at https://doi.org/10.1016/j.pmedr.2019.100968.

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References

Ballard, P.J., Ozer, E.J., 2016. Implications of youth activism for health and well-being. In: Contemporary Youth Activism: Advancing Social Justice in the United States, pp. 223–244.
Ballard, P.J., Syme, S.L., 2016. Engaging youth in communities: a framework for promoting adolescent and community health. J. Epidemiol. Community Health 70 (2), 202–206. https://doi.org/10.1136/jech-2015-206110.
Ballard, P.J., Cohen, A.K., Littenberg-Tobias, J., 2016. Action civics for promoting civic development: main effects of program participation and differences by project characteristics. Am. J. Community Psychol. 58 (3–4), 377–390. https://doi.org/10.1002/ajcp.12103.
Ballard, P.J., Hoyt, L.T., Pachucki, M.C., 2018. Impacts of adolescent and young adult civic engagement on health and socioeconomic status in adulthood. Child Dev. https://doi.org/10.1111/cdev.12998.
Bowling, A., 2005. Just One Question: If One Question Works, Why Ask Several? BMJ Publishing Group Ltd.
Christens, B.D., 2012. Targeting empowerment in community development: a community psychology approach to enhancing local power and well-being. Community Dev. J. 47 (4), 358–354. https://doi.org/10.1093/cdj/bfs031.
Cohen, A.K., Littenberg-Tobias, J., Ridley-Kerr, A., Pope, A., Stolte, L.C., Wong, K.K., 2018. Action civics education and civic outcomes for urban youth: an evaluation of the impact of Generation Citizen. Citizenship Teach. Learn. 13 (3), 351–368.
DeSalvo, R.B., Blosner, N., Reynolds, K., He, J., Muntner, P., 2006. Mortality prediction with a single general self-rated health question. J. Gen. Intern. Med. 21 (5), 367–368.
Eriksson, I., Undén, A.L., Elofsson, S., 2001. Self-rated health. Comparisons between three different measures. Results from a population study. Int. J. Epidemiol. 30 (2), 326–333.
Ginwright, S., Neguera, P., Cammarota, J., 2006. Beyond Resistance: Youth Activism and Community Change. Routledge.
Hope, E.C., Spencer, M.B., 2017. Civic engagement as an adaptive coping response to conditions of inequality: an application of phenomenal variant of ecological systems theory (PVEST). In: Handbook on Positive Development of Minority Children and Youth. Springer, Cham, pp. 421–435.
Levinson, M., 2012. No Citizen Left Behind. Harvard University Press.
Pope, A., Stolte, L., Cohen, A.K., 2011. Closing the civic engagement gap: the potential of action civics. Soc. Educ. 75 (5), 265–268.
Pope, A., Cohen, A.K., Duarte, C.D., 2019. Making civic engagement go viral: applying social epidemiology principles to civic education. J. Public Aff. 19 (1), e1857.
Selvin, S., 2004. Statistical Analysis of Epidemiological Data. Oxford University Press.
Stolte, L.C., Ienharder, M., Cohen, A.K., 2014. Measuring civic engagement processes and youth civic empowerment in the classroom: the CIVVICS observation tool. Clearing House J. Educ. Strateg. Issues Ideas 87 (1), 44–51. https://doi.org/10.1080/00096655.2013.842533.
Tkacik, C., 2019. Baltimore City school board votes ‘no’ to arming officers. Baltimore. Sun. https://www.baltimoresun.com/news/maryland/education/k-12/b-md-ci-board-20190122-story.html.
Viner, R.M., Ross, D., Hardy, R., Kuh, D., Power, C., Johnson, A., Kelly, Y., 2015. Lifecourse epidemiology: recognising the importance of adolescence. J. Epidemiol. Community Health. https://doi.org/10.1136/jech-2015-205607. jech-2014-205300.
Wallerstein, N., 2002. Empowerment to reduce health disparities. Scand. J. Public Health 30 (59 suppl), 72–77.
Zimmerman, M.A., 1995. Psychological empowerment: issues and illustrations. Am. J. Community Psychol. 23 (5), 581–599. https://doi.org/10.1007/BF02506983.