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Leading Change to Ensure a Better World: College Students' Participation in Community Service

Krista M. Soria, Tania D. Mitchell, and Brayden J. Roberts

Abstract

We examined whether the effects of community service on college students' engagement in social change and social generativity are conditional upon students' demographic characteristics. We used data from the Multi-Institutional Study of Leadership survey, which was administered at 70 four-year campuses in 2018. We used propensity score matching techniques to create a group of 13,981 students who participated in community service and matched them with a group of 13,981 students who did not participate in community service. The results suggest that the effects of community service on students' engagement in social change are significant and positive regardless of gender, parental education, and disability; however, the effects are not uniform across race/ethnicity or sexual orientation. Similarly, the effects of community engagement on social generativity are significant and positive across parental education and disability, but not uniform across gender, race/ethnicity, and sexual orientation.

Keywords: community service, social change, social generativity, college students

Over decades, researchers have amassed a large body of evidence pointing to the effectiveness of community service in promoting college students' social, developmental, leadership, and academic outcomes. Scholars have documented the outcomes of community service participation among college students, including enhanced social responsibility, sense of belonging, efficacy, motivation, multicultural awareness, civic responsiveness, academic skills, socially responsible leadership capacities, awareness of social issues, social perspective taking, engagement in social action and social change, multicultural competence, a desire to continue service beyond college, and more (Astin & Sax, 1998; Astin, Sax, & Avalos, 1999; Astin, Vogelgesang, et al., 2000; Einfield & Collins, 2008; Giles & Eyler, 1994; Hunter & Brisbin, 2000; Markus et al., 1993; Mitchell, Rost-Banik, & Battistoni, 2019; Mitchell & Soria, 2016; Moely et al., 2002; Schamber & Mahoney, 2008; Soria & Johnson, 2017; Soria, Johnson, & Mitchell, 2016; Soria, Nobbe, & Fink, 2013; Soria & Thomas-Card, 2014; Soria, Troisi, & Stebleton, 2012; Soria & Weiner, 2013; Steinberg et al., 2011; Warren, 2012).

Yet, amid the existing and ever-expanding research about the developmental benefits of college students' engagement in community service, unexplored limitations and angles remain. Notably, quantitative research on the benefits of community engagement is limited due to smaller sample sizes, single site or single classroom environments, and lack of control groups. Furthermore, researchers investigating the benefits of community service participation have treated samples as homogeneous groups without exploring whether community service is equally beneficial for different students based upon their demographic characteristics (Soria, Hufnagle, et al., 2019). In one study, researchers explored the conditional effects of academic service-learning courses (although not community service) on students' outcomes. Soria et al. examined the effects of service-learning classes on students' sense of belonging conditional on students' social class (i.e.,

low income or poor, working class, middle class, upper class or professional middle-class, and wealthy). The authors found that service-learning has differential effects on students' sense of belonging conditional upon their social class. In particular, enrolling in a service-learning course had effects on students' sense of belonging only among students from low-income/poor and working-class backgrounds and not among middle/upper class students.

Additionally, Langhout and Gordon (2019) found that "underrepresented and misrepresented college students" in service-learning based their notions of success more in civic responsibility than in traditional academic outcomes. These students benefited most when service-learning experiences supported their aims to develop social and personal insights that built pathways toward increased civic responsibility. Although these studies provide some insights into the potential for differential effects of service-learning based upon students' demographics, by and large, researchers have yet to explore whether the effects of community service are potentially conditional on students' demographic characteristics, including characteristics such as gender, race/ethnicity, sexual orientation, parental education, and disability.

Although scholars and practitioners have lauded the benefits of participating in community service, structural barriers can place opportunities to participate in community service out of reach for many students. For instance, some first-generation students and those from lower income backgrounds often need to work a greater number of hours when enrolled, are more likely to live off campus, and often commute longer to campus (Soria, 2015; Soria, Weiner, & Lu, 2014). Students who have caretaking responsibilities or other significant responsibilities may also be limited in their ability to volunteer their time to organizations or external causes. Furthermore, students who are underrepresented or marginalized in higher education may encounter discrimination or harassment in community service sites, resulting in potential harm to students, a desire to disengage from community efforts, further marginalization, and limited developmental benefits (Battistoni, 1995; Chesler et al., 2006; Mitchell, schneider, & Soria, 2019).

Additionally, another persistent shortcoming in the existing research about students' involvement in community service is the potential presence of students' self-selection biases. In other words, the characteristics and prior experiences that compel students to volunteer their time in community service may contribute to systematic differences between those who volunteer in college and those who do not (Soria & VeLure Roholt, 2018; Soria & Werner, 2018; Soria, Hufnagle, et al., 2019; Soria, Werner, & Nath, 2019). Comparisons of students who do and do not engage in community service may therefore show effects that are attributable not to the experience of completing community service but to students' characteristics, experiences, efficacy, and beliefs. Such systematic differences may contribute to differences in students' outcomes, so researchers should account for those differences when determining the effects of experiences on outcomes (Austin, 2011).

Therefore, to address the limitations of prior research, we used quasi-experimental procedures known as propensity score matching techniques to construct a control group of students who were not involved in community service and a treatment group of students who were involved in community service. We matched students on their demographics, precollege leadership experiences, precollege volunteerism experiences, and additional collegiate experiences to reduce the potential bias found within students' self-selection into community service. We also examined whether the effects of community service participation were conditional on students' gender, race/ethnicity, sexual orientation, parental education, and disability.

The outcomes we explored in this study include students' engagement in social change and social generativity, defined as a desire to give back to society and leave a legacy for future generations (Morselli & Passini, 2015). Higher education leaders are increasingly called upon to develop students who are socially responsible, engaging in positive social change, and actively participating in our pluralistic democracy (Association of American Colleges & Universities & National Leadership Council, 2007; Boyte & Hollander, 1999; Hurtado, 2007; Mitchell & Soria, 2016, 2017; National Task Force on Civic Learning and Democratic Education, 2012; Soria & Mitchell, 2016). Given the significance of these outcomes in a continued quest for social justice, the measures of social change engagement and social

generativity explored in this study are important for a variety of stakeholders in higher education. Armed with knowledge of whether community service has effects upon students' social change engagement and social generativity—and whether those effects are uniform among students regardless of their gender, race/ethnicity, sexual orientation, parental education, and disability—practitioners can better understand the outcomes of service and make revisions to existing programs or service opportunities, if necessary.

Conceptual Framework

We employed Bandura's (1986) social cognitive theory and Astin's (1993) input-environment-output model as the conceptual frameworks for this study. Bandura conceptualized learning as a social process that occurs through observing, modeling, and imitating behaviors. Additionally, learning is multidimensional and contains elements of cognition, morality, and behavior. The prosocial behaviors measured in this study—students' engagement in social change and social generativity—can be influenced through cognitive, moral, and behavioral processes that occur as a result of participation in community service. From a cognitive perspective, college students who engage in community service may learn from others with whom they are completing service (e.g., community partners, volunteers, supervisors) and discover more about social problems and social injustices. As a consequence of that cognitive knowledge, students may also develop higher levels of moral reasoning development, reaffirming a sense of what is right and wrong, especially with regard to social consequences. Bolstered by cognitive and moral development, students may seek to emulate the prosocial behaviors they see in others and develop their own behaviors to positively contribute to social change and generativity through actions that demonstrate care and concern for others. Additionally, through their service, students may learn how to become more involved in an expanded variety of community efforts, develop a greater understanding of the roots of inequality and social problems, build the confidence or abilities to effectively address social problems, learn how they can best support their communities with their personal skills and abilities, and fortify their continued desire to ensure a better future for continuing generations.

Astin's (1993) theory of college student development also provided guidance on the selection of variables used in our analysis. Astin hypothesized that the background characteristics of college students (inputs) and relevant aspects of the college experience (environment) influence students' outcomes. We utilized Astin's theory in our analyses by taking students' inputs (e.g., demographics and precollege community service experiences) and collegiate experiences (e.g., academic major, leadership experiences) into account when considering the self-selection biases of students who engage in community service.

Methods

Instrument

We utilized data collected as part of the Multi-Institutional Study of Leadership (MSL), which was administered at 70 four-year colleges and universities in spring 2018. We received Institutional Review Board (IRB) approval to conduct this study of existing data. The MSL is an international research program that examines the influence of higher education on undergraduates' leadership development. The MSL survey measures several outcomes reflecting students' engagement in a variety of experiences, including their participation in community service while in high school and in college. Students also report additional precollege experiences and perceptions; demographic characteristics that are not commonly collected within colleges and universities; and academic, prosocial, and leadership outcomes. Researchers have tested the psychometric properties of the MSL instrument and discovered that common concerns related to self-reported data—social desirability, halo effect, and item format—are not problematic in the MSL survey (Dugan, 2015; Tyree, 1998). Additionally, researchers who examined the MSL survey for content, criterion, and construct validity made several changes to improve those psychometric properties, including reducing the number of items and removing two constructs from the socially responsible leadership scale (Dugan, 2015; Tyree, 1998).

Participants

In spring 2018, 70 institutions participated in the MSL, and each invited 4,000 randomly selected students to participate (although some institutions included additional oversampled groups of students

beyond 4,000 students). We used only the randomly selected students in our sample, and the response rates varied between 14% and 48% across the institutions. After matching procedures (described below), we narrowed our sample down to 27,962 students (50% who engaged in community service in an average month and 50% who did not). In Table 1, we present students' demographic information, and in Table 2 we report the institutional information for the final sample.

Measures

Independent Measure

In the survey, students responded to the question, "In an average month, do you engage in any community service?" which was scaled 0 = *no* and 1 = *yes*. In the original sample of 39,845, 41.8% of students (n = 16,641) had engaged in community service. We matched those who had completed community service with those who had not completed community service, and the final sample was also reduced due to survey item

Table 1. Demographic Information for Respondents

	N	%
Gender		
Man	9,176	32.8
Woman	18,489	66.1
Transgender or gender nonconforming	297	1.1
Age		
Under 24	25,660	91.8
Over 24	2,302	8.2
Race/Ethnicity		
African American/Black	1,432	5.1
American Indian/Alaska Native	109	0.4
Asian American	2,282	8.2
Latino/Hispanic	1,875	6.7
Middle Eastern/Northern African	265	0.9
Multiracial	3,230	11.6
Native Hawaiian/Pacific Islander	90	0.3
Race not listed	581	2.1
White/Caucasian	18,098	64.7
Citizenship		
Domestic	26,888	96.2
International student	1,074	3.8
Parental Education		
Continuing generation	18,702	66.9
First generation	9,260	33.1
Transfer Status		
Started here	22,919	82.0
Started elsewhere	5,043	18.0
Class Level		
Freshman	6,221	22.2
Sophomore	6,114	21.9

Table continued on next page

Table 1. Continued

	N	%
Junior	7,046	25.2
Senior+	8,581	30.7
Sexual Orientation*		
Asexual	1,467	5.2
Bisexual	1,927	6.9
Gay	528	1.9
Heterosexual	22,568	80.7
Lesbian	329	1.2
Pansexual	424	1.5
Queer	433	1.5
Questioning or unsure	612	2.2
Preferred response not listed	326	1.2
Estimated Grades (percentages ≠ 100% due to rounding)		
3.50–4.00	14,109	50.5
3.00–3.49	9,560	34.2
2.50–2.99	3,401	12.2
2.00–2.49	736	2.6
1.99 or less	134	0.5
No college GPA	22	0.1
Disability		
Has a disability	24,125	86.3
Does not have a disability	3,837	13.7

Note. * Students could select more than one option, so counts ≠ 100%.

nonresponse. In follow-up items, students reported information about the nature and duration of their community service experience. About 10% participated in at least one hour of community service in an average month as part of a class, 4% participated in at least one hour of community service as a part of a work–study experience, 30% participated in at least one hour of community service with a campus student organization, 15% participated in at least one hour of community service as a part of a community organization unaffiliated with school, and 20% participated in at least one hour of community service on their own.

Covariate Measures

We utilized several measures as covariates in propensity score matching that we believed to be theoretically or practically related to students' community service participation (Austin, 2011). The demographic measures we selected included gender, age, race/ethnicity, citizenship, first-generation status (i.e., parents do not have a bachelor's degree or higher), transfer status, sexual orientation, estimated grades, and disability (Cruce & Moore, 2007; Lester et al., 2013; Marks & Jones, 2004; Mitchell, schneider, & Soria, 2019; Schulzetenberg et al., 2020; Soria, Hufnagle, et al., 2019; Soria, Werner, & Nath, 2019). We also matched students on their academic major, whether they were employed on or off campus (yes/no), whether they performed community service or participated in leadership in high school (frequency, 0 = *never* to 3 = *very often*), and whether they were members or leaders of college organizations (yes/no; Astin & Sax, 1998; Cruce & Moore, 2007; Marks & Jones, 2004; Mitchell, schneider, & Soria, 2019; Schulzetenberg et al., 2020; Serow & Dreyden, 1990; Soria, Hufnagle, et al., 2019; Soria, Werner, & Nath, 2019). We also

Table 2. Institutional Information for Sample

	n	%
Carnegie Classification		
Baccalaureate	2,749	9.8
Master's colleges and universities: Small and medium programs	3,205	11.5
Master's colleges and universities: Larger programs	7,161	25.6
Doctoral universities: Moderate research activity	1,146	4.1
Doctoral universities: Higher research activity	5,368	19.2
Doctoral universities: Highest research activity	8,333	29.8
Institutional Size		
1,000 to 4,999	5,126	18.3
5,000 to 9,999	6,886	24.6
10,000 to 19,999	6,449	23.1
20,000+	9,501	34.0
Control		
Public	14,629	52.3
Private	13,333	47.7
Institutional Setting*		
Town or rural	3,827	13.7
Suburb	6,533	23.4
Small city	4,321	15.5
Midsize city	5,849	20.9
Large city	7,432	26.6

Note. * Percentages ≠ 100% due to rounding.

included institutional measures such as Carnegie Classification, size, control, and setting (Cruce & Moore, 2007).

Dependent Measures

Our dependent measures included students' engagement in social change and social generativity. We measured students' engagement in social change by asking them how frequently they participated in nine different social change activities (e.g., involved with an organization that addresses a social or environmental problem, communicated with campus or community leaders about a pressing concern, acted to raise awareness about a campus/community/global problem, took part in a protest/rally/march/demonstration). Those items were scaled 0 = *never* to 3 = *often*. The internal consistency of the items was excellent (α = .91).

We measured students' social generativity by asking them six items from Morselli and Passini's (2015) Social Generativity Scale. Students rated their agreement (scaled 1 = *strongly disagree* to 7 = *strongly agree*) on items such as "I carry out activities in order to ensure a better world for future generations," "I think that I am responsible for ensuring a state of well-being for future generations," and "I commit myself to do things that will survive even after I die." The internal consistency of the items was excellent (α = .93).

Data Analyses

We utilized propensity score matching techniques in SPSS 24.0 (Thoemmes, 2012) to match students in the treatment condition (engaging in community service) with those in the control condition (not engaging in

community service), using the aforementioned covariates. We began by using binary logistic regression to compute the propensity scores (the estimated probability that students lived on campus) for individual students. Next, we used 1:1 nearest neighbor matching, meaning that each student who engaged in community service was matched to a student who did not engage in community service who had the most similar estimated propensity score (Austin, 2011). We matched without replacement and discarded all the units that fell outside the area of common support to avoid extrapolation to units that were so dissimilar that no comparisons could be made to other units (Thoemmes, 2012). We also imposed a caliper of .20 of the standard deviation of the logit of the propensity score to avoid inadequate matches (Austin, 2011).

Next, we utilized a factor analysis on the survey items to reveal latent variables that explain correlations between the variables (or dimensions). Traditional methods of exploratory factor analysis may overestimate or underestimate the true number of factors (Basto & Pereira, 2012). We therefore utilized Velicer's (1976) minimum average partial (MAP) method, parallel analysis (Velicer et al., 2000), and Raîche et al.'s (2006) optimal coordinate (OC) method to estimate the factors (Courtney, 2013). We used the procedures outlined by Courtney to analyze the data using SPSS R-Menu v2.0 (Basto & Pereira, 2012). Velicer's MAP values suggested a two-step minimum squared average partial correlation, and parallel analysis also suggested two factors should be retained. Against a plot of eigenvalues, the OC procedures estimated two factors should be retained. The goodness of fit statistics suggested the factorial model had good fit (GFI = .967, RMSR = .073), so we retained the following factors: engagement in social change (α = .91) and social generativity (α = .93). We computed the factor scores using the regression method and standardized the scores with a mean of zero and a standard deviation of one.

Students in this sample are enrolled in different institutions; therefore, we computed the intraclass correlation coefficients, an estimate of the proportion of between-institution variance compared to within-institution variance, and discovered the coefficients were less than .001, suggesting greater independence of observations in the different groups of institutions. Scholars utilizing the MSL survey in prior studies have similarly discovered nominal between-institution differences in their results (Dugan et al., 2013), suggesting that hierarchical linear modeling analyses are not necessary for the present project.

Next, we paneled the results by gender, race/ethnicity, sexual orientation, parental education, and disability, which means that we ran separate linear regressions for each of the groups within those major demographic categories. Finally, we analyzed the data using ordinary least squares regression. We examined the relationship between our independent variable (engaging in community service) and our dependent variables (engagement in social change and social generativity).

Results

After conducting the propensity score matching analysis, we examined whether the matching procedures balanced the distribution of variables in both the treatment and control groups by first reviewing the standardized mean differences (the mean differences between the two groups divided by the standard deviation of the control group) in the groups before and after matching. We met the threshold suggested by Rosenbaum and Rubin (1985) because we detected no large imbalances above .25 after matching. Next, we examined the overall imbalance test (Hansen & Bowers, 2008) and found that no variables were significantly unbalanced (over .25) after matching. Additionally, the measure developed by Iacus et al. (2009) was smaller in the matched sample than in the unmatched sample.

We inspected the histograms of propensity scores pre- and postmatching and observed that the magnitude of standardized differences was reduced. Furthermore, the histograms of standardized differences of all terms pre- and postmatching suggested that the standardized differences postmatching were centered on zero and that no systematic differences existed after matching (Thoemmes, 2012). Therefore, although the covariates within the treatment and control groups differed significantly before matching procedures were implemented, we effectively decreased bias by making the observed and treatment groups similar with regard to the covariates we used in our analysis.

After creating matched pairs of students,

we examined the potential impacts of community service on students' engagement in social change and social generativity conditional on gender, race/ethnicity, sexual orientation, parental education, and disability. The results for engagement in social change are shown in Table 3. The results suggest that the effects of community engagement on students' engagement in social change are significant and positive ($p < .001$) across all genders, parental education, and disability. Regardless of students' gender, parental education, or disability, students who participated in community engagement had significantly higher engagement in social change compared to their peers who did not participate in community service.

However, there were not uniform effects of community service on students of different racial/ethnic backgrounds and sexual orientations. Specifically, compared to their peers, American Indian or Alaska Native students who participated in community service did not have a significantly different level of engagement in social change compared to American Indian or Alaska Native students who did not participate in community ser-

Table 3. Regression Results for Engagement in Social Change

	B	*SE*	β	*p*	R^2
Gender					
Man	.462	.020	.234	.000	.055
Woman	.423	.015	.211	.000	.045
Transgender or gender nonconforming	.439	.125	.202	.001	.041
Race/Ethnicity					
African American/Black	.542	.056	.254	.000	.065
American Indian/Alaska Native	.279	.183	.148	.131	.022
Asian American	.470	.042	.233	.000	.054
Latino/Hispanic	.518	.049	.243	.000	.059
Middle Eastern/Northern African	.391	.138	.175	.005	.031
Multiracial	.412	.036	.201	.000	.040
Native Hawaiian/Pacific Islander	.833	.205	.406	.000	.164
Race not listed	.326	.084	.163	.000	.026
White/Caucasian	.421	.014	.216	.000	.047
Parental Education					
Continuing generation	.426	.014	.215	.000	.046
First generation	.455	.021	.223	.000	.050
Sexual Orientation					
Asexual	.316	.052	.158	.000	.025
Bisexual	.426	.046	.208	.000	.043
Gay	.488	.091	.231	.000	.053
Heterosexual	.388	.029	.186	.000	.035
Lesbian	.585	.113	.279	.000	.078
Pansexual	.304	.099	.149	.002	.022
Queer	.479	.093	.244	.000	.059
Questioning or unsure	.521	.081	.255	.000	.065
Preferred response not listed	.203	.117	.099	.083	.010
Disability Status					
Has a disability	.437	.013	.220	.000	.049
Does not have a disability	.431	.033	.206	.000	.043

vice (β = .148, p = .131). Among the rest of the racial and ethnic groups, however, students who participated in community service had significantly higher engagement in social change compared to their peers who did not participate in community service.

Additionally, students who noted that their preferred sexual orientation response was not listed and who participated in community service did not have a significantly different level of engagement in social change compared to their peers who did not participate in community service (β = .099, p = .083). Among the rest of the sexual orientation groups, however, students who participated in community service had significantly higher engagement in social change compared to their peers who did not participate in community service.

The results for social generativity are shown in Table 4. The results suggest that the effects of community engagement are significant and positive (p < .001) across parental education and disability. Regardless of students' parental education or disability, students who participated in community engagement had significantly higher social generativity compared to a matched group of peers who did not participate in community service.

The results were not uniform across all genders; specifically, transgender or gender nonconforming students who participated in community service did not have a significantly different level of social generativity compared to transgender or gender nonconforming students who did not participate in community service (β = .047, p = .427). Among the rest of the gender groups, however, students who participated in community service had significantly higher social generativity compared to their peers who did not participate in community service.

American Indian or Alaska Native students who participated in community service did not have a significantly different level of social generativity compared to American Indian or Alaska Native students who did not participate in community service (β = .075, p = .072). The same is true for Middle Eastern or Northern African students and Native Hawaiian or Pacific Islander students: There were no differences in students' social generativity based upon whether they participated in community service (β = .073, p = .245 and β = .034, p = .759, respectively). Across the rest of the racial/ethnic groups, however, students who participated in community service had significantly higher social generativity compared to their peers who did not participate in community service.

Similarly, asexual and pansexual students who participated in community service had no significant differences in their levels of social generativity compared to their matched peers who did not participate in community service (β = .048, p = .074 and β = .082, p = .096, respectively). Among the rest of the sexual orientation groups, however, students who participated in community service had significantly higher social generativity compared to their peers who did not participate in community service.

Discussion, Limitations, and Directions for Future Research

The results suggest that the effects of community service on students' engagement in social change are significant and positive regardless of gender, parental education, and disability; however, the effects are not uniform across race/ethnicity or sexual orientation. Particularly, American Indian or Alaska Native students and students who did not have a preferred gender available to select who participated in community service did not have a significantly different level of engagement in social change compared to their matched peers who did not engage in community service.

Similarly, the effects of community engagement on social generativity are significant and positive across parental education and disability, but not uniform across gender, race/ethnicity, and sexual orientation. With the social generativity variable, we saw more disparities among the different groups of students than were observed for the engagement in social change variable. Specifically, transgender or gender nonconforming, American Indian or Alaska Native, Middle Eastern or Northern African, Native Hawaiian or Pacific Islander, asexual, and pansexual students who participated in community service did not have a significantly different level of social generativity compared to their matched peers who did not engage in community service.

Although we observed that community service does not have equal outcomes for all students, a limitation of the present study is information about why we may have arrived at these results. For instance, we do

Table 4. Regression Results for Social Generativity

	B	*SE*	β	*p*	R^2
Gender					
Man	.268	.022	.128	.000	.016
Woman	.266	.014	.136	.000	.019
Transgender or gender nonconforming	.111	.140	.047	.427	.002
Race/Ethnicity					
African American/Black	.426	.057	.115	.000	.013
American Indian/Alaska Native	.340	.187	.175	.072	.031
Asian American	.247	.043	.122	.000	.015
Latino/Hispanic	.258	.047	.127	.000	.016
Middle Eastern/Northern African	.160	.138	.073	.245	.005
Multiracial	.313	.036	.155	.000	.024
Native Hawaiian/Pacific Islander	.062	.202	.034	.759	.001
Race not listed	.255	.089	.121	.004	.015
White/Caucasian	.261	.015	.132	.000	.018
Parental Education					
Continuing generation	.266	.014	.135	.000	.018
First generation	.265	.021	.129	.000	.017
Sexual Orientation					
Asexual	.102	.057	048	.074	.002
Bisexual	.338	.046	.167	.000	.028
Gay	.389	.091	.185	.000	.034
Heterosexual	.269	.013	.135	.000	.018
Lesbian	.335	.114	.163	.004	.026
Pansexual	.173	.104	.082	.096	.007
Queer	.295	.096	.148	.002	.022
Questioning or unsure	.233	.085	.112	.006	.012
Preferred response not listed	.253	.126	.113	.046	.013
Disability Status					
Has a disability	.269	.013	.136	.000	.018
Does not have a disability	.242	.034	.116	.000	.013

not know why transgender or gender nonconforming students, American Indian or Alaska Native students, Middle Eastern or Northern African students, Native Hawaiian or Pacific Islander students, asexual students, pansexual students, and students without a preferred gender option do not have higher prosocial outcomes when they engage in community service. As alluded to previously, students from underrepresented and marginalized backgrounds may encounter further marginalization in community service (Battistoni, 1995; Chesler et al., 2006; Mitchell, schneider, & Soria, 2019). For instance, students with marginalized gender and/or sexual identities have encountered experiences in community service where they were tokenized, disempowered, and silenced and where they felt their identity was erased (Mitchell, schneider, & Soria, 2019). In such spaces where students are not free to be themselves and celebrate or affirm their identity, students may not develop a desire to continue to engage in other efforts related to social change.

Furthermore, we do not know the in-depth nature of students' community service experiences. Traditional forms of service may feature acts of "serving for" rather than "serving with," and thus miss opportunities to teach students about systemic and institutionalized oppression, reflect upon the historical roots of social inequalities, and work to redistribute power (Mitchell, 2008). Researchers have suggested that intention in how community engagement experiences are designed and implemented may also inform students' prolonged efforts toward meaningful citizenship (Langhout & Gordon, 2019; Mitchell, Rost-Banik, & Battistoni, 2019). This limitation presents opportunities for future research; for instance, qualitative studies may reveal more insights into the results of this study and further unpack the potential barriers to students' growth and development in community service.

Across both of the models, participating in community service appears to explain a greater proportion of variance in students' engagement in social change than in students' social generativity. Students who engage in community service seem more likely to benefit from additional engagement in social change, such as through taking action to improve communities, campus, or the environment; work with others to address social problems; and take part in protests, marches, or demonstrations. The collegiate environment itself may inspire students' continued social engagement outside their community service participation; for instance, 4-year colleges and universities typically have multiple opportunities for students to work with others in student clubs or organizations, governmental associations, or affinity groups, making it easier for students to get involved in social change efforts given the access to others interested in similar pursuits (Williams et al., 2016). Morselli and Passini (2015) acknowledged that there might be "a more complex path" toward the development of social generativity (p. 180), and the present study also alludes to such a path. The challenge, it appears, may not be in activating students' engagement in social change, but in inspiring their long-term interest in making the world a better place for future generations. Efforts to create strong relational ties to community members and to build understanding of the social concerns impacting communities where students serve may further engender social generativity.

There are a few additional limitations to the present study that are important to address. For instance, our sample was derived from primarily 4-year institutions, thus limiting the generalizability of the findings to different types of institutions, such as community colleges. We encourage researchers to replicate these methods at community colleges or other types of institutions to examine whether the effects of community service are similar. Furthermore, researchers could expand the analyses by adding covariates not measured in the present study.

Community service explained only a nominal amount of variance in students' engagement in social change and social generativity, meaning that our limited model lacks many additional variables associated with those outcomes. Consequently, we recommend that researchers investigate whether other programs or services on campus may be more impactful in inspiring students' engagement in social change and social generativity.

Furthermore, propensity score matching techniques present additional limitations; for instance, the selection of covariates in the logistic regression is subjective and the misspecification of the logistic model is common (King & Nielsen, 2016). Propensity score matching also reduces the participant sample size for the outcome analysis, sometimes introducing potential bias in the

final models (Peikes et al., 2008). Finally, although we implemented propensity score matching to address self-selection bias in participating in community service, the generalizations derived from self-selection in response to a survey must also be factored into cautious interpretations of the results.

Conclusion

Although researchers have documented the attendant developmental benefits from participation in community service, scholars have not examined whether those benefits are universal among students with different gender, race/ethnicity, sexual orientation, parental education, and disability identities. The results of our study of college students enrolled at 70 four-year colleges and universities suggest that the effects of community service on students' engagement in social change are significant and positive regardless of gender, parental education, and disability; however, the effects are not uniform across race/ethnicity or sexual orientation. Similarly, the results of our study suggest that the effects of community engagement on social generativity are significant and positive across parental education and disability, but not uniform across gender, race/ethnicity, and sexual orientation. We encourage researchers to continue to investigate the ways in which community service may not be universally impactful for underrepresented and marginalized students. We further encourage practitioners to design community engagement experiences that promote engagement in social change and social generativity through relational, community-centered approaches that include opportunities for prolonged engagement and inspire commitment to leading change to ensure a better world.

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About the Authors

Krista M. Soria *is an assistant professor in leadership and counseling at the University of Idaho.*

Tania D. Mitchell *is a professor of higher education in the College of Education and Human Development at the University of Minnesota.*

Brayden J. Roberts *is a graduate from the Department of Sociology at the University of Minnesota.*

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