

# **Leadership through Service: AmeriCorps NCCC's Impact on Members**

## **FINAL REPORT**

**December 29, 2023**

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December 29, 2023

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## **Executive Summary**

The Corporation for National and Community Service (dba AmeriCorps) is the federal agency connecting individuals and organizations through service and volunteering to tackle the nation's most pressing challenges. AmeriCorps has engaged and provided opportunities for more than five million individuals to serve their communities and address local needs through its core programs – AmeriCorps State and National, AmeriCorps NCCC, AmeriCorps VISTA, and AmeriCorps Seniors. The service that members and volunteers provide through the core programs is embodied in AmeriCorps' mission statement: *To improve lives, strengthen communities, and foster civic engagement through service and volunteering*. Operating under the AmeriCorps umbrella and mission is the AmeriCorps NCCC program, with its own, related, mission statement: *To strengthen communities and develop leaders through direct, team-based national and community service*.

AmeriCorps retained JBS International (JBS) to design a mixed-methods longitudinal evaluation consisting of three studies: (1) measure the impact of service on leadership skills among members; (2) define and gauge how AmeriCorps NCCC strengthens the communities in which its members serve; and (3) evaluate the factors affecting member retention.

This report discusses the findings on whether and how service impacts members' leadership skills. AmeriCorps NCCC is a full-time, residential, team-based program for young adults aged 18-26. AmeriCorps NCCC maintains two programs, Traditional Corps and FEMA Corps. In Traditional Corps, members' service assignments include leading youth development activities; constructing and rehabilitating low-income housing; helping communities develop emergency plans and respond to emergencies such as flood, hurricanes, and public health emergencies such as COVID-19; performing environmental clean-up; constructing and rehabilitating low-income housing, coordinating volunteers; and addressing other local needs. FEMA Corps is a partnership with the Federal Emergency Management Agency (FEMA) where members gain professional skills in emergency management while serving with FEMA on disaster response and recovery efforts. FEMA Corps works solely on emergency management and long-term recovery activities within FEMA, helping coordinate services for disaster survivors. FEMA Corps projects may involve indirect assignments in the FEMA offices that support FEMA's overall mission or direct assignments in disaster sites, such as helping survivors in remote regions sign up for Disaster Survivor Assistance.

The current study provides evidence supporting AmeriCorps NCCC's mission to develop leaders through team-based national and community service. AmeriCorps NCCC's theory of change sets forth the core outcomes of leadership through service: 1) gain professional skills; 2) develop life skills; 3) teamwork; and 4) engagement in civic life.

## **Objectives**

The current study accomplishes two primary objectives:

1. Estimate the impact of service on members' leadership skills.
2. Examine the association between service project assignments and members' leadership skills.

## **Methods**

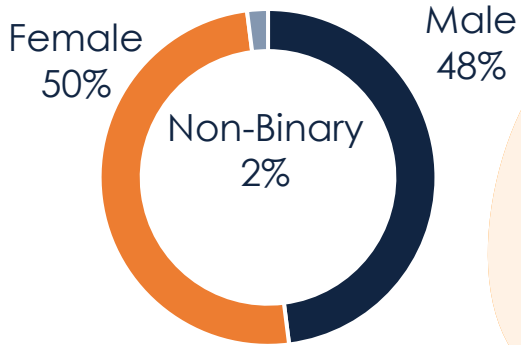
The study draws data from the national longitudinal quasi-experimental design (QED) evaluation of AmeriCorps NCCC. The QED identified comparable individuals drawn from the pool of accepted applicants who declined to serve and a treatment group of accepted applicants who served and completed their term of service with AmeriCorps NCCC. The survey administration timeline is the same for members and comparison participants. All participants completed the same questionnaire at three time points. The impact of service on leadership skills is assessed by comparing leadership outcomes of members (treatment group) to the outcomes of comparison participants who are observationally equivalent to members (comparison group). In addition to survey responses, we coded emerging themes from interviews and focus groups with a sample of members, team leaders, NCCC staff, sponsors, and FEMA points of contact. Of the 2,241 participants who enrolled in the study, 1,252 were AmeriCorps members and 989 were comparison participants.

# Leadership Through Service: AmeriCorps NCCC's Impact on Members

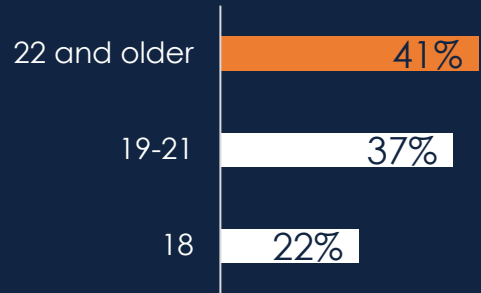


Members' average age is 21 years old, about 50% are female, and 56% identified as White. More than two-thirds are from low or average SES households.

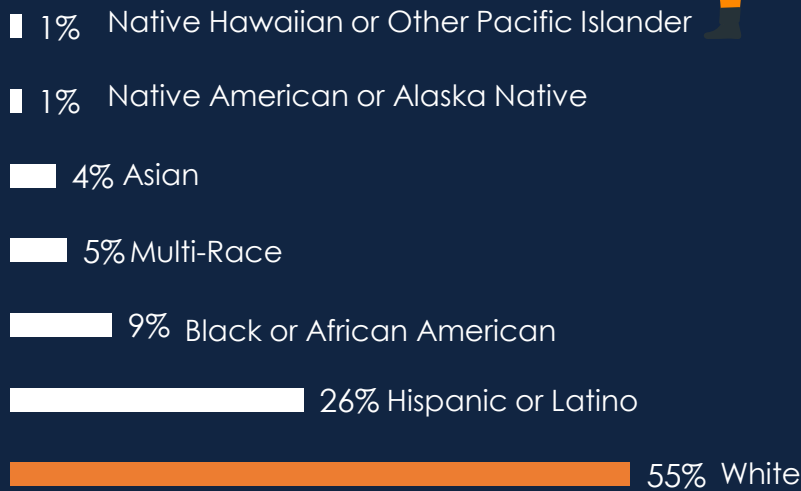
## Gender



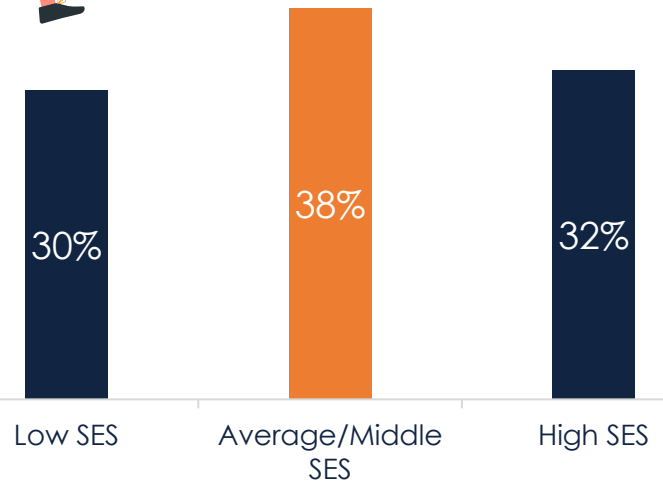
## Age



## Race & Ethnicity



## Socio-Economic Status



Almost two-thirds have a high school diploma/GED or some college. About one-third have at least a bachelor's degree.

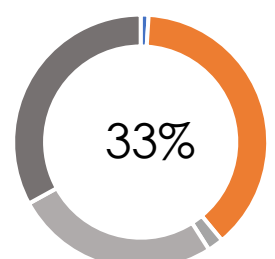
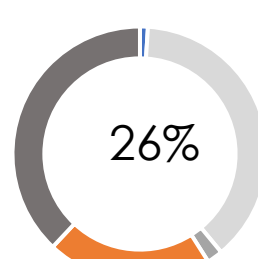
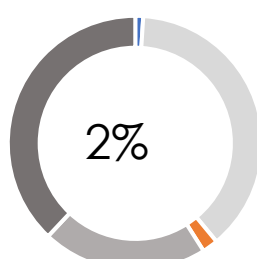
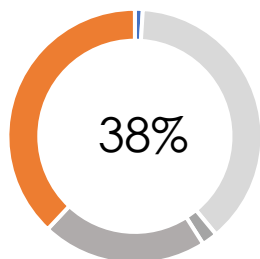
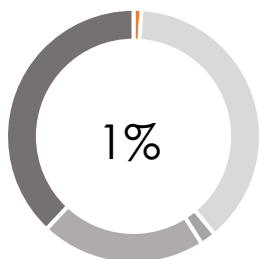
Some high school

High school degree or GED

Technical school

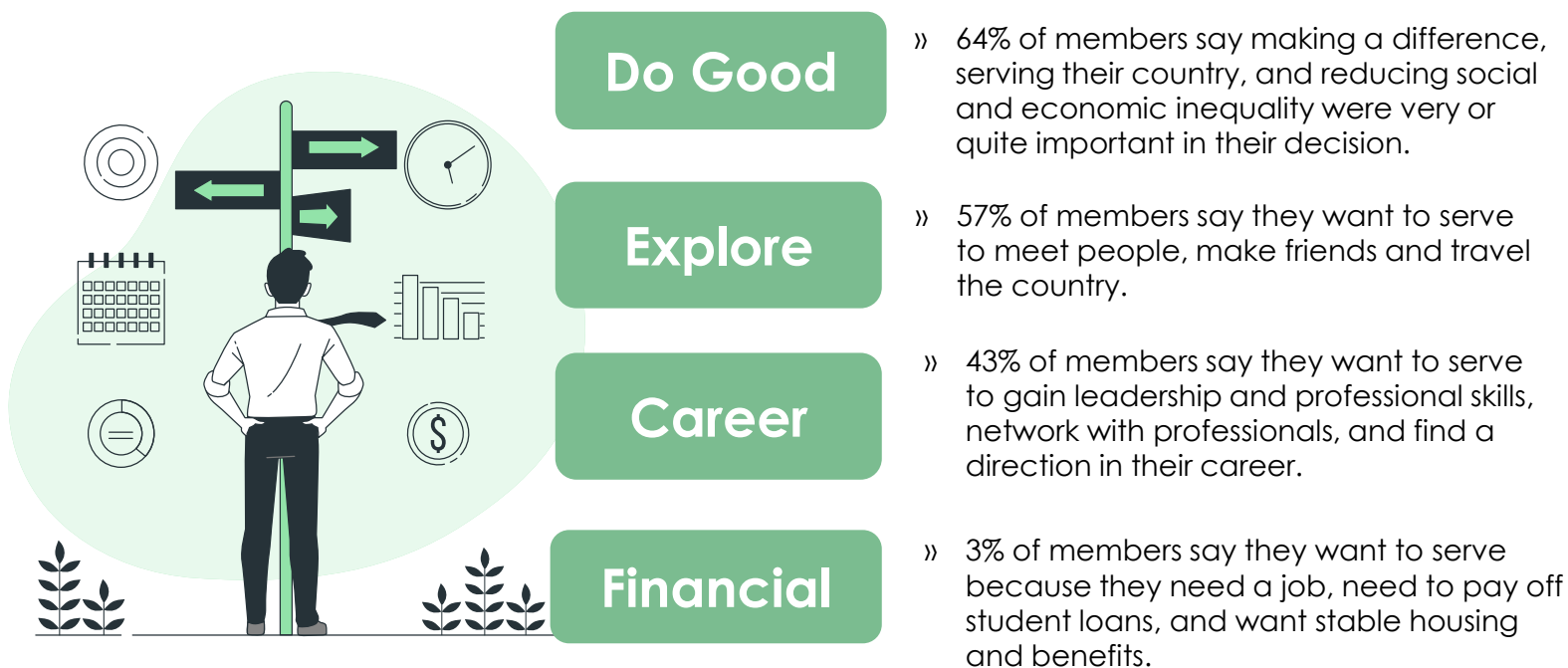
Some college or Associate degree

Higher education degree





# AmeriCorps members are motivated to serve because they are altruistic, looking for the experience to travel and make friends, and they seek career and professional opportunities.



## Motivation to serve and demographic characteristics affect the likelihood of opting into service.

### More likely to opt into service



Altruistic motivation



Motivated to travel and make new friends



Likely to vote in future election



Identify as multi-race

### Less likely to opt into service



Financial motivation



Has at least a bachelor's degree



Identify as Asian  
Identify as female or non-binary



Has a physical or mental impairment

# AmeriCorps members, through their service, experience personal benefits evidenced in strong leadership skills.

**This is evident in members' increasing confidence in their life skills, professional skills, communication skills, collaborative practices skills, community problem solving skills, and appreciation for varied perspectives.**



↑ Growth at the one year after service

↓ Decline at the one year after service

	AmeriCorps members	Comparison group
Life skills	↑	↓
Professional skills	↑	↓
Communication skills	↑	↓
Collaborative practices	↑	↓
Community problem-solving abilities	↑	↓
Appreciation for varied perspectives	↑	↓
Civic efficacy	↓	↓

- ### Facilitators to Skill Development
- » In-depth training & practice opportunities
  - » Mentorship
  - » Positive team leader experience
  - » Clarity of purpose of service assignments
  - » Team building

- ### Barriers to Skill Development
- » Insufficient training
  - » Lack of support from sponsors or administration
  - » Team conflicts
  - » Disconnect between personal development and perceived impact of service assignment
  - » Limited hands-on experiences

# Members' project assignments foster leadership skills and professional development beyond the term of service

## Activities in service projects that yield these benefits

### Tangible benefits

- » Access to food, water, health care
- » Physical infrastructure
- » Economic and financial benefits

### Intangible benefits

- » Mental health care
- » Learning
- » Enhanced efficiency
- » Expanded services

### Disaster aid benefits

- » Disaster preparation
- » Disaster recovery
- » Disaster prevention and mitigation

## Lead to members' increase confidence in

- » Life skills
- » Professional skills
- » Civic efficacy

- » Community problem-solving abilities

- » Collaborative practices
- » Communication skills

## Training combined with opportunities to apply skills through service helps members develop leadership and professional skills



- » **Provide comprehensive training, ongoing supervision, and mentorship.** Training expands members' skills, and when combined with the opportunity to apply this training, it shapes them as leaders during and beyond their term of service.
- » **Expose members to a range of projects.** Satisfaction with the project assignment is a vital predictor of a successful volunteer experience. Participation in a wide range of projects increases the opportunities for members to apply and practice different leadership skills.
- » **Ensure quality sponsorship with durable workloads.** Members apply and gain leadership skills through the service projects. Clear communication and training from sponsors are vital in promoting leadership skills. To ensure satisfaction for both sponsors and members, there should be transparency in the expectations of the depth of training a sponsor can provide, as well as the teams can be expected to provide.

## Background

The Corporation for National and Community Service (dba AmeriCorps) is the federal agency connecting individuals and organizations through service and volunteering to tackle the nation's most pressing challenges. AmeriCorps has engaged and provided opportunities for more than five million individuals to serve their communities and address local needs through its core programs – AmeriCorps State and National, AmeriCorps NCCC, AmeriCorps VISTA, and AmeriCorps Seniors. The service that members and volunteers provide through the core programs is embodied in AmeriCorps' mission statement: *To improve lives, strengthen communities, and foster civic engagement through service and volunteering*. Operating under the AmeriCorps umbrella and mission is the AmeriCorps NCCC program, with its own, related, mission statement: *To strengthen communities and develop leaders through direct, team-based national and community service*. The Office of Research and Evaluation (ORE), as the principal office for research activity within AmeriCorps, relies on multiple sources of scientific inquiry to provide credible and reliable evidence to support the agency's mission, drive the agency's business decisions, allocate resources strategically, and grow effective national service programs. AmeriCorps NCCC and ORE embarked on a collaboration to evaluate how service in AmeriCorps NCCC promotes leadership skills among its members and how the service projects strengthen the communities in which the members serve. This national evaluation is closely linked to AmeriCorps' strategic plan developed by the agency in accordance with the Foundations for Evidence-Based Policymaking Act (FEBP) of 2018, Pub. L. 115-435. The strategic plan provides the agency a roadmap for generating credible, relevant, and actionable information for strategic learning and decision-making to ensure the efficiency and effectiveness of AmeriCorps and its programs.

In September 2018, AmeriCorps retained JBS International (JBS) to design a mixed-methods longitudinal evaluation consisting of three studies to (1) measure the impact of service on leadership skills among members; (2) define and gauge how AmeriCorps NCCC strengthens the communities in which its members serve; and (3) evaluate the factors affecting member retention. In January 2020, the Office of Management and Budget (OMB) approved the data collection (OMB Control Number 3045-0189) for the three studies.

The current study provides the evidence supporting AmeriCorps NCCC's mission to develop leaders through team-based national and community service. AmeriCorps NCCC's theory of change sets forth the core outcomes of leadership through service: 1) gain professional skills; 2) develop life skills; 3) teamwork; and 4) engagement in civic life.

This report discusses the findings from the study measuring the impact of service on leadership skills among members. Two accompanying reports discuss the findings on member retention and the impact of the service projects on strengthening the communities in which the members serve<sup>1</sup>. AmeriCorps NCCC is a full-time, residential, team-based program for young adults aged 18-26. At the time of the study's implementation, AmeriCorps NCCC maintained two programs, Traditional Corps and FEMA Corps. In Traditional Corps members' service assignments include

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<sup>1</sup> Georges, A., Shannon, R., Sum, C., Smith, S.J., Tait, E., LaTaillade, J., McHugh, C., & Mackey, C. (2023). *Evidence of AmeriCorps NCCC in Strengthening Communities*. San Mateo, CA: JBS International, Inc.; Georges, A., Smith, S.J., Hussain, B., Shannon, R., Sum, C., Tait, E., LaTaillade, J., Alvarado, A., & Kraus, J. (2023). *Exploring Demographics, Motivation, Interpersonal and Group Cohesion Factors in Retaining Members through their Term of Service: A National Study of AmeriCorps NCCC*. San Mateo, CA: JBS International, Inc.

leading youth development activities; constructing and rehabilitating low-income housing; helping communities develop emergency plans and respond to emergencies such as flood, hurricanes, and public health emergencies such as COVID-19; performing environmental clean-up; constructing and rehabilitating low-income housing; coordinating volunteers; and addressing other local needs. FEMA Corps is a partnership with the Federal Emergency Management Agency (FEMA) where members gain professional skills in emergency management while serving with FEMA on disaster response and recovery efforts. FEMA Corps works solely on emergency management and long-term recovery activities within FEMA, helping coordinate services for disaster survivors. FEMA Corps projects may involve indirect assignments in the FEMA offices that support FEMA's overall mission or direct assignments in disaster sites, such as helping survivors in remote regions sign up for Disaster Survivor Assistance.

The current study accomplishes two primary objectives:

1. Estimate whether and how service impacts members' leadership skills.
2. Examine the association between service project assignments and members' leadership skills.

#### Organization of the report

This report is organized into 6 chapters. Chapter 1 summarizes the literature on how national service fosters leadership skills; this chapter also identifies the evidence gap in the literature to which this evaluation contributes. Chapter 2 summarizes AmeriCorps NCCC's theory of change to develop and strengthen members' leadership skills through the service term and beyond. Chapter 3 describes the research design, including the analysis approach, data sources and measures of leadership. Chapter 4 presents the results on the first objective to estimate the impact of service on members' leadership skills; and chapter 5 presents the results on the second objective to examine the association between service project assignments and members' leadership skills. Chapter 6 summarizes the findings.

### **Chapter 1 Developing Leadership Skills through Service**

The existing literature defines leadership as a process of expanding the capacity of individuals to assume leadership roles and engage in the leadership process (Houghton & DiLiello, 2010). Leadership is not a fixed trait; it is a complex set of competencies that can be cultivated through appropriate interventions (Karagianni & Montgomery, 2018). While the theories on how to cultivate and engage in developing leadership skills among young adults have not been well-researched, the extant research indicates that community service can be an effective intervention to develop leadership competencies. The two implications of the existing research on leadership are: (1) leadership can be learned and cultivated through practice, and (2) young adults need opportunities to learn and practice leadership. We summarize the existing evidence on the four leadership skills at the core of AmeriCorps NCCC's mission: professional skills, life skills, teamwork, and civic engagement. The evidence on how young adults develop each of these leadership skills is uneven, with more research around civic engagement and relatively less around the impact of service on professional skills, life skills, and teamwork.

The studies on professional skills suggest that experience in national service enhances members' employment aptitude, particularly in basic work skills (Friedman et al., 2016; Jastrzab et al., 2004), with weaker evidence to suggest that national service may impact participants'

employment, employability, and career goals. Some studies describe factors that enhance the connection between national service and professional skill development, such as the opportunity to explore new career paths, member attitudes, and participation in hands-on work (Epstein 2009). The research on life skills outcomes among national service participants is also limited. The evidence from this research suggests that national service may have positive effects on the development of certain life skills, such as problem-solving and social and emotional intelligence (Mattero, 2009; Yerace, 2017). Some evidence also suggests that participation in service learning and national service can have a positive effect on members' self-efficacy (Friedman et al., 2016). Further, there is evidence that experiential learning and mentorship contribute to life skills (Yerace, 2017).

Several studies demonstrate that national service with AmeriCorps in general--and AmeriCorps NCCC service specifically--encourage civic engagement, including among those who entered national service without high levels of civic engagement (JBS International, 2015; Metz & Youniss, 2005). The evidence suggests a positive effect of national service on several forms of civic engagement, such as volunteer engagement and political engagement (CIRCLE, 2013; Epstein, 2009; Markovitz et al., 2008).

Analysis conducted by Stafford, Boyd, and Lindner (2003) did not find significant impacts of service on youths' effective team skills, and a study by Jastrzab et al. (2004) found a statistically significant negative effect on appreciation of cultural and ethnic diversity among members serving in AmeriCorps NCCC. The authors hypothesized this may have been due to short-term disillusionment with the concept of working in diverse groups and living and working in close proximity to their teammates, which may lead to interpersonal conflicts (Jastrzab et al., 2004). In a follow-up analysis with the same participants, Frumkin et al. (2009) found the statistically negative effect disappeared, which suggests that members' perceptions of diversity change over time. Epstein (2009) also found that members who reported living or serving in a community culturally different from where they grew up had decreased scores in team behavior.

One member quoted in Epstein (2009) described the challenges of communication with team members and how the AmeriCorps experience provided an opportunity to work on communication skills. Gifted team leaders were seen as critical to successful programs, and some members expressed appreciation for team-building activities (Epstein, 2009). In Epstein's study, AmeriCorps members described the benefit of being placed into team-based settings with those who differed from themselves and having to learn how to work together; despite the negative findings related to appreciation for diversity as noted above in prior studies, these qualitative findings suggest that some members may find benefits to the diverse teams they work with in addition to the associated challenges (Epstein, 2009). In general, however, there is a need for substantial research into factors that may either enhance teamwork among AmeriCorps members or negatively affect appreciation of cultural and ethnic diversity among members.

A study conducted by Hudson-Flege (2018) suggests that while interpersonal challenges during the year of service may limit members' short-term growth in positive group behavior and appreciation of diversity, these challenging experiences might also facilitate long-term development in these areas relative to comparison group members. Post service, members experience significant changes in "constructive personal behavior in groups" and "appreciation for ethnic and cultural diversity." Consequently, challenging experiences might also facilitate

long-term development in these areas relative to comparison group members (Hudson-Flege, 2018).

In summary, the research suggests there is a positive impact of national service experience on professional skills such as employment aptitude, employment outcomes, employability and career goals, and civic engagement. Despite these positive findings, there are some areas of leadership process among national service participants that merit further research. For example, Jastrzab et al.'s (2004) findings of a significant negative impact among members' appreciation of cultural and ethnic diversity warrants a better understanding of the reasons behind this finding and their long-term implications on leadership skills. Appreciation of cultural and ethnic diversity and their long-term implications are areas of leadership that require more in-depth analysis. The dearth of evidence on the impact of service on life skills, teamwork, and certain aspects of professional skill development also merit further exploration. Furthermore, for many other aspects of leadership development, studies have focused on short-term outcomes around knowledge, skills, and attitudes. Few studies have examined the impact of service on life skills, teamwork, and professional development.

## **Chapter 2 AmeriCorps NCCC's Theory of Change and Logic Model**

AmeriCorps NCCC is a full-time, residential, team-based program with a dual purpose of supporting and developing leadership skills for those who serve and strengthening the communities where members serve. The program engages young adults aged 18-26 in structured training and service activities designed to enhance personal development, promote professional development, and foster leadership skills that shape its members for a lifetime. It combines practices of civilian service with aspects of military service, which includes short-term on-site deployments, leadership development and team building. During the term of service, AmeriCorps members receive training in leadership, team building, disaster services, and civic engagement.

At the time of the study's implementation, AmeriCorps NCCC maintained two programs: Traditional Corps and FEMA Corps. In Traditional Corps, AmeriCorps members perform service projects in one or more focus areas, such as helping communities develop emergency plans and respond to emergencies, constructing and rehabilitating low-income housing, performing environmental clean-up, coordinating volunteers, and addressing other local needs. FEMA Corps is a partnership with the Federal Emergency Management Agency (FEMA) where members gain professional skills in emergency management while serving with FEMA on disaster response and recovery efforts. FEMA Corps works solely on emergency management and long-term recovery activities within FEMA, helping coordinate services for disaster survivors. FEMA Corps projects may involve indirect assignments in the FEMA offices that support FEMA's overall mission or direct assignments in disaster sites, such as helping survivors in remote regions sign up for Disaster Survivor Assistance.

For both Traditional Corps and FEMA Corps, AmeriCorps members are assigned to one of four regional campuses and placed into teams of approximately 8 to 12 members. Teams perform a variety of projects throughout their term of service and engage in a minimum of three different projects. The projects often last six to eight weeks and support local community needs in every contiguous state, Alaska, Hawai'i, Puerto Rico, and other U.S. Territories.

There are two types of assignments at each regional campus: team leaders or members. In Traditional Corps, team leaders and members serve for 10 months (FEMA Corps serve for 12 months<sup>2</sup>) on teams of 8 to 12 members. Team leaders are enrolled through a separate selection process. Team leaders are over the age of 18, with no upper age limit, and have demonstrated a strong interest in and commitment to national service. Team leaders are responsible for team performance in fulfilling the AmeriCorps NCCC mission. Members may take on the role of assistant team leader, or one of five other specialty roles within a team. However, the assistant team leader role is not consistent within or across campus, and there is no specific training provided to assistant team leaders.

AmeriCorps members and team leaders live in dormitory-like and barracks-like facilities when based at the NCCC campus. Teams eat, live, serve, and travel together to project sites. Some projects may require a team to temporarily establish a base of operation in another community away from the campus; and these projects can be in a wide variety of settings from remote rural areas to the inner city. Campuses may also have projects that are in the same community where the NCCC campus is based.

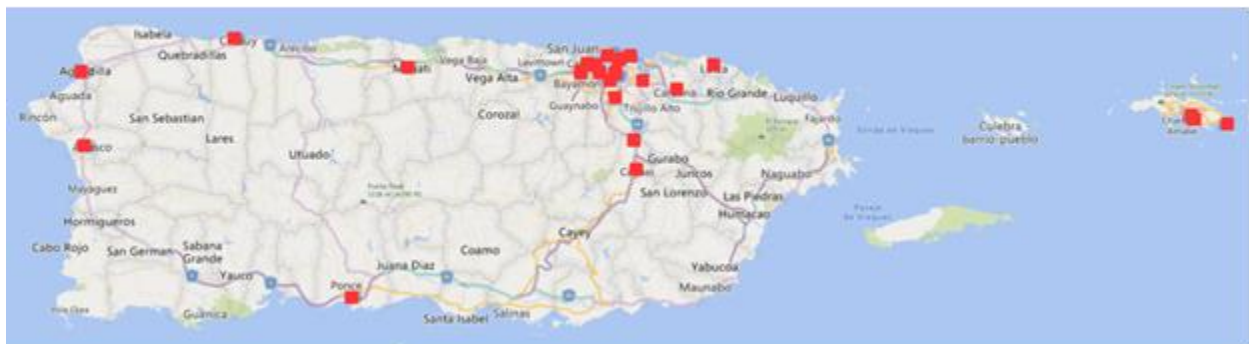
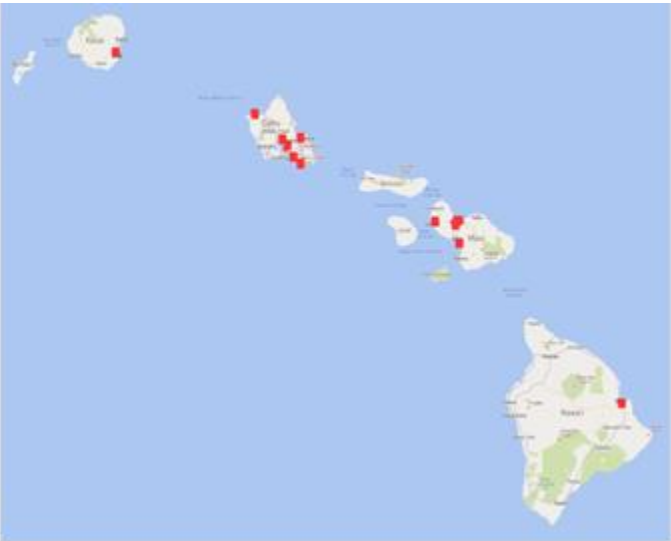
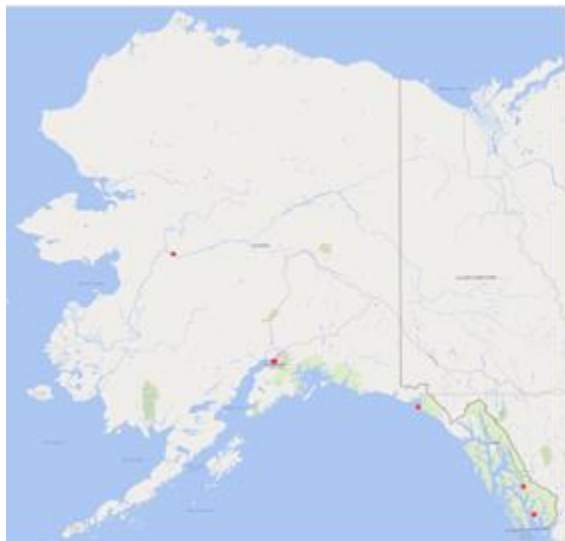
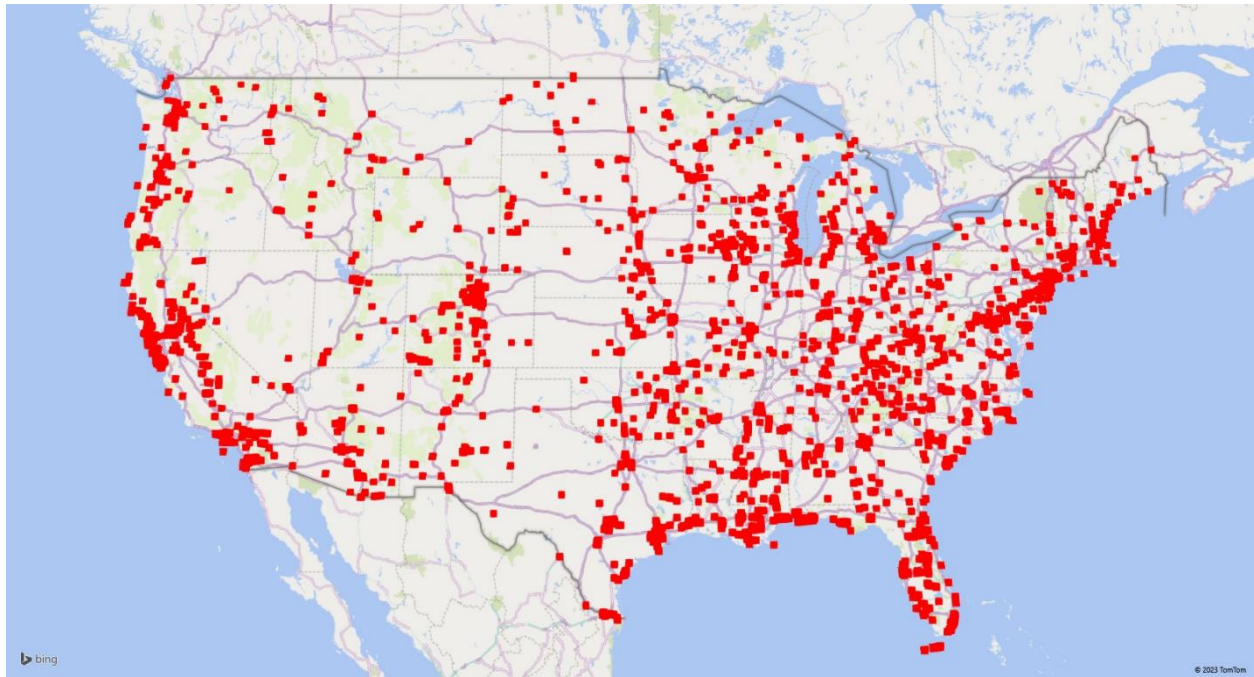
Figure 2.1 shows the geographic distributions of AmeriCorps NCCC service projects from 2012-2022. Each dot on the map represents the site location where a team was deployed at least once and completed a service project between 2012-2022. There were 6,753 completed service projects between 2012-2022. AmeriCorps NCCC served multiple geographic locations in each contiguous state, Alaska, Hawai'i, Puerto Rico, and other U.S. Territories, with 29 percent taking place in the Southern region, 28 percent in the Pacific region, 24 percent in the North Central region, and 19 percent in the Southwest region.

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<sup>2</sup> During the course of this study, FEMA Corps adjusted their term of service to 10-months.

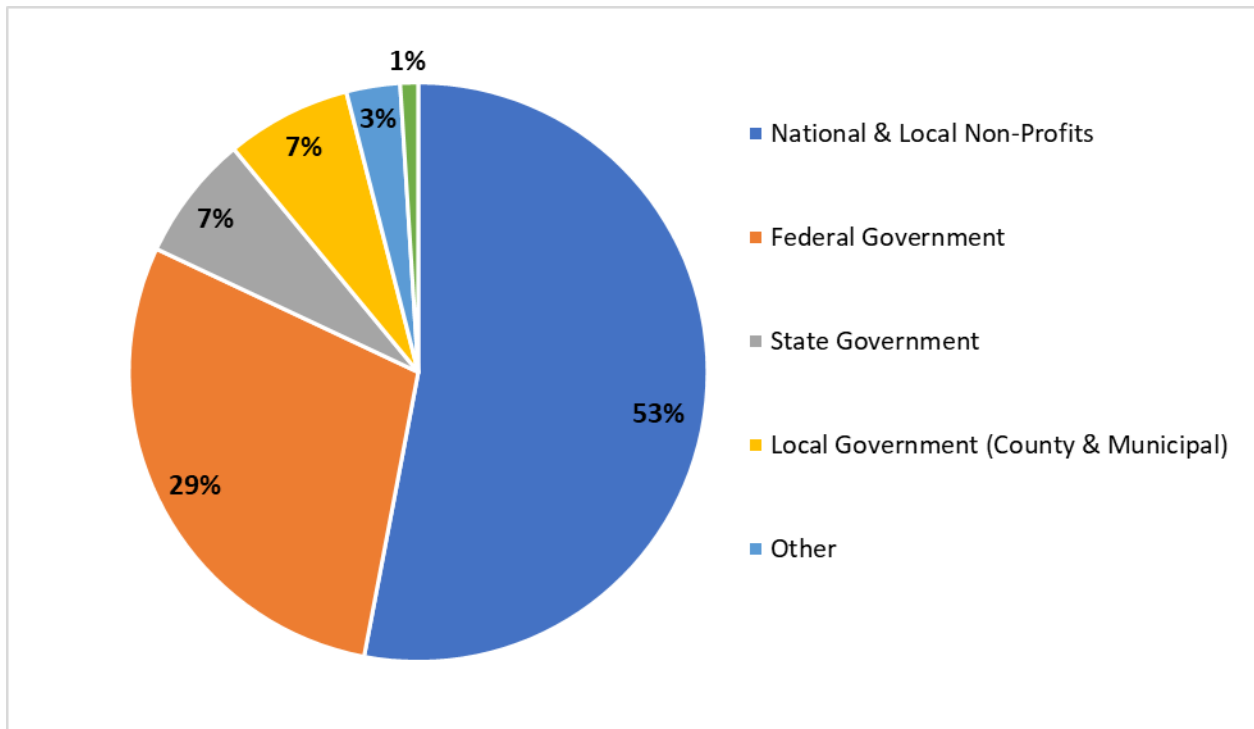


Figure 2.1: Communities affected by AmeriCorps NCCC service, 2012-2022



Sponsors are typically non-profit organizations that apply for support in a specifically designed project that can benefit from the addition of a team. Sponsors provide in-kind resources, assist teams in obtaining housing, and meet basic needs during their service. Sponsors supervise the team during their service projects. Figure 2.2 shows the distribution of the type of organizations that have sponsored AmeriCorps NCCC teams since 2012. Over this period, some sponsors may have had recurring teams while others may have sponsored only one team during that period. More than half (53%) of sponsors are non-profit organizations. This includes both larger national non-profits and smaller local non-profit organizations. Over a quarter (29%) are projects sponsored by the Federal government, including FEMA Corps. A smaller percentage of sponsors were either the state government or local county/municipal government each at 7 percent.

**Figure 2.2: Types of sponsoring organizations, 2012-2022**



Community beneficiaries of service projects are wide-ranging and include, for example, disaster survivors, older adults, people with disabilities, and people in low-income communities facing housing or food insecurity.

### **Chapter 3 Research Design**

The primary objective is to measure whether and how service impacts members’ leadership skills. The following research questions guided the evaluation:

1. Does service impact members’ leadership skills (professional skills, life skills, teamwork, and civic engagement)?
2. What is the growth trajectory of members’ leadership skills through service and beyond?
3. How do members’ service project assignments contribute to their leadership skills?

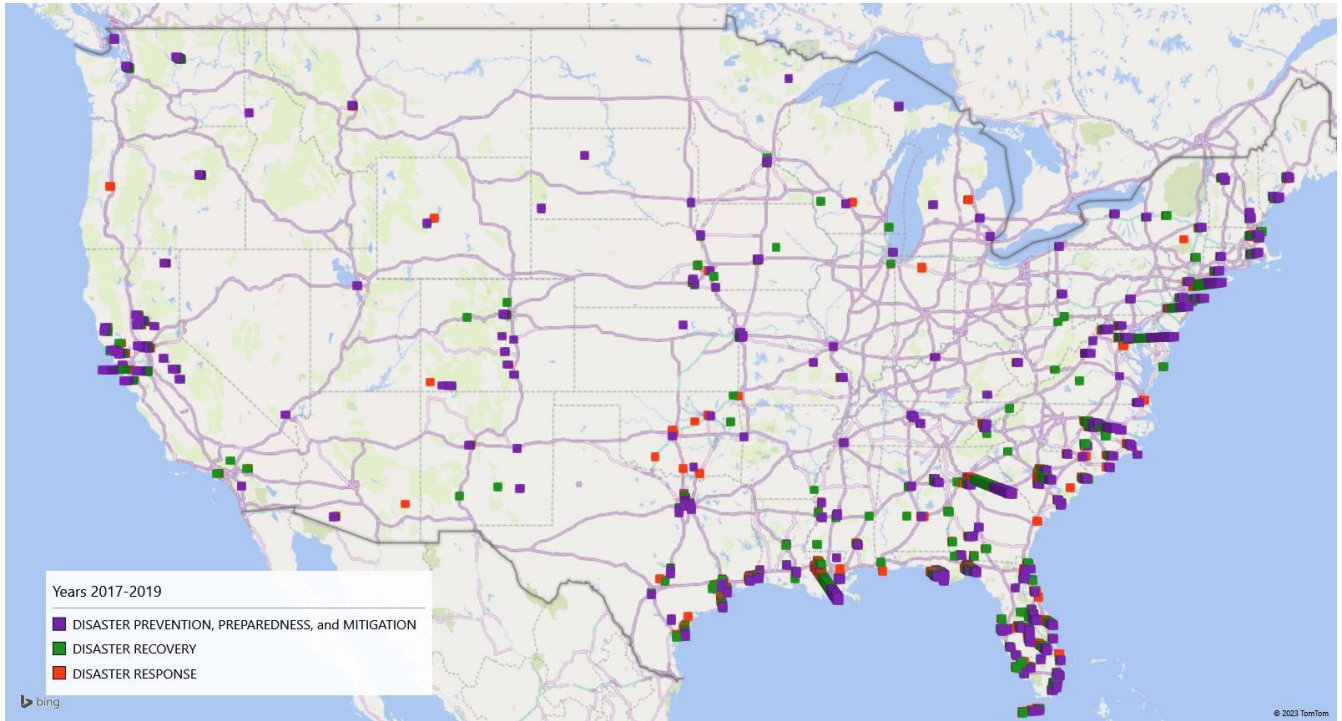
This study draws from the national longitudinal quasi-experimental design (QED) evaluation of AmeriCorps NCCC. The QED identified comparable individuals from a pool of accepted applicants who declined to serve. The treatment group consists of accepted applicants who served and completed their term of service. The survey administration timeline is the same for members and comparison participants. All participants completed the same questionnaire at three time points. The service year for AmeriCorps NCCC is divided into three cycles; the Fall cycle begins in October, the Winter cycle in February, and the Summer cycle in July. Incoming members from February 2020 through March 2021 enrolled in the study. Comparison participants from the corresponding enrollment cycles during that same period enrolled in the study.

The data collection began with the Winter cycle in February 2020. Enrollment into the study occurred as members reported to their campus for training and to begin their service. March 2020 marks the official start of the public health emergency due to the coronavirus (COVID-19). As a result, AmeriCorps paused campus arrival of new members, which lasted through June 2020. The pause in arrival necessitated a concomitant pause in the baseline data collection. Data collection resumed once AmeriCorps began to bring members to the campuses.

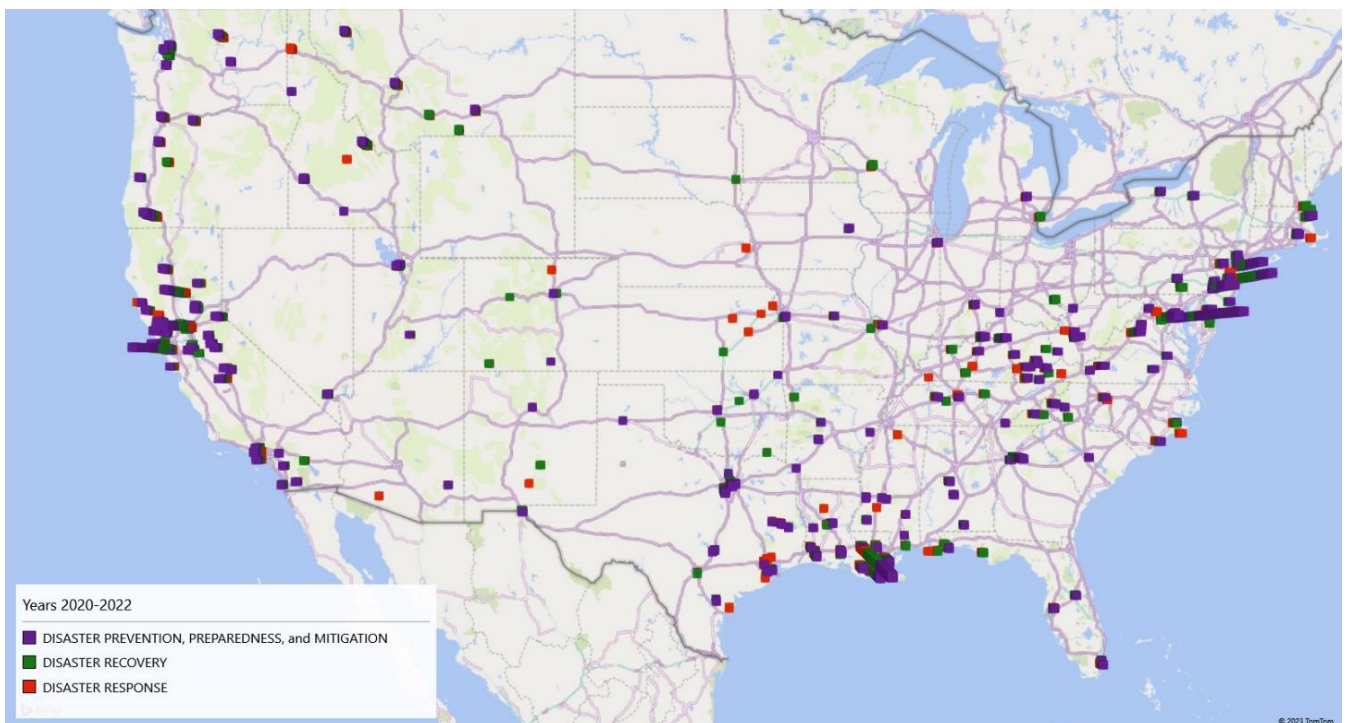
Although there was a pause to on-site arrival to campuses, members continued to serve their communities. Traditional Corps and FEMA Corps members pivoted to supporting local communities during the COVID-19 public health emergencies through projects such as food distribution, support at Covid vaccination sites (e.g., check-ins, screenings, traffic control), staffing Covid clinics (e.g., contact tracing, information distribution), PPE distribution, and support conducting non-clinical work at hospitals. Of the 1,401 projects completed from January 2020 through August 2022, the latest month for which data are available, 194 (14%) percent were pandemic related disaster projects. In addition to AmeriCorps NCCC's response to the COVID-19 public health emergency, during this period, teams completed 434 projects that had a disaster recovery outcome, which makes up 31 percent of the projects completed from 2020-2022; 422 projects had a disaster prevention, preparedness, and mitigation outcome (30%), and 274 projects had a disaster response outcome (20%).

The pandemic did not alter AmeriCorps' continued commitment to serve communities through disaster response and recovery. In fact, these types of projects constitute close to 50 percent of AmeriCorps NCCC projects. Despite the pandemic, there was no significant drop in the number of specific project outcomes. The proportion of disaster prevention, recovery, and response projects for the years 2020-2022 is consistent with the proportion of disaster projects in 2017-2019. There was a large increase in the proportion of projects that had outcomes focused on community well-being (from 35% to 44%) as well as an increase in the proportion of projects that had outcomes focused on basic needs (from 23% to 37%), which may be attributed to the increase of COVID-19 projects. The pandemic impacted both the treatment and comparison group equally. The study's response rate is very strong; a non-response bias analysis showed none to minimal bias (Appendix B).

*Figure 3.1: Distribution of AmeriCorps NCCC service projects focused on disaster, 2017-2019*



*Figure 3.2: Distribution of AmeriCorps service projects focused on disaster, 2020-2022*



## Participants

The baseline survey was administered immediately prior to the start of service to each of 10 AmeriCorps NCCC classes that began service between February 2020 and March 2021. The second survey was administered from October 2020 to March 2022, as these members completed their term of service (10 months for Traditional Corps, 12 months for FEMA Corps). The administration of the second survey began three to four weeks prior to members' end of service term. The third survey was administered from November 2021 to April 2023, which is 12 months post service. Concurrent with each survey administration with members, participants in the comparison group completed the same survey as members. Table 3.1 shows the number of participants for each wave of survey administration. Of the 1,252 AmeriCorps members who completed the baseline survey, 1,011 members completed their service term and responded to the second survey. Of those, 765 members completed the third survey. Of the 989 comparison participants who completed the baseline survey, 738 participants completed the second survey. Of those, 593 comparison participants completed the third survey. From the second survey to the third survey, the response rate is 76 percent for the treatment group, and 80 percent for the comparison group. Of the 1,252 participants in the treatment group at baseline, 344 exited early and did not complete their service term. A separate report analyzes the characteristics of exit early members<sup>3</sup>.

**Table 3.1: Survey response rate**

		Total Contacted	Respondents	Response Rate
<b>Baseline survey</b>				
	AmeriCorps members	1,617	1,252	77%
	Comparison	1,622	989	61%
<b>Second survey</b>				
	AmeriCorps members	1,252	1,011	81%
	Comparison	989	738	75%
<b>Third survey</b>				
	AmeriCorps members	1,011	765	76%
	Comparison	738	593	80%

<sup>3</sup> Georges, A., Smith, S.J. Hussain, B., Shannon, R., Sum, C., Tait, E., LaTaillade, J., Alvarado, A., & Kraus, J. (2023). *Exploring Demographics, Motivation, Interpersonal and Group Cohesion Factors in Retaining Members through their Term of Service: A National Study of AmeriCorps NCCC*. San Mateo, CA: JBS International, Inc..  
 Smith, S.J., Alvarado, A., Shannon, R., Georges, A., Garcia-Cardenas, J., & Hussain, B. (2023). *Profile of AmeriCorps NCCC Members That Do Not Remain in Service* San Mateo, CA: JBS International, Inc.

During the enrollment period, FEMA enrolled two FEMA Corps classes consisting of 297 FEMA Corps members, both in the Southern region. Table 3.2 shows the response rate for each survey for FEMA Corps members. The baseline response rate among FEMA Corps is 78 percent for the treatment group and 85% for the second survey. The third survey response rate for FEMA Corps treatment group members was 74%.

**Table 3.2: FEMA Corps survey response rate**

		Total Contacted	Respondents	Response Rate
<b>Baseline survey</b>				
	AmeriCorps members	297	232	78%
	Comparison	371	211	57%
<b>Second survey</b>				
	AmeriCorps members	232	198	85%
	Comparison	211	149	71%
<b>Third survey</b>				
	AmeriCorps members	198	147	74%
	Comparison	149	117	78%

#### Non-Response Bias Analysis

Non-response bias can occur when individuals who chose not to take part in the study or who dropped out of the study, are systematically different from those who participated fully. For each wave of the survey administration, a non-response bias analysis showed none to minimal bias. The non-response bias analysis determined that there were no significant systematic differences in characteristics between those who responded to the survey and those who did not respond, indicating that the sample is representative of the members that served during the data collection period. Appendix B provides a full list of the variables and a full description of the three non-response analyses for each survey administration.

#### Qualitative data

We conducted focus groups with a sample of members at the time of the second survey near the end of the service term. We also interviewed the same members who participated in the focus groups approximately two months following their service term. In addition, AmeriCorps NCCC regional staff participated in focus groups. We also contacted a sample of sponsors to interview them about their experience with their AmeriCorps NCCC teams.

We sampled members for the focus groups and interviews from the baseline survey responses using a random sample stratified on gender, education, race/ethnicity, and prior volunteer

experience. Each campus provided a list of 10 to 12 sponsors and FEMA Corps points of contact (POC) who were willing to be interviewed about their experience with AmeriCorps NCCC teams. AmeriCorps NCCC staff from each region participated in focus groups to share their insights and experiences on their campus.

We completed 41 focus groups with members, team leaders and staff. Two researchers conducted each focus group between October 2020 and June 2022. Each focus group lasted approximately 90 minutes. We completed 181 semi-structured interviews with members, team leaders, sponsors, and FEMA Corps POC. We completed the semi-structured interviews about two months following the end of the term of service with members and team leaders who participated in the focus groups. Two researchers conducted the interviews via video conference calls or telephone calls between November 2020 and June 2022. Each semi-structured interview lasted approximately 45 minutes.

**Member Characteristics.** A separate report<sup>4</sup> describes members' demographic characteristics, sources to learn about NCCC, motivations for serving, and perception of the experience prior to the start of their service. The same report describes members' initial leadership skills as they began their service. It also compares Traditional Corps, FEMA Corps, and comparison participants. This section is a synopsis of the results described in the previous report<sup>5</sup>.

Members' average age is 21 years old. The comparison group skews slightly older with an average age of 22 years old. A higher proportion of members is female, which comprises 50 percent of members and 67 percent of comparison participants. More than half of members identified as White (56% compared to 48% among comparison participants). The next largest group is members who identified as Hispanic or Latino (26% compared to 28% of comparison participants), followed by Black or African American (9% compared to 13% among comparison participants). The race and ethnic distribution of the treatment and comparison group participants reflects the U.S. population for this age group. However, White, and Hispanic or Latino members are over-represented in the treatment group; Black or African American, and Asian are under-represented in the treatment group.

For efficiency, since 90 percent of participants identify as White, Hispanic or Latino, or Black or African American, Table 3.3 shows the interaction of education and race and ethnicity for these three groups. More than half (59%) of members have either achieved a high school diploma or GED (38%) or some college (21%). About one-third (32%) have a bachelor's degree. Among members who identified as White, 40 percent have completed a bachelor's degree; one third of Hispanic and Latino members and one quarter (26%) of Black or African American have completed a bachelor's degree. Among Black or African American members, nearly half (43%) have completed high school or obtained a GED (43%).

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<sup>4</sup> Georges, A., Smith, S.J., & Fung, W. (2021). *Profile of AmeriCorps NCCC Members at the Start of Service*. San Mateo, CA: JBS International, Inc.

<sup>5</sup> Ibid.

**Table 3.3: Highest level of education completed**

<b>Level of Education Completed</b>	<b>Overall Sample</b>	<b>White</b>	<b>Hispanic or Latino</b>	<b>Black or African American</b>
Middle school	0%	0%	0%	0%
Some high school, I do not have a diploma	1%	1%	1%	1%
High school diploma or GED	38%	32%	34%	43%
Technical school / Apprenticeship certificate	2%	1%	2%	7%
Some college	21%	19%	23%	16%
Associate degree	5%	5%	6%	6%
Bachelor's degree	32%	40%	33%	26%
Graduate degree	1%	2%	1%	1%

The socio-economic status (SES) construct is derived from a factor analysis using the participants' household structure, parent employment status, and parent education. The SES score is then divided to a scale from 1 to 3, where a score of '1' indicates low socio-economic status, a score of '2' indicates medium socio-economic status, and a score of '3' indicates high socio-economic status. Factors that contribute to a lower SES score include if no parent or guardian in the household is employed, if no parent or guardian has at least a college degree, or if a participant lives in a single parent household or no parent household. While factors that contribute to a higher SES score include if all parents/guardians in the household are employed, if all parents/guardians have a college degree, or if the participant comes from a two biological parent household. Appendix C describes the development of the SES construct.

For the overall sample, 30 percent are low SES, 38 percent are average SES, and 32 percent are high SES. Members who identified as Black or African American or Hispanic or Latino are over-represented in the low SES category and under-represented in the high SES. Members who identified as White are under-represented in the low SES and over-represented in the average and high SES (Table 3.4).

**Table 3.4: Distribution of AmeriCorps members socio-economic status by race and ethnicity**

<b>SES Score</b>	<b>Overall Sample</b>	<b>White</b>	<b>Hispanic or Latino</b>	<b>Black or African American</b>
1 – Low SES	30%	21%	39%	60%
2 – Average/Middle SES	38%	41%	34%	33%
3 – High SES	32%	38%	27%	7%

Among members who identified as White, 21 percent are in the low SES category and 38 percent are in the high SES category. Among members who identified as Black or African American, 60 percent are in the low SES category and 7 percent are in the high SES category. Among



members who identified as Hispanic or Latino, 39 percent are in the low SES category and 27 percent are in the high SES category.

#### Differences in Characteristics Between Traditional Corps & FEMA Corps

Of the 1,252 participants in the treatment group, 81 percent began their service in Traditional Corps and 19 percent in FEMA Corps. The characteristics of both groups were similar, with the following notable differences in age, gender, education, and employment activity:

- FEMA Corps members were older, with an average age of 22 compared to 21 for Traditional Corps members.
- A higher percentage of FEMA Corps members identified as male, at 52 percent, compared to 47 percent for Traditional Corps members.
- A higher percentage of FEMA Corps members completed an associate degree or a bachelor's degree, at 41 percent, compared to 36 percent for Traditional Corps.
- A higher percentage of FEMA Corps members were motivated to serve to find a new career direction, at 81 percent, compared to 71 percent for Traditional Corps members.
- A higher percentage of FEMA Corps members believe they get to work in an office doing administrative duties, at 42 percent, compared to 5 percent for Traditional Corps members.
- The average SES is higher for Traditional Corps members (2.04) than FEMA Corps members (1.92). A higher proportion of FEMA Corps members have an SES indicator of '1,' at 35 percent, compared to Traditional Corps members at 29 percent.

#### Differences in Characteristics between Members and Comparison Participants

The matched QED design identified the comparison participants from a pool of accepted applicants who declined to serve. To estimate the causal impact of service in a QED design, comparison participants should be as similar as possible to members in terms of background characteristics and other relevant observable measures that could affect the likelihood of service as well as leadership skills. Overall, comparison participants were older, had a higher level of education, and were more likely to be employed.

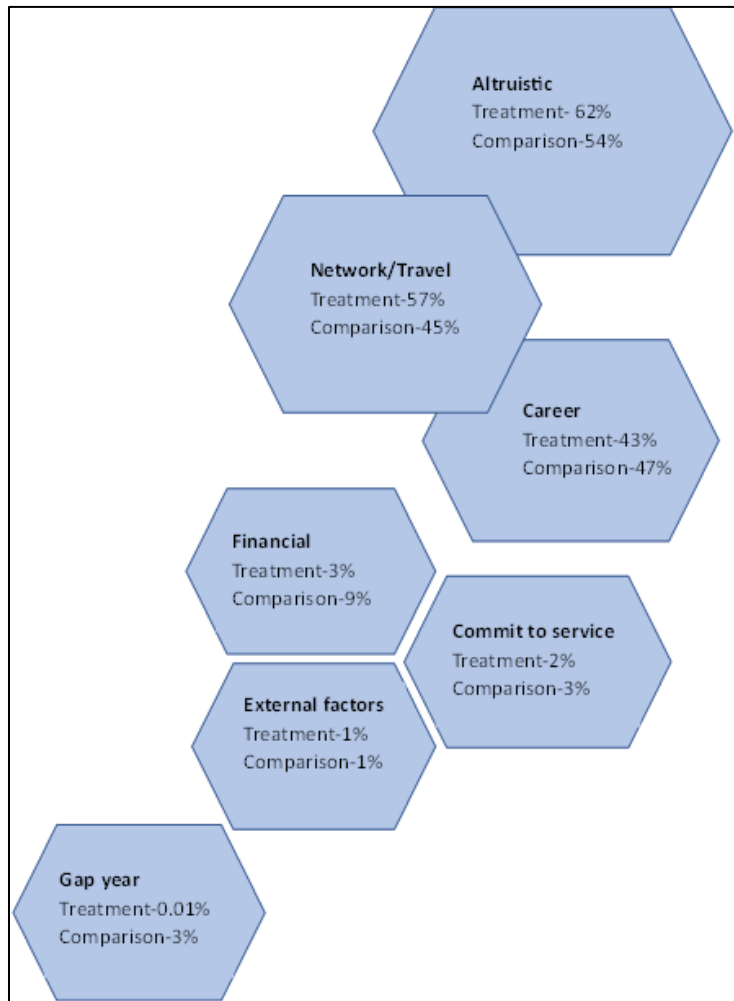
- More than half (62%) of comparison participants were at least 22-years old compared to 42 percent of members.
- A higher proportion of the comparison participants identified as female, at 67 percent, compared to 50 percent of members.
- A higher percentage of comparison participants identified as Black or African American (13%), Asian (5%), and Hispanic or Latino (28%) compared to members who identified as Black or African American (9%), Asian (4%), and Hispanic or Latino (26%).
- A higher percentage of comparison participants completed a bachelor's degree, at 55 percent, compared to 32 percent for members.
- A higher percentage of comparison participants were attending college prior to what would have been the start of their service (41% compared to 35% for members).
- Comparison participants have a slightly lower average SES score, at 1.97, compared to a 2.04 for members.

Given those differences between members and comparison participants, prior to the analysis that examines the impact of service on leadership, we identified a matched sample of members and comparison participants using propensity score. The propensity score is based on a regression model that controlled for participants' characteristics to match members to comparison participants using nearest neighbor matching. The regression model uses the matched sample and controls for baseline leadership score, and demographic characteristics.

**Motivation to apply and serve.** Consistent with prior studies, there is not just a single reason for wanting to serve, members decide to serve for more than one reason. Members who serve with AmeriCorps NCCC are both altruistic, and they desire to explore through travel and make friends, as well as seeking career and professional opportunities. Drawing on the literature of motivation for volunteering, the survey included 24 statements that members rated on a scale of “Not Relevant” to “Very Relevant.” The comparison participants were asked how important these same 24 statements

were in their decision to apply to serve. The survey included an open-ended option where members could describe their motivation in their own words. We coded the open-ended responses to determine overlap and redundancy with the initial statements. We analyzed the pattern of responses of members’ motivation to serve using a principal component analysis (PCA) technique, which allows for a meaningful interpretation of all the data by reducing the list of 24 items to a few linear combinations of the data. Each linear combination corresponds to a principal component. Appendix D describes the PCA analysis and provides a complete list of the original survey items. The first seven principal components explained 52 percent of the variance. Based on the results from the PCA, we determined there are seven types of motivation to serve among members. We then used factor analysis, a data reduction method, to interpret the seven types of motivation, as shown in Figure 3.3<sup>6</sup>.

**Figure 3.3: Types of motivation to serve members (treatment) and comparison group**



<sup>6</sup> One statement ‘I want to take a break while enrolled in college’ did not onto any of the six factor loadings, suggesting that none of the members dropped out of college to serve with AmeriCorps NCCC.

There are three primary types of motivators. The statements members frequently chose as ‘very important’ or ‘quite important’ in their decision show they are altruistic, seek opportunities to explore by traveling and making new friends, and career opportunities. Almost two thirds (62%) of members are altruistic, and more than half are looking for opportunities to travel and make new friends. Less than half (43%) are motivated for reasons related to professional and leadership opportunities. Few members have a financial reason for serving (3%), seeking experience to serve in another program (2%), external factors that affected their decision (1%), and taking a break from school (0.01%). As noted, the comparison participants were asked about their motivation to apply to serve. Like members, comparison participants were altruistic (54%), sought opportunities to explore (45%), wanted to develop career opportunities (47%) and had financial reasons (9%). The comparison participants differ from members in that a higher proportion of them had financial reasons for applying to serve, and a higher proportion of them were motivated to apply due to a gap year.

**Reasons comparison participants opt out of service.** The survey included a question that asked comparison participants their reason for declining to serve. The question included a list of response options based on prior studies as well as an open-ended option for respondents to provide details on reasons not listed or to expand on their response option. Participants may have more than one reason for opting out of service. Table 3.5 lists the percentage of comparison participants who responded ‘yes’ to each statement. Almost two-thirds (64%) found a job and started working. This is followed by 48 percent who thought they would not be earning enough money as a member, *“I didn't join NCCC because I needed to save up money for a vehicle and also I wouldn't be earning much.”* and 36 percent who stated they were going back to school, *“I decided to go back to school instead of taking another gap year.”*

More than one-third (36%) of comparison participants described their reasons for declining to serve. Out of the 201 write-in responses, 35 (17%) referenced COVID-19 as something that impacted their decision to not serve, mainly because they were not satisfied with the safety protocols AmeriCorps NCCC put in place, *“I was concerned that I would be exposed to COVID-19 during my service year,”* or they needed to stay close to their family and friends during the pandemic, *“My mother owns and runs a small business. I'm going to work part-time and up to full-time at her office until things stabilize. I would have loved to participate in NCCC, but because of the pandemic situation, I'm really needed here.”*

**Table 3.5: Reasons comparison participants declined to serve**

<b>Reason declined to serve</b>	<b>Percentage that said ‘yes’</b>
I found a job / I am working	64%
I will not be earning enough money as a NCCC member	48%
I am going back to school	36%
There were other reasons I decided not to join NCCC	30%
I am going to serve with another AmeriCorps program	27%
I need to care for a family member or close friend	12%
NCCC has too much structure / too strict	11%
I have difficulty doing some activities because of a physical, mental, or emotional condition	10%
I am concerned about my ability to do some of the physical activities	9%
I am going to serve with Peace Corps	3%
I am joining the military	1%

Sample size: 989

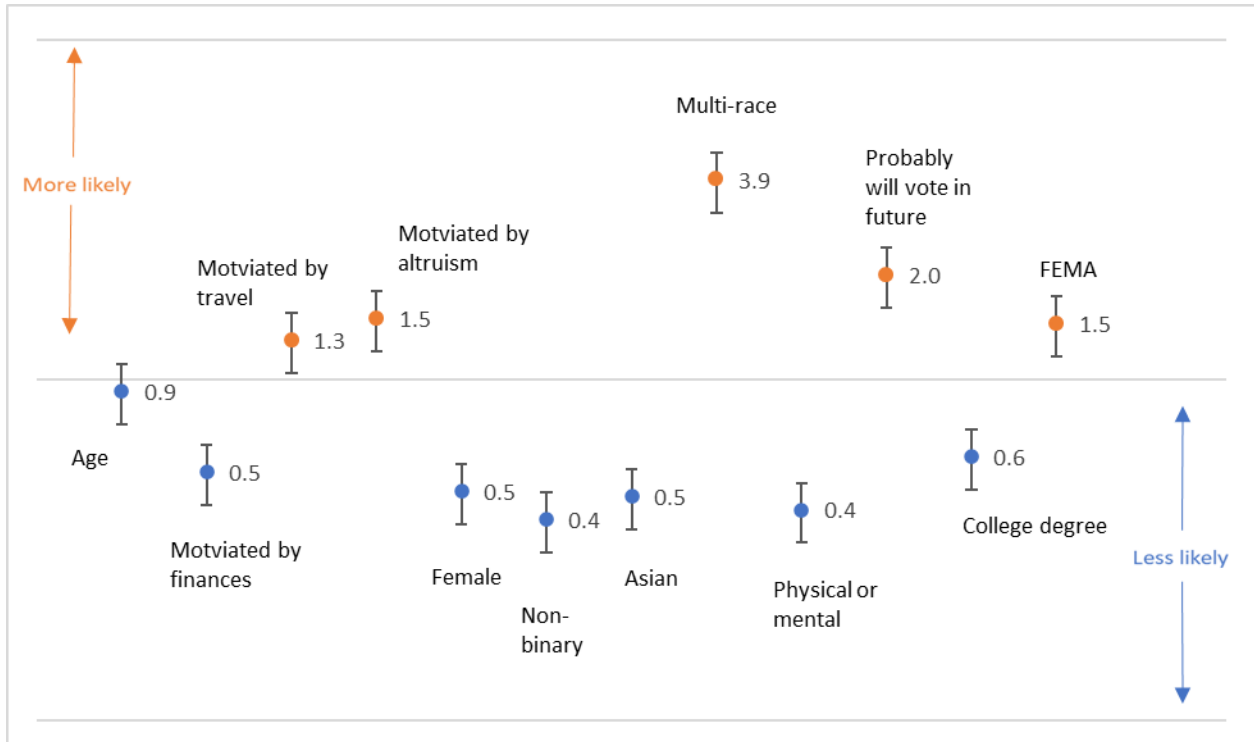
A small proportion of comparison participants expressed concerns about the relocation process and costs, as eight respondents (4%) indicated that relocating to another state is financially difficult. The perception of the health insurance AmeriCorps NCCC provided was a factor for a minority of participants as well (N = 4; 2%).

**Factors contributing to the likelihood to serve.** We estimated a multi-level regression model to investigate which factors are associated with the likelihood of opting into service upon acceptance. The model controlled for SES, age, education, race and ethnicity (e.g., Asian, Black or African American, Hispanic or Latino, White), gender, physical or mental impairment, prior volunteer experience, likelihood of voting in future elections, and motivation to serve; we considered the top three types of motivations: 1) altruistic, 2) network/travel and 3) self-development and career.

Figure 3.4 displays the odds ratio from the regression estimates that are statistically significant. Appendix E presents the full results from the regression model. The model indicates that motivation, gender, race and ethnicity, having a college degree, and a physical or mental impairment are significantly associated with the odds of opting into service. All else equal, female and non-binary applicants have significantly lower odds of opting into service. Applicants who identify as Asian have a significantly lower odds of opting into service, whereas applicants who identify as multi-race have significantly higher odds of opting into service. Once other factors are accounted for, the likelihood of opting into service for applicants who identify as Black or African American, and Hispanic or Latino are not significantly different than that of applicants who identify as White.

Motivation influences the decision to serve. Applicants who are altruistic or seek opportunities to travel and make friends have significantly higher odds of opting into service, whereas financial reasons for applying (e.g., want to earn money/needed to get a job, earn money to pay off student or for future college tuition, want stable housing and other benefits) significantly reduces the odds of opting into service.

Figure 3.4: Factors contributing to the odds of opting into service



Note: The chart illustrates odds ratio with statistically significant regression estimates. Appendix E presents the full results from the regression model

## Chapter 4 Impact of Service on Leadership Skills

This chapter discusses the findings for the following research questions:

1. Does service impact members' leadership skills (professional skills, life skills, teamwork, and civic engagement)?
2. What is the growth trajectory of members' leadership skills through service and beyond?

A latent growth curve analysis (LGCA) model estimates the causal impacts of service with AmeriCorps NCCC using data from the three time periods (baseline, first-follow up, and second follow up). The model uses a matched sample of members and comparison participants using propensity score. The propensity score is based on a regression model that controlled for participant's characteristics, then members and comparison participants are matched on their propensity score using nearest neighbor. LGCA measures change and determines the group's growth trajectory. The LGCA model measures the growth trajectory in leadership skills from baseline through one year post service among members compared to comparison participants, controlling for gender, race and ethnicity, SES, age, and education level. We then use the regression results to estimate the average change of each leadership score at each time point. Appendix G describes the model and presents the full regression results.

**Measures of leadership.** All three surveys included the same questions that measure leadership skills. A principal component analysis (PCA), a technique of dimensionality reduction, identified relevant scale items to create constructs of leadership. The survey included 50 Likert scale questions used to measure leadership skills. Each response is based on a scale of 1 (no confidence at all) to 5 (complete confidence). Appendix F describes the PCA analysis and provides a complete list of the original survey items. Based on the PCA results, seven types of leadership skills emerged. For each type, we computed an average composite score. A higher average score is interpreted to mean the respondent has greater confidence in that leadership skill.

- Professional skills
- Self-efficacy and life skills
- Solve community problems
- Communication skills
- Collaborative practices
- Appreciation for varied perspectives
- Community and civic efficacy

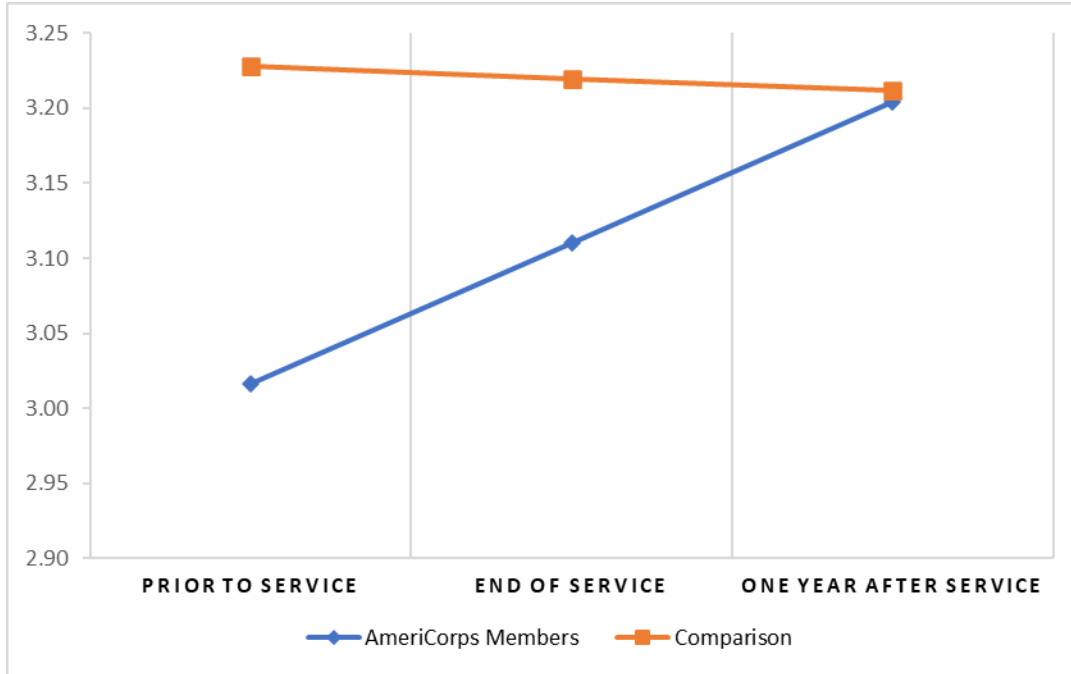
### Professional Skills

Professional skills consists of six statements that measure specific work-related abilities such as the respondent gathers and analyzes information, manages projects, and completes assigned tasks. Each statement is rated on a scale of 'no confidence' to 'complete confidence.'

AmeriCorps members have a positive trajectory in their professional skills compared to those who had not served. At the start of service, comparison participants had higher levels of confidence in their professional skills than incoming members by an estimated 0.21 points. Over time, members have a faster growth trajectory, which reduced the gap between the two groups by

0.10 points each period (Figure 4.1). All else equal, the regression results indicate that AmeriCorps members are projected to maintain their growth trajectory and surpass comparison participants in professional skills by two years after completing service.

**Figure 4.1 AmeriCorps members closed the gap in professional skills:**



Members participate in service projects that offer many opportunities to develop and strengthen technical (e.g., professional certifications, construction skills) and soft skills (e.g., time management, networking) that align with strengthening professional skills. Consequently, members experience an increase in confidence. Focus groups and in-depth interviews with members, team leaders, sponsors, and staff revealed the different professional skills members acquired through the service experience, which include both technical skills and soft skills. The most common was construction-related skills, followed by skills related to the use of computers, technology, and specific software platforms. As one member explained,

*“I’m able to work lots of machinery now. I have confidence in things like forklifts and things like that, which I never would have imagined. I’m able to work most tools. Beforehand I didn’t really know much about even like the difference between a screw and a nail!”*

Another common technical skill area where members gained through their service experiences was environmentally focused skills, such as trail building and being trained to use different tools.

Additionally, members gained “soft” skills and experiences related to their own career development, including resume writing, networking, interviewing, and gaining insights into various career types. A team leader explained,

*“Just getting to meet so many different people in their fields and seeing how they interact and how they move through their jobs and their careers – it was really helpful. I’ve gotten to see a lot of different environments and what it looks like to be a professional in many different fields.”*

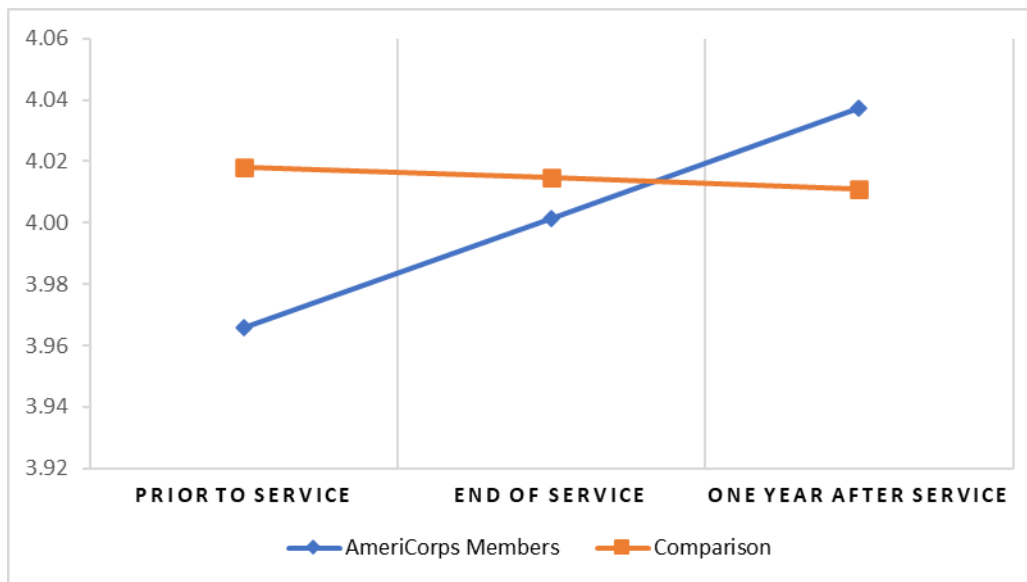
In the post service survey, 93 percent of members agreed that service helped them gain professional skills and helped build their resumes, and 65 percent of members agreed that service helped them understand the next steps needed for their career and professional goals.

### Self-Efficacy and Life Skills

Self-efficacy and life skills measure how strongly participants agreed or disagreed (1= strongly disagree, 5 = strongly agree) with seven statements broadly covering the ability to deal with problems and overcome unexpected situations. Some of the statements reflect perceived ability to exert control over own behavior and environment.

Prior to service, AmeriCorps members had an average self-efficacy and life skills score that was lower than comparison participants. Figure 4.2 shows a faster growth trajectory for AmeriCorps members across the three time periods. By one year post service, AmeriCorps members felt strongly about their coping abilities to handle unforeseen situations; by contrast, the expected self-efficacy and life skills score remained essentially flat among comparison participants.

**Figure 4.2: AmeriCorps members closed the self-efficacy and life skills gap**



AmeriCorps members have an expected increase of 0.036 points each period. Although comparison participants started off more confident, they lost confidence in their self-efficacy over time. The comparison participants have a slower growth rate of 0.04 points than members, meaning the gap between the two groups is reduced by 0.04 points each period. At one year post service, members have higher average life skills scores than their counterparts.

In interviews and focus groups, members described examples such as interpersonal relationship building, personal growth, resilience and adaptability, and time management. In those conversations, members frequently reflected on how their service affected their personal growth, such as humility, self-awareness, and courage. One member explained,

*“Learning that I don’t have to be right in every scenario.”* Another shared, *“I definitely learned how to be a more assertive individual.”* Finally, another member said, *“I was able to better cope*



*with my anxieties. I was able to try and adapt when something wouldn't go my way or the schedule would change or something bad would happen."*

They also reflected on how they created and maintained interpersonal relationships and felt more resilient and adaptable due to the service experience. As one member shared,

*"Being adaptable and having a growth mindset – I learned in NCCC and will apply in the future,"* and another shared, *"I'm way more confident in my ability to act in resiliency and be super flexible and super adaptable."*

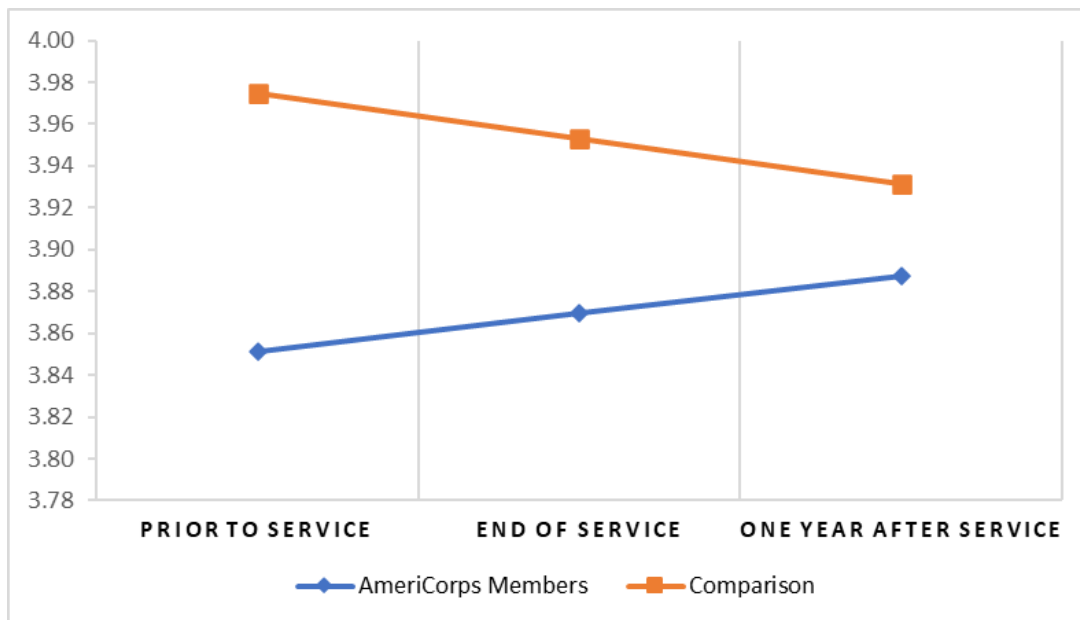
Members' responses to survey questions reflect increased confidence in the ability to endure difficult situations. From the survey responses, 75 percent of members agreed they did things they never thought they could do. Members reported more confidence in their overall leadership abilities, with 85 percent of members agreeing that service helped them improve their leadership skills. Some life skills members acquired included time management and personal responsibility; conflict resolution; budgeting; setting boundaries; patience; skills related to cooking and nutrition; and home maintenance. Additionally, 75 percent of members agreed service helped them to further understand their own personal goals.

### Ability to Solve Community Problems

The response scale for the eight statements that comprise solving community problem ranges from 1 ('I definitely could not do this') to 5 ('I definitely could do this'). Some examples of these statements are organizing and running a meeting, expressing views in front of a group of people, and contacting people to get their help.

AmeriCorps members' confidence in their ability to solve community problems increased during the term of service by 0.018 points at each time period (Figure 4.3). The increase in average score is due to a greater proportion of members responding to more statements that they could 'definitely' solve community problems.

**Figure 4.3: AmeriCorps members gained skills in solving community problems**



The estimated baseline score was 0.12 points higher for comparison participants, but they had a slower growth trajectory of 0.021 points per period relative to members. The gap between members and comparison participants shrank by 0.04 points each period; however, the gap remained.

During interviews and focus groups, members and staff described how service is relevant to problem solving abilities. Members had the opportunity to practice problem solving skills by leading volunteers and managing other members. This was especially true for team leaders but was also described as a benefit for other members, including members who assumed the role of assistant team leaders. Respondents described exercising patience and empathy and learning to earn respect from those they managed.

The qualitative interview data revealed that members acquired skills in conflict resolution, persuasion and influence, and strategic thinking, as well as stating,

*“I feel just really confident in my ability to manage conflicts, to listen to other people, and to kind of advocate for people.”*

Another explained skills acquired in motivating team members: *“understanding people, what makes them tick, how to get them motivated, how to get them to do what you need them to do.”*

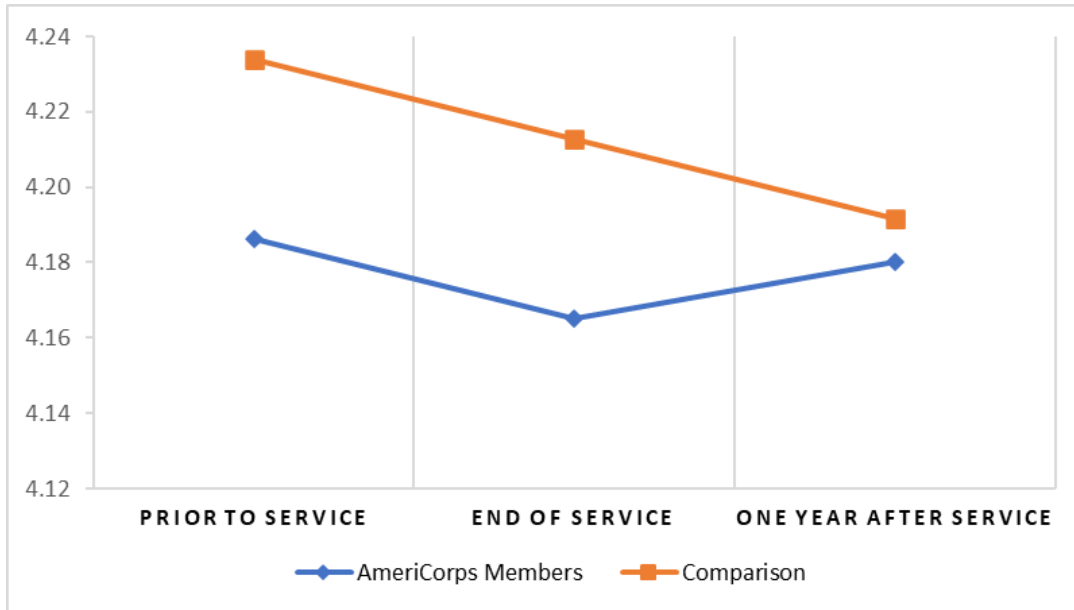
The conversations revealed that members applied their leadership skills rather than simply learning about them in a training or classroom setting. As one staff member explained,

*“Other ways that members can gain leadership is directly on their project sites, whether that’s leading their teammates on something that they’re more familiar with or something that they picked up quickly because the site supervisor can’t lead everyone and everything, or whether it’s leading a group of volunteers that showed up for the day.”*

### Communication Skills

Communication skills touch upon communication style, listening abilities, and skills in conflict resolution through dialogue. There were six statements rated on a scale of how much they agree or disagree (1 = strongly disagree, 5 = strongly agree). Members self-reported responses lagged behind comparison group participants in communication skills (Figure 4.4). At the end of service, however, both groups’ average scores decreased, with members reporting a lower average score below that of the comparison group. The interviews and focus groups provide insights to unfamiliar challenging situations that members faced during service that may have required developing, adjusting to, and learning different communication strategies. An additional context is that members who were in service in the early phase of the pandemic served when most or all communication channels shifted to virtual modes. These changes may have exacerbated communication challenges to complete project assignments. Comparison participants have a slower growth trajectory in communication skills whereas members have a faster growth trajectory (Figure 5.4). Despite losing ground during service, the trajectory shows members gained confidence showing a faster growth trajectory in their perceived communication skills within a year post service.

**Figure 4.4: AmeriCorps members were less confident in their ability to communicate but gained confidence within one year post service**



In the interview and focus group discussions, members described multiple facets of communication with internal organizations, the sponsors and sponsor organizations, and fellow teammates. Members perceived the communication structures and hierarchies within AmeriCorps as unclear or overly complicated, as illustrated by this quote from a member:

*“To get the information for the next person in the chain of command, you had to get it from the person before them....To get our unit leader’s information to complain about our team leader, we’d ask our team leader for it.”*

Members sometimes faced challenging interpersonal communication, often as a result of personal conflict due to differing communication styles. A member reported,

*“Some people don’t like it being directly approached. And I’m a very direct person. And so, um, I wish I kind of understood how they worked better without feeling I was fighting to get to know them the entire year. So, yeah, I guess just having more ways of communication under my belt I feel like in this program would have been nice.”*

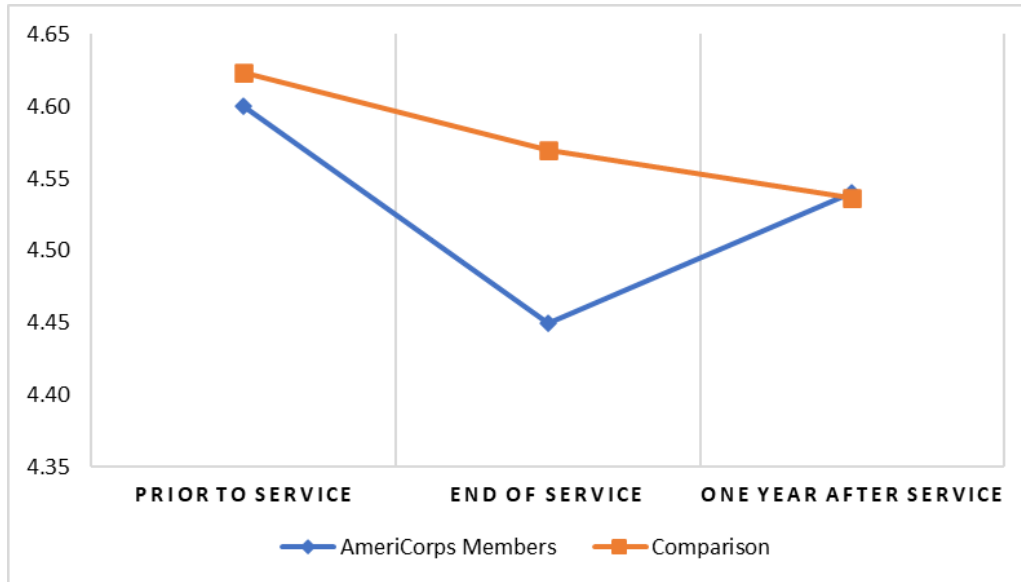
Additionally, members described the lack of clear communication when dealing with internal and external organizations, such as interactions between unit leaders (internally) and interactions between AmeriCorps and sponsoring organizations (externally).

### Collaborative Practices

Collaboration is an important skill in the workplace and socially. The collaboration measure is based on seven statements on abilities to work with people from different backgrounds and diverse viewpoints, with an emphasis on encouraging different viewpoints and participation of all people. The response to each statement is on a scale of one to five (where 1 = strongly disagree, and 5 = strongly agree). Figure 4.5 shows members and comparison participants started with similar average scores in collaborative practices. At the end of service, both groups had a slow growth trajectory, with members experiencing a much slower growth than comparison

participants. Post service, members demonstrated a faster growth trajectory relative to comparison participants, with an expected increase of 0.124 points per period.

**Figure 4.5: AmeriCorps members perceived they were less confident in their ability to collaborate, but closed the gap within one year post service**



The data from the focus groups and interviews provide some insights into the factors that may have affected the slower pace of change in perceived confidence to collaborate. This allowed for a more nuanced look into the attitudes and behaviors of members when put into group situations. The focus group conversations revealed examples of members describing issues that arose as a byproduct of living in a team environment, such as feelings of having no work/life separation, personal conflict, issues with sharing space with others, and feelings of disconnect from fellow members. Most prevalent among these was the feeling that the separation between their work and personal lives was nonexistent, leaving respondents feeling this was a detriment to the program. One member explained,

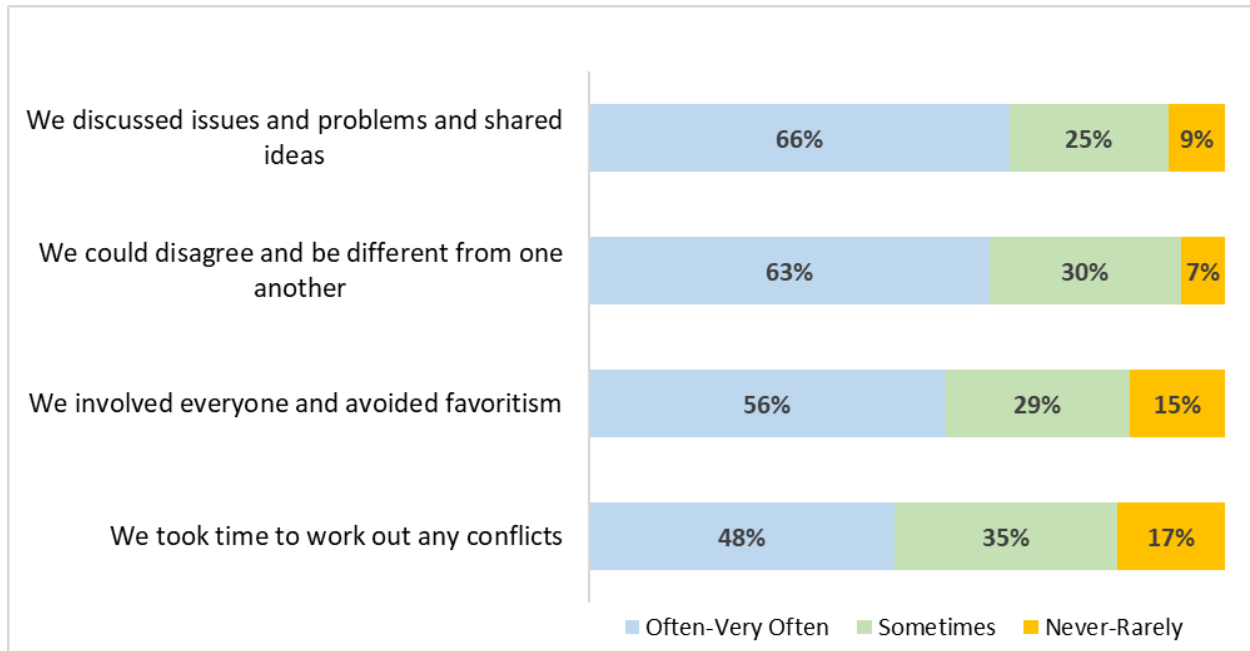
*“...it’s not like you’re saying hello to your team in the morning and then goodbye to them after 5:00. You’re living with them. And their problems are now your problems. Whether they know they have a problem or not, it is now your problem. And so, it’s not for everybody.”*

Members faced personal conflict while working and living in a team environment, including issues with detachment, unresolved team conflict, and team members not meshing. Additionally, respondents described personal space as a barrier encountered due to living in a team environment. One team leader discussed,

*“Some people aren’t built for traveling that often, especially when you have to live in a very like small amount of personal rooms, which just people aren’t that comfortable in. Some people like the creature comfort. I think also the whole team living, some people are very independent, and they don’t like all those rules and all those – the same people for 10 months just is not their thing.”*

Despite the reported issues of conflict in the team settings, 74 percent of members agreed that they felt accepted by their fellow teammates, and 61 percent of members felt valued by the people in their team. Figure 4.6 showcases different aspects of the team dynamics members faced. More than 60 percent of members reported that they often or very often discussed problems and shared ideas with their teams. It was also reported that most teams involved all members and were able to avoid favoritism; however, 15 percent of members surveyed stated that their teams rarely or never involved everyone. Additionally, 17 percent of members were on teams that rarely took time to work out conflicts.

**Figure 4.6: AmeriCorps NCCC team dynamics**

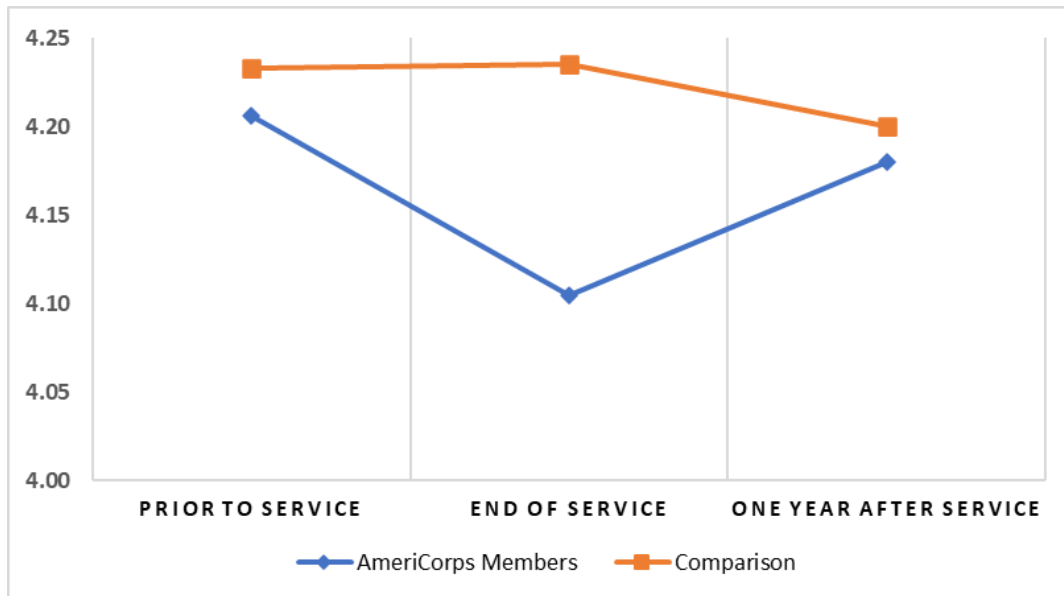


Sample size is 758

### Appreciation for Varied Perspectives

The measure of appreciation for varied perspectives is similar to previous studies (Jastrzab et al., 2004) and is based on responses to five statements on how often the individual engages in understanding other people’s ideas and opinions; encourages the participation of other people; encourages different points of view; and considers all points of view or possible options before forming an opinion or making a decision. This leadership skill complements communication skills and collaborative work practices skills. Prior to service, there were no differences between members and comparison participants, with both registering an average score of 4.30. At the end of the term of service, the average score for comparison participants increased slightly, while AmeriCorps members had a slower trajectory that widened the gap. Post service, members have a stronger growth trajectory relative to comparison participants. The stronger growth trajectory yields an increase in the frequency with which members reported engaging in activities that demonstrate appreciation of varied perspectives, closing the gap with comparison participants.

**Figure 4.7: AmeriCorps members perceived they were less engaged in activities that demonstrate appreciation of varied perspectives during service, but gained confidence post service to close the gap**



During the term of service, members are exposed to different people. Almost all members agree (96%) that their service experience gave them the opportunity to interact with people who were different from them. One member highlighted,

*“I mean I grew up in, ha, a suburb in Alabama. So, I wasn’t around a lot of diversity. So, I was immersed in AmeriCorps. And everybody was super different from all over the country. And I’ve been able to apply that at home a lot because I see things differently. I – AmeriCorps really opened my eyes to all the differences we have and how it works together, it coincides. Um, and I’ve been able to apply that in the workplace as well. And just realize like, living with so many different people, um, you do need to watch your words and you do need to be mindful and respectful. And that’s also been a huge role in my life after AmeriCorps.”*

Through their service, 89 percent of members agreed they were exposed to new ideas and ways of seeing the world, and 77 percent confirmed they re-examined their own beliefs and attitudes about other people. Living and serving in different communities can bring both positive and negative experiences in terms of diversity. One member recalled,

*“You know, it’s – and because unfortunately, for my team, thank goodness it wasn’t within the team, but we did experience some very racist things going on throughout the year. Um, not our sponsors, but, uh, civilians that we were serving. And, you know, because of that, they said they wish they would have had better training in like how the team could help members who were attacked in that manner.”*

The pattern in members’ appreciation for varied perspectives during and post service is supported by empirical evidence (Epstein, 2009; Frumkin et al., 2009; Hudson-Flege, 2018; Jastrzab et al., 2004;). As with prior studies, there may be short-term disillusionment with the concept of working in diverse groups due to living and working in close proximity to their teammates, which may result in interpersonal conflicts, which then restrains the ability for short-term growth. Post service, these challenges may have facilitated long-term positive behavior and

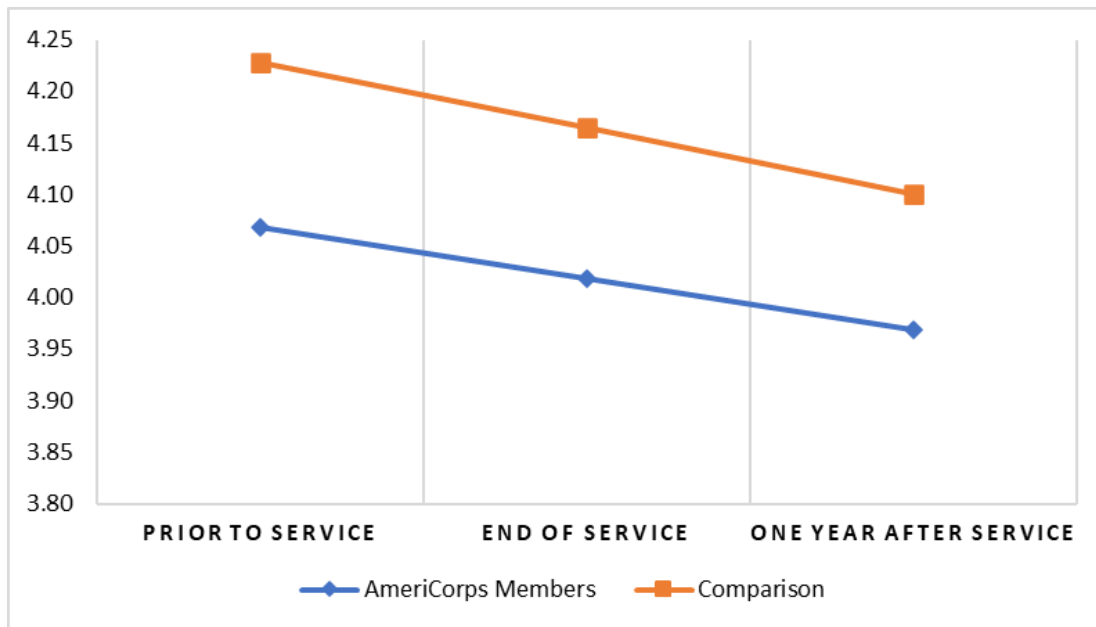
engaging in activities that more frequently appreciate varied perspectives. Similar to the qualitative data Epstein (2009) analyzed, the themes that emerged from the focus groups and interviews with members suggest that the members find benefits to the diversity of their teams, despite the short-term challenges they experienced.

### Community and Civic Efficacy

The community and civic efficacy measure is based on how strongly participants agreed or disagreed (1= strongly disagree, 5 = strongly agree) with five statements about whether they feel obligated to contribute to their communities, if they feel they can make a difference in their communities, and if they currently are or are planning to find the time to contribute to their communities in a positive manner.

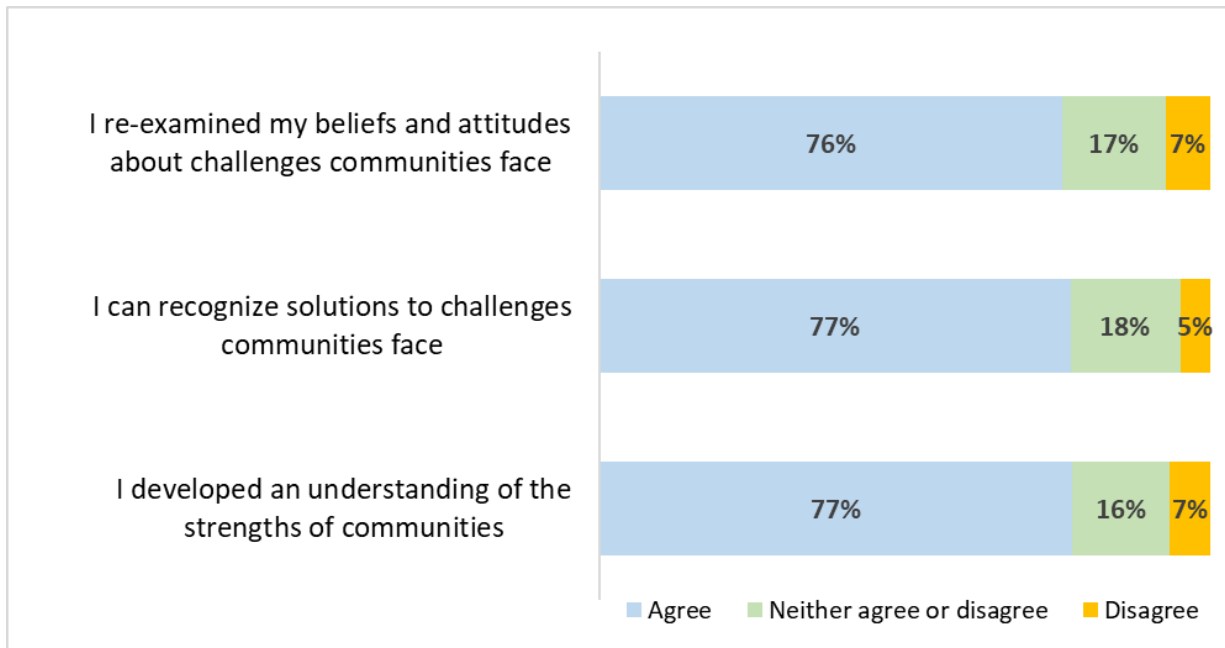
Prior to service, comparison participants indicated higher levels of community and civic efficacy than AmeriCorps members, an estimated 0.16 points higher. Both comparison participants and AmeriCorps members have a downward trajectory in community and civic efficacy. AmeriCorps members' trajectory occurred at a slower rate than comparison participants.

**Figure 4.8: AmeriCorps members' sense of community and civic efficacy decreased**



Exploring members' responses reveals how the service experience positively impacted community and civic efficacy. Overall, members demonstrated a deeper understanding of community engagement. Figure 4.9 shows that nearly 80 percent of members agreed that they re-examined their beliefs about community challenges and are able to recognize solutions to community challenges.

**Figure 4.9: AmeriCorps members showed deep understanding of community challenges**



Sample size is 760

As one member said, *“It definitely taught me how to be more involved and basically to just come up with solutions to problems that are in the community.”* Another member said, *“It taught me to think critically about the community and the status quo, and it’s helped me to have an even more open mind....That taught me how to get involved with the community because once I got back from AmeriCorps I started looking into volunteer organizations.”*

Unlike life skills and professional skills, the focus group and interview questions did not explicitly ask members to discuss how they engage with their community post service. In the data, we found instances where members described the types of skills needed for community engagement. There are four areas in which members’ community and civic efficacy might have been affected by their service experience: general exposure to various types of and the importance of service; skills and awareness of volunteerism; awareness of political processes; and nonprofit management. One member explained,

*“We learned a little more about the specific nonprofit that we were working with and what they do and what a community agency is. I’m interested in kind of the social work aspect of community so being able to learn how the nonprofit world works a little bit....figuring out how they maneuver those agencies, those skills were important.”*

#### Comparability of Leadership Skills Between Traditional Corps and FEMA Corps

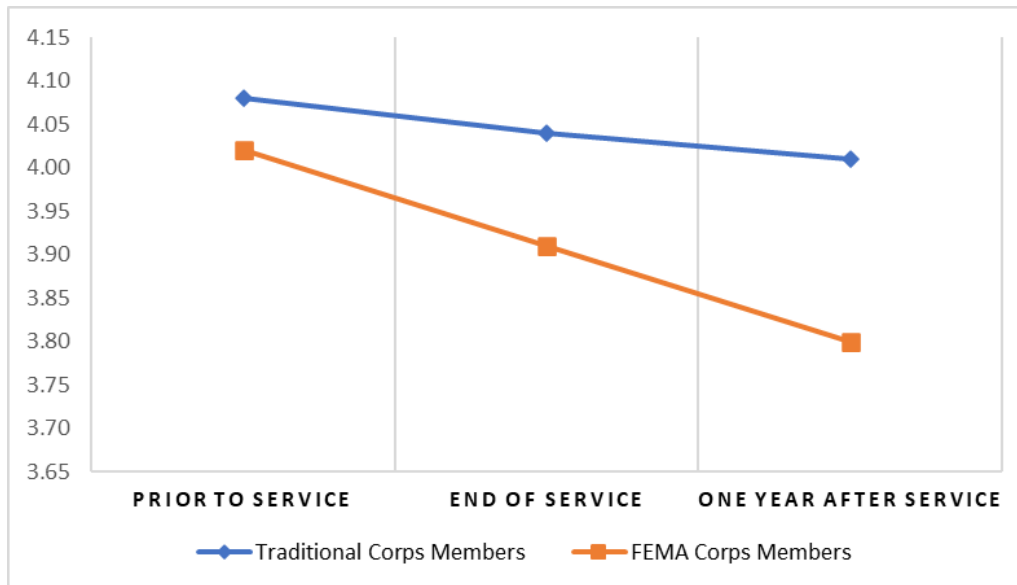
Traditional Corps and FEMA Corps differ in the length of the term of service and the type of projects. FEMA Corps members’ assignments include emergency management and disaster response and recovery efforts. The sample size for the third survey consists of 617 members, of which 504 are Traditional Corps members, and 113 are FEMA Corps members. Sample sizes are proportional to the size of the two programs. We conducted separate analysis for Traditional Corps and FEMA Corps samples using the same statistical methods to examine whether there are



differences in leadership skills between the two programs given term length and program type differences.

The biggest differences between Traditional Corps and FEMA Corps members are seen in their community and civic efficacy levels as seen in Figure 4.10. While both Traditional Corps and FEMA Corps members show a slower trajectory in community and civic efficacy, FEMA Corps members' trajectory was slower at a rate of 0.12 compared to 0.04 for Traditional Corps.

**Figure 4.10: FEMA and Traditional community efficacy**



Interview and focus group respondents shared insights about the FEMA Corps training and service that supported leadership skills. Specifically, the two ways that FEMA Corps members thought their training facilitated leadership skills were clarity of expectations and direct relevance to the service experience. FEMA Corps members also shared ways in which their training provided opportunities for professional development; one FEMA Corps team leader said,

*“Some of the things that really helped them [members] out were taking some sort of classes in terms of making sure that they appropriately empathize with what they’re [evacuees] going through and just socializing with these evacuees because a lot of them are coming from traumatic situations.”*

FEMA Corps training provided awareness of specific resources, was highly engaging and hands-on, and provided opportunities to acquire certificates. All three were beneficial for leadership skills. FEMA Corps members highly valued the hands-on experience because it provides the benefit of practicing the use of tools and professional skills in real-world settings. One member explained,

*“The tangible sort of computer skills I gained working regularly in things like Excel and Microsoft Power BI...Those were opportunities offered through FEMA that I was able to use and learn from.”*

FEMA Corps members report that working with sponsors who provided direct opportunities to practice their skills and offered mentorship and support were key to professional and leadership skills.

### Factors affecting leadership skills

AmeriCorps members named many facilitators and barriers to developing leadership skills, summarized in Table 4.1.

**Table 4.1: Factors that impacted AmeriCorps members’ leadership skill development**

Facilitators	Barriers
In-depth training	Insufficient training
Practice opportunities	Limited hands-on experiences
Mentorship	Lack of support from administration or sponsor
Positive team leader experience	Team conflicts
Receiving feedback	Lack of clarity
Team building	Poor diversity/sexual harassment training
Development of coping strategies	Lack of interactivity
Clear communication	Unprepared sponsors
Clarity/explanation on purpose of work	Disconnect between development and output
Adaptability/flexibility	Dealing with the bureaucracy of NCCC

### Facilitators of leadership skills

Members shared examples of ways in which the training helped to prepare them for their service experience:

*“I think all of the training that was about the specific project processes that we were going to be doing were really good. It was good to be able to have some kind of idea of how the year was going to look and how each project was going.”*

They also built interpersonal skills and conflict resolution skills. One member recalled,

*“I think the biggest, the most useful trainings that I got...was definitely conflict management.”*

Training also strengthened teamwork:

*“I think the most helpful training was the Hands of Peace training...They just told you about how to communicate with others, team building exercises.”*

Members frequently highlighted the benefits of hands-on experiences in developing skills. Members focused on opportunities to apply professional skills and techniques. A Traditional Corps team leader explained,

*“I think anytime the sponsor is willing to show us something hands-on or make an example of something in real-time it was really helpful for my members, whether that was how to hammer a nail better when I was at my Habitat site or how to deal with the customer better when we were doing taxes.”*

Interview and focus group respondents described the importance of personal support and mentorship provided to members as a facilitator of leadership skills. Respondents emphasized the value of supportive sponsors. As one Traditional Corps member shared,

*“I think the quality of the sponsor is huge...The foodbank we worked at really took an interest in developing our skills in the food warehouse and making sure we understood why we were doing what we were doing and emphasized if we had any questions to speak up...Definitely the quality of the sponsors plays a big role in what skills we can develop.”*

Opportunities to converse with professionals in fields of interest were seen as a major benefit to members:

*“It was very good for me to speak with sponsors who’ve had that kind of experience as well as staff who can have the higher-end discussion that I’m looking for.”*

Members also shared ways in which team leaders had a positive impact on member skill development. Good team leaders balanced their role as an authority figure with empathy for and alignment with member experiences. As one Traditional Corps member shared,

*“My second team leader has taken a lot more time to make sure that we’re doing all right as people and not just getting the most work done possible.”*

Members also described good team leaders as providing mentorship and prioritizing professional development among their members:

*“Sometimes you have team leaders who are amazing at delegating, empowering, and being able to give up that control so that their members can gain that leadership experience.”*

### Barriers to leadership skills

AmeriCorps members who participated in the interview and focus group described frustrations and challenges related to training. Members described a need for training in specific topical areas for skill building and experience. This included a desire for training on:

1. Specific AmeriCorps resources and tools that members might use during their service experience;

*“I would have liked having some more training on member management and helping support people...The situations I dealt with ended up being a lot more complex than that [what team leaders were trained on.]” – Traditional program team leader*

2. Conflict resolution;

*“Being able to handle those conflict situations or high conflict living arrangements in a way that is sustainable in the long-term wouldn’t been really helpful. I would’ve liked to see a bit more focus on that.”*

3. Mental health;

*“We did need to have more training when it came to mental health issues and some more specific examples of how to deal with those situations. A lot of our training had to do with more punitive behavioral management issues, which works when you have 18-year-olds who are*

*blatantly breaking policies and procedures but is a lot less applicable when you have members who have mental health crises or are dealing with more emotional issues.”*

#### 4. Diversity

*“Instead of just covering both areas rather than rules and policies...members definitely could have used further help with communication and understanding diversity and other people.”*

Beyond training that was described as entirely missing, some existing training was described as unsatisfactory in its current form. Members mentioned the training on diversity and sexual harassment as inadequate, outdated, and even inappropriate.

*“We had one training that was like an hour on how to not sexually assault somebody, and it’s clear that they don’t take it very seriously, and that’s become an issue multiple times and not just on our campus.”*

AmeriCorps members described the Corps Training Institute (CTI) as “information overload” and lacking in interactivity or hands-on practice. Finally, members highlighted a desire for more training on interpersonal skills and team-building exercises as a Traditional Corps team leader shared,

*“I think bringing in expert facilitators and doing structured team-building activities and activities that are really focused on building connections; more of active learning and not listening so much.”*

In some cases, members and team leaders described limited hands-on experience as a barrier to skills development. Interview and focus group respondents described a lack of variety in their service experiences as a barrier to skill development:

*“Sometimes there’s a tradeoff between doing that [getting things done] and developing the members’ skills because sometimes it’s like, okay, if we put this person who’s already good at this specific task on this task all the time they can get more done, but sometimes that comes at the expense of this one person who needs to develop that skill but might be a little slower and might be less productive.”*

Interview and focus group respondents described a lack of support – from sponsors, NCCC staff, and team members/leaders – as a major barrier to skill development. This manifested as a general sense of disconnection, which heightened pressures on team leaders as illustrated by this quote from a team leader:

*“I wish there was some more support for the members. My members had me, but they felt kind of distant from our unit leader. I felt like when they had issues, when I couldn’t solve them, they were just at a loss.... I wish there were just some more resources in general specifically for the members.”*

Respondents noted a lack of structure designed to foster a supportive system:

*“Unit leaders don’t have to do one-on-ones.”*

*“It might be nice to have like a housing sponsor debrief.”*

*“The biggest impact for the team was that – from comparing the pre-pandemic to the post-pandemic team – there was much less interaction with the staff as a group. They didn’t develop relationships with any staff people.”*

Interview and focus group respondents highlighted negative impacts that NCCC team leaders sometimes had on their members’ skill development and well-being. When members and team leaders had a contentious relationship, this made the service experience far more challenging:

*“With the members that I had on my team, I don’t know if I helped them at all. I tried and they kind of like rejected the ideas.” “I think that the challenge of working with the team that I was with was that I didn’t receive a lot of feedback that was very constructive. It was very critical.” “I know another team member left because of their mental health and then they weren’t feeling connected as well. They weren’t connecting with the team lead.”*

**Adapting Under COVID-19.** AmeriCorps members were on emergency leave from March 2020 through June 2020 due to the COVID19 pandemic. When they resumed service, NCCC deployed Traditional Corps and FEMA Corps members to projects in response to the pandemic. This section explores the impact COVID-19 had on members, sponsors, and the program.

#### Impact of COVID-19 on AmeriCorps members

Participants in the interview and focus group described how the pandemic affected their overall service experience. As illustrated in Figure 4.11, members, NCCC staff, and sponsors described the primary areas in which the COVID-19 pandemic impacted their service, such as skill development, team impact, and sponsor impact, while also describing detailed impacts on socialization, training, growth opportunities, nature of project work, programmatic adjustments during their service year, AmeriCorps NCCC policies, and interaction with communities served.

**Figure 4.11 Impact of COVID-19**



The most common impact was a reduction in opportunities related to socialization with peers, communities, sponsors, and program administration. As one member explained,

*“Most teams were separated and so they couldn’t interact with other people or hear different options or answer questions.”*

The pandemic decreased personal, professional, and leadership growth opportunities for members. A shortage of volunteers during the pandemic impacted the projects and the nature of the work for members, which led to fewer opportunities to build skills. One NCCC staff member discussed,

*“Especially this year, the pandemic where a lot of our sponsors were without volunteers for almost a full year and were really behind on the work, probably contributed more to our members just getting the work done, than taking that time to have that development.”*

One member offered further support for this by stating,

*“I think [the pandemic] has impacted our service experience by – because I feel like we're doing a lot of work that's not as beneficial to gain skills. It's more like organizing stuff, cleaning a shed – at a state park, we've cleaned the shed and organized crafts and sanitize it because they don't*

*have as many workers. So, we're basically considered free workers in a way on very easy tasks and not actually tasks to learn."*

Covid-19 impacted the accessibility of sponsor organizations, which led to abbreviated trainings, virtual trainings, unengaging trainings, and canceled trainings. Communication between sponsors and AmeriCorps NCCC teams became more difficult as well due to the lack of in-person meetings. Respondents also described the impact the pandemic and the Covid rules and regulations implemented by AmeriCorps had on their abilities to interact with the communities they served, causing them to feel disconnected from their work.

Members had to adapt to programmatic adjustments ranging from program structure to length of service as well as changes in policies, including COVID restrictions. One respondent recalled,

*"They had to do a lot of virtual projects. They just sat in the same room all day every day. They never really got to go out and do things."*

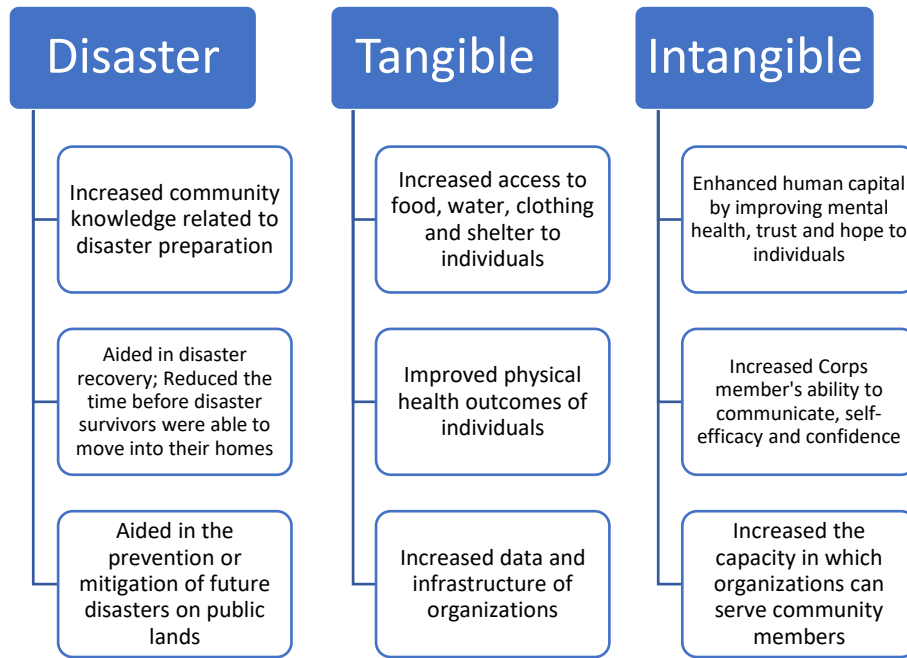
Finally, members cited health concerns related to the pandemic and issues surrounding quarantining as negative impacts of Covid-19 on their service experiences.

## **Chapter 5 Service Experience and Leadership Skills**

This chapter discusses findings from the third research question: How do members' service project assignments contribute to their leadership skills? The results are from a multi-level logistic regression model that accounts for the clustering of members within region and focuses on the association between service projects and leadership skills, controlling for member characteristics.

The measures on the characteristics of the service projects are from the AmeriCorps NCCC Service Projects Database (SPD), which contains information on more than 6,7000 service projects completed between 2012 and 2022. The SPD is the primary source of information describing the activities of the service projects as well as the impact on the individuals, organizations, and communities. The variables in the SPD are issue areas, project accomplishments, project characteristics, disaster type (when applicable), type of sponsor, and sponsor and site locations. Each project has narrative texts that reflect the team's perceptions of the project's impact and what the team gained by working on the project. These codes identify the primary types of impacts from the narrative text. There are three types of impacts: disaster, tangible and intangible. Tangible impacts capture outcomes that are clear to observers, such as providing food and clothing to survivors of a disaster. Intangible impacts capture outcomes that are not concrete or clear to observers, such as providing emotional support to survivors after a crisis or listening to people in the community who are struggling with addiction. The coding framework also distinguishes the unit where the impact occurred (i.e., individual, organization, community), but the analysis does not differentiate the unit where the impact occurred. Each member is linked to each of the projects they were assigned during their service. For the analysis, the data on service projects are limited to those projects for members in the sample. For the analysis, we focus on three types of impact within the SPD. Figure 5.1 provides examples of the three types of impacts coded from the narrative text.

*Figure 5.1: Examples of the coded projects' impacts as described by teams assigned to the projects*



We created a sum composite variable for each of the three types of impact in Figure 5.1. These are our main explanatory variables in the model that examines the effect of service projects on members' leadership skills.

To capture differences within teams as well as between teams, we reconstructed a 'teams' variable using Project ID information and Project Round information. Of the 1,657 applicants who began their service during the study's enrollment window, 77 percent (N = 1,252) participated in the study. The reconstruction of teams uses the sample of members who participated in the study and completed all three surveys. In the final sample, 652 members were grouped into 175 separate teams. The number of participants on a team ranged from three members to nine members with the average team size being made up of six participants.

Table 5.1 shows the distribution of teams by region, with the highest proportion of teams being placed in the Southern region at 29 percent, followed by Pacific at 25 percent and North Central and Southwest both at 23 percent.

**Table 5.1: Distribution by region**

Region	Percent
North Central	23%
Pacific	25%
Southern	29%
Southwest	23%

Sample size: 652



## Participant and Project Level Impacts on Leadership Development

Our analysis utilized a multi-level model with three levels. Level-1 includes participant level predictors (gender, race/ethnicity, SES, baseline leadership scores), and level-2 includes project level predictors (number of disaster impacts, number of tangible impacts, number of intangible impacts). The third level is the NCCC region. Table 5.2 shows estimated impacts of project characteristics on each of the seven predefined leadership metrics. Appendix H shows and summarizes the full regression results.

**Table 5.2: Impacts of service project type on leadership development**

	<b>Collaborative Practices</b>	<b>Comm. Skills</b>	<b>Life Skills</b>	<b>Prof. Skills</b>	<b>Civic Efficacy</b>	<b>Problem Solving</b>	<b>Varied Perspectives</b>
Disaster impacts	0.05** (0.02)	0.04* (0.02)	0.00 (0.02)	0.01 (0.02)	0.02 (0.02)	0.01 (0.02)	0.03 (0.02)
Intangible impacts	0.004 (0.01)	-0.001 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.02** (0.01)	0.00 (0.01)
Tangible Impacts	-0.001 (0.02)	0.00 (0.03)	0.05* (0.03)	0.04* (0.02)	0.05** (0.03)	0.01 (0.02)	0.01 (0.03)

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.001; Standard errors in parenthesis. Explanatory variables SES and baseline score, as well as all seven outcome variables have been standardized (z-score).

As shown in Table 5.2, projects that have tangible impacts are positively associated with life skills, professional skills, and community and civic efficacy skills. Projects where members mitigate disaster (e.g., focus on disaster recovery, mitigation, prevention, or preparedness) are positively associated with members' ability to communicate as well as collaborate with others. The analysis shows that AmeriCorps members' problem-solving abilities are positively associated with projects that have intangible impacts (Table 5.2).

## Differences Between Teams and Regions

The intraclass correlation coefficient (ICC) estimates how much variation in leadership development exists between teams as well as regions. The team ICC expresses the correlation between members in the same team, or alternatively informs us of how much of the total variation in leadership skills exists between teams. The region ICC expresses the correlation between teams within the same region. Table 5.3 shows the team ICC and region ICC for all outcome variables.

**Table 5.3: Impacts of teams and region placement on leadership development**

	<b>Collaborative Practices</b>	<b>Comm. Skills</b>	<b>Life Skills</b>	<b>Prof. Skills</b>	<b>Civic Efficacy</b>	<b>Problem Solving</b>	<b>Varied Perspectives</b>
Team ICC	1%	4%	3%	5%	2%	5%	3%
Region ICC	1%	1%	1%	1%	3%	1%	1%

Both the team ICC and region ICC are five percent or lower. For example, 2 percent of the variation in civic efficacy skills exists between teams and 3 percent exists between regions, leaving 95 percent of the variance in civic efficacy existing between members themselves. Professional skills and problem-solving abilities both have a team ICC of 5 percent, meaning that 5 percent of the variation is accounted for by the team. The region ICC indicates that the region is not causing significant variation in members' leadership development, as placement in a specific region will not result in higher or lower leadership abilities. In examining team ICC, we

see that while it is possible for members' team placement to impact their leadership development, it is still relatively low, as no more than 5 percent of the variation in leadership development is explicitly explained by a members team placement.

## **Chapter 6 Summary and recommendations**

These findings are based on an analysis of the longitudinal mixed-methods evaluation during which data were collected at three time points: a baseline survey administered prior to the start of service, a second survey administered when members were completing their term of service, and a third and final survey administered one year post service. In addition to participants' survey responses, we coded emerging themes from interviews and focus groups with a sample of members, team leaders, NCCC staff and project sponsors. The retention rate for participation was high, and there is minimal to no effect of non-response bias. These are indicators of the validity and robustness of the data itself.

Leadership is an ongoing process of expanding one's capacity to assume certain leadership roles. It is clear from the literature that leadership is not a fixed trait; it is a complex set of competencies that can be cultivated through not just appropriate interventions but through lived experiences to learn and grow as leaders. Service with AmeriCorps NCCC emphasizes seven skills intended to give its members the opportunity to learn and practice leadership: professional skills, life skills, communication skills, collaborative practices, appreciation for varied perspectives, community problem solving abilities, and civic efficacy. As with prior studies on young adults' development of leadership skills, the growth trajectory of leadership skills is uneven (Jastrzab et al., 2004, Frumkin et al., 2009, Metz et al., 2005). Through interviews and focus groups, AmeriCorps members expressed that their training, team dynamics, and hands-on work experience were all key to their leadership development skills. AmeriCorps members remained on a positive trajectory in their professional skills, life skills, and problem-solving skills. While members were consistently on a positive trajectory for professional, life and problem-solving skills, some leadership skills would initially slow down in trajectory. Examples of these were: communication skills, collaboration, and appreciation for varied perspectives. However, within one year, post service members' growth trajectory in those skills surpassed those of the comparison group participants. There is support in the literature that an initial slower growth is followed by a course correction yielding stronger growth trajectory (Jastrzab et al., 2004).

Members as well as comparison participants both had a slower growth trajectory of their civic efficacy during the study period. This slower growth trajectory is unexpected based on prior studies. This is one skill set for both members and comparison participants that might have been more impacted by Covid-19 both during and post service because both groups had to contend with communications disruption. During service, the pandemic may have limited members' access to opportunities to learn and practice these skills. As this cohort completed their service in 2021, the pandemic health emergency was still active for most countries and may have further limited opportunities to civically engage and support their communities. Several prior studies found a significant negative impact on members' leadership skills during their term of service (Jastrzab et al., 2004; Frumkin et al., 2009; Epstein, 2009; Hudson-Flege, 2018).

Consistent with these previous studies, the current analysis also found an initial negative impact on members' communication skills, collaborative practices, and appreciation for varied perspectives in the time period from baseline to first follow-up, and then a positive trajectory in

the time period of first follow-up to second follow-up. As with the analysis conducted by Epstein (2009) and Hudson-Flege (2018), AmeriCorps members reported a decrease in these skills at the end of their service compared to what they reported before their service. However, when surveyed a year after graduation, AmeriCorps members reported a higher level of confidence in these skills compared to what was reported directly after the end of their service. Previous authors (Epstein, 2009; Hudson-Flege, 2018) hypothesized this may have been due to short-term disillusionment, or a gush of wisdom, with the concept of working in diverse groups and living and working in close proximity to their teammates, which may lead to interpersonal conflicts. We also contend that at mid-point when members completed the first follow-up survey they were still participating in the program with little free time for self-reflection. After graduation and time for reflection, they report how well their service experience prepared them.

In summary, the research suggests there is a positive impact of national service experience on professional skills such as employment aptitude, employment outcomes, employability and career goals, and civic engagement. Despite these positive findings, there are some elements of the leadership building process among national service participants that merit further research. For example, Jastrzab et al.'s (2004) findings of a significant negative impact among members' appreciation of cultural and ethnic diversity warrants a better understanding of the reasons behind this finding and their long-term implications on leadership skills. Appreciation of cultural and ethnic diversity and their long-term implications are elements of leadership development that require more in-depth analysis. The lack of evidence on the impact of service on life skills, teamwork, and certain aspects of professional skill development also merit further exploration. Furthermore, for many other aspects of leadership development, studies have focused on short-term outcomes around knowledge, skills, and attitudes. Few studies have examined the impact of service on life skills, teamwork, and professional development.

We refer to Chapter 4, Table 4.1 which categorizes the themes that emerged from focus groups and interviews on the facilitators and barriers to members' development of leadership skills.

**Table 4.1: Factors that impacted AmeriCorps members' skill development**

<b>Facilitators</b>	<b>Barriers</b>
In-depth training	Insufficient training
Practice opportunities	Limited hands-on experiences
Mentorship	Lack of support from administration or sponsor
Positive team leader experience	Team conflicts
Receiving feedback	Lack of clarity
Team building	Poor diversity/sexual harassment training
Development of coping strategies	Lack of interactivity
Clear communication	Unprepared sponsors
Clarity/explanation on purpose of work	Disconnect between development and output
Adaptability/flexibility	Dealing with the bureaucracy of NCCC

From these themes we developed the following recommendations.

**Provide comprehensive training, ongoing supervision, and mentorship.** Members' ability to successfully complete their projects requires knowledge and skills. Training expands members' skills, and understanding, combined with the opportunity to apply this training, shapes them as

leaders during and beyond their term of service. As we noted in a separate report<sup>7</sup> ongoing training and check-ins at the projects' site was helpful with the sponsor and site supervisor because it provides members an experience that lasts beyond the term of service. In some cases, members channeled the training and guidance received to provide mentorship, guidance, and knowledge and build their confidence.

Additional facilitators discussed critical paths to effective leadership skills:

- Variation in task complexity, allowing members to learn and gain experience with tasks that foster development of multiple professional, leadership, prosocial, and life skills
- Availability of sponsors and site supervisors to provide ongoing training and support throughout the duration of the project
- Having clear standard operating procedures (SOPs) that team leaders and members can reference and use a resource to supplement their training and task completion

**Expose members to a wide range of service projects to ensure personal development and increase perceived impact.** Satisfaction with the project assignment is a predictor of a successful volunteer experience. Volunteers tend to experience satisfaction when they are given activities that support and relate to their interest in making a difference while at the same time supporting self-development and career development, as well as having some autonomy (Alfes, Shantz, & Bailey, 2016). Our analysis corroborates this sentiment and shows that the types of service projects are significantly associated with leadership skills. Participation in a wide range of projects increases the opportunities for members to apply and practice different leadership skills.

**Ensure quality sponsorship with durable workloads.** AmeriCorps NCCC may need to ensure sponsor organizations have the right amount of work needed to sustain a team for the duration of a service term since members apply and gain leadership skills through the service projects. Clear communication and training from sponsors are vital in promoting leadership skills. To ensure satisfaction for both sponsors and members, there should be transparency in the expectations of the depth of training a sponsor can provide, as well as what the program can be expected to provide.

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Georges, A., Shannon, R., Sum, C., Smith, S.J., Tait, E., LaTaillade, J., McHugh, C., & Mackey, C. (2023). *Evidence of AmeriCorps NCCC Impact in Strengthening Communities*. San Mateo, CA: JBS International, Inc.

## Appendix A: AmeriCorps NCCC Logic Model for Leadership Development

INPUTS	ACTIVITIES	OUTPUTS	OUTCOMES		
			Short Term (upon completion of the NCCC service, at 10 months)	Medium Term (1 year after completing NCCC service)	Long Term (3 to 5 years after completing NCCC service)
<ul style="list-style-type: none"> <li>• AmeriCorps NCCC funding</li> <li>• AmeriCorps NCCC facility and physical resources</li> <li>• NCCC curriculum and training materials</li> <li>• NCCC program staff</li> <li>• Sponsors and partners</li> <li>• Sponsor site housing</li> <li>• On site supervision</li> <li>• AmeriCorps NCCC education and service awards (college credits, certificate in non-profit management, Presidential Service Award, Congressional Award)</li> </ul>	<ul style="list-style-type: none"> <li>• Members participate in Corps Training Institute (CTI), and FEMA Academy for FEMA Corps members</li> <li>• Members participate in disaster trainings</li> <li>• Teams Leaders participate in AmeriCorps NCCC Team Leader Training (TLT)</li> <li>• Members participate in In-service Training (pre-project &amp; project training, transition training, Life after AmeriCorps training (LAA)). In-service training incorporates activities on leadership, soft skills, civic literacy.</li> <li>• Members participate in Independent Service Project (ISP).</li> <li>• Members participate in specialty role activities.</li> <li>• Members receive leadership skills support and mentoring from NCCC Unit Leaders and Team Leaders, NCCC staff and sponsors.</li> <li>• Members practice technical skills and acquire hands-on experience .</li> <li>• Members participate in community service projects over a 10-month period.</li> <li>• Members participate in residential and team-based activities</li> </ul>	<ul style="list-style-type: none"> <li>• Members complete 10 months of service (1700 hours), including 80 Independent Service Project hours (ISPs) for Traditional NCCC members and 10 ISPs for FEMA members.</li> <li>• Members complete Corps Training Institute (CTI), and FEMA Academy (if applicable).</li> <li>• Team Leaders complete AmeriCorps NCCC Team Leader Training (TLT).</li> <li>• Members complete In-service training (pre-project &amp; project training, Life after AmeriCorps training (LAAA))</li> <li>• Members complete specialty role activities.</li> <li>• Members complete leadership development activities.</li> <li>• Members complete training and activities to develop soft skills.</li> <li>• Members complete service learning activities and ISPs,</li> </ul>	<p><b>Professional skills</b></p> <ul style="list-style-type: none"> <li>• Increased hard skills needed to succeed in the workplace (e.g., computer literacy, public speaking, industry certifications).</li> <li>• Increased soft skills needed to succeed in the workplace (e.g., leadership, consensus building, fluent communication).</li> <li>• Increased desire to pursue continuing education</li> <li>• Earned education and service awards.</li> </ul> <p><b>Life skills</b></p> <ul style="list-style-type: none"> <li>• Increased knowledge of strategies and skills needed to plan, prepare, execute, and assess an endeavor.</li> <li>• Increased attitude of action or change orientation to the world.</li> <li>• Increased positive self-orientation and sense of self-efficacy.</li> </ul> <p><b>Work as a team</b></p> <ul style="list-style-type: none"> <li>• Practice effective communication strategies to resolve conflict in a constructive manner</li> <li>• Increased awareness, attitude, knowledge, and skills in dealing with people different from oneself.</li> <li>• Members formed meaningful connections with leaders and sponsoring organizations, and people in the community they served.</li> <li>• Increased awareness to employ positive team behavior in workplace, civic and religious organizations.</li> </ul> <p><b>Civic engagement</b></p> <ul style="list-style-type: none"> <li>• Increased knowledge related to civic participation (e.g., ability to lead a successful community-based movement, ability to collaborate with other members of the community to solve community problems).</li> <li>• Increased level of civic orientation and civic attitudes, knowledge of civic opportunities and outlets.</li> </ul>	<p><b>Professional skills</b></p> <ul style="list-style-type: none"> <li>• Informed career choices, affirmed or changed career interests as a result of service experiences (e.g., able to clearly define career goals and aspirations, interest in public sector career or community serving organizations, knowledge and skills related to workplace success).</li> <li>• Increased ability to demonstrate professional skills.</li> <li>• Increased applications to continuing education.</li> <li>• Increased usage of education awards.</li> <li>• Members who lacked a high school diploma or GED successfully complete their education requirements</li> </ul> <p><b>Life skills</b></p> <ul style="list-style-type: none"> <li>• Increased belief in positive self-orientation and sense of self-efficacy.</li> </ul> <p><b>Work as a team</b></p> <ul style="list-style-type: none"> <li>• Increased ability to demonstrate positive team behavior in workplace, civic and religious organizations</li> <li>• Increased ability in dealing with people different from oneself.</li> </ul> <p><b>Civic engagement</b></p> <ul style="list-style-type: none"> <li>• Increased belief in the ability to affect change through civic action.</li> <li>• Increased belief in civic participation and civic orientation and attitudes.</li> </ul>	<p><b>Professional skills</b></p> <ul style="list-style-type: none"> <li>• Engaged in activities related to education or career goals, or demonstrate general career advancement.</li> </ul> <p><b>Life skills</b></p> <ul style="list-style-type: none"> <li>• Improved ability to demonstrate confidence to accomplish goals, deal efficiently with unexpected events and handle unforeseen situations.</li> </ul> <p><b>Work as a team</b></p> <ul style="list-style-type: none"> <li>• Improved ability to work with diverse populations.</li> <li>• Improved ability to employ positive team behavior in their workplaces, civic organizations and religious organizations.</li> </ul> <p><b>Civic engagement</b></p> <ul style="list-style-type: none"> <li>• Improved ability of responsible citizenship and positive attitudes regarding the value of lifelong active citizenship and service for the common good, meet community needs, integrate into the community.</li> <li>• Took leadership positions within civic organizations.</li> </ul>

## Appendix B: Survey Non-Response Bias Analysis

The purpose of the non-response analysis is to identify the potential for bias and, if any bias is present, describe its direction and magnitude. A non-response bias analysis determines if the non-response is random or if there are systematic differences in characteristics between respondents and non-respondents. The non-response bias analysis examines whether, at baseline, respondents differed systematically from the target population. We used the relative non-response bias formula as defined by the Office of Management and Budget (OMB). The relative non-response bias formula is:

$$B(\bar{Y}_r) = \bar{Y}_r - \bar{Y}_t = \left(\frac{n_{nr}}{n}\right)(\bar{Y}_r - \bar{Y}_{nr})$$

where:

$\bar{Y}_t$  = the mean based on all sample cases;

$\bar{Y}_r$  = the mean based only on respondent cases;

$\bar{Y}_{nr}$  = the mean based only on nonrespondent cases;

$n$  = the number of cases in the sample; and

$n_{nr}$  = the number of nonrespondent cases.

We used available AmeriCorps NCCC administrative data on all eligible individuals. The administrative data contained observed characteristics on all participants whether they responded to the survey or not. For the non-response bias analysis at first and second follow-up, we used several variables that were included in the baseline survey, as all participants included in the first follow-up analysis were respondents to the baseline survey.

Respondents and non-respondents can have similar demographic distributions, and significant bias may still exist. On the other hand, differences between respondents and non-respondents on a few demographic characteristics may suggest that non-respondents are not “missing at random,” and there may be similar differences on key survey variables. There may be little or no bias after all if the key variables are not related to those demographics. In each instance, we compare differences between respondents and non-respondents to assess the presence or absence of response bias and calculate the size and direction of the bias by applying the OMB formula.

The administrative data contained the following variables: age, any prior employment when the participants applied to serve with AmeriCorps NCCC, number of previous jobs reported on their AmeriCorps NCCC application, if the participant is an immediate family member of active duty, National Guard or Veteran, and the application assessment score. Variables used from the baseline survey included: gender, whether the participant had an associate’s degree or higher (college degree or graduate degree), if at least one of the participant’s parents had at least a college degree, whether the participant identified as a Non-Hispanic White, whether the participant identified as Hispanic or Latino, whether the participant lived in a single-parent or no-parent household, and whether the participant indicated they worked in the six months prior to their service.

Using these defined variables, we conducted relative non-response bias using OMB’s formula for non-response bias. JBS calculated non-response for all respondents combined (Table B1),

then separately for members (Table B3) and comparison group (Table B5). Bias was low for all variables, which indicates that there were only small differences between respondents and non-respondents.

*Non-Response Bias in the Full Sample.* We assessed the differences in response patterns for all respondents. Table B1 shows the relative bias for each variable. No variable has a relative bias greater than 5 percent. The variable with the largest relative bias is the ‘Comparison’ variable at -0.05. This indicates that individuals in the comparison group were less likely to participate in the study.

**Table B1. Non-Response Bias—All Respondents**

Variable	Mean - all	Mean - respondents	Mean - nonrespondents	Total	Total respondents	Total nonrespondents	Difference in means	Relative Bias
Type – Comparison	0.44	0.42	0.51	2241	1749	492	-0.09	-0.05
Female	0.58	0.58	0.58	2241	1749	492	0.00	0.00
Age	21.49	21.53	21.33	2200	1720	480	0.20	0.00
Prior employment	0.91	0.91	0.92	2241	1749	492	-0.01	0.00
Number of jobs	2.79	2.83	2.63	2040	1588	452	0.20	0.02
Prior volunteer experience	0.82	0.83	0.79	2241	1749	492	0.04	0.01
Veteran status	0.18	0.17	0.19	2214	1728	486	-0.01	-0.01
NCCC application score	66.69	66.75	66.51	2087	1621	466	0.24	0.00
College degree	0.51	0.53	0.46	2241	1749	492	0.07	0.03
Parent college degree	0.74	0.73	0.76	1691	1352	339	-0.03	-0.01
Non-Hispanic White	0.54	0.52	0.60	2155	1683	472	-0.07	-0.03
Hispanic or Latino	0.26	0.27	0.22	2234	1745	489	0.06	0.04
Single or no parent household	0.35	0.35	0.36	2101	1675	426	-0.01	0.00
Working Participant	0.62	0.63	0.61	2241	1749	492	0.02	0.01

To examine the effects of each variable on non-response when all other variables tested were held constant, we ran a logistic regression model (Table B2). Individuals in the treatment group, participants with prior volunteer experience, and participants with at least a college degree were

all significantly more likely to participate in the first follow-up survey. Non-Hispanic White individuals had significantly higher odds of non-response. No other variable exhibited statistically significant differences.

**Table B2. Likelihood of Non-Response Based on Participant Characteristics—All Respondents**

Variable	B	S.E.	Wald	Df	Sig.	Exp(B)
Type – Treatment	-0.2114	0.0558	14.3449	1	0.0002	0.655
Female	0.0131	0.054	0.0587	1	0.8085	1.027
Age	-0.0576	0.2537	0.0515	1	0.8205	0.944
Prior employment	0.1479	0.0974	2.3073	1	0.1288	1.344
Prior volunteer experience	-0.1363	0.0686	3.9424	1	0.0471	0.761
Veteran status	0.00532	0.0678	0.0062	1	0.9375	1.011
NCCC application score	0.0134	0.0333	0.1631	1	0.6863	1.014
College degree	-0.2047	0.0653	9.8213	1	0.0017	0.664
Parent college degree	0.0682	0.0741	0.8454	1	0.3578	1.146
Non-Hispanic White	0.1414	0.0713	3.9284	1	0.0475	1.327
Hispanic or Latino	-0.0602	0.0803	0.5625	1	0.4533	0.887

*Non-Response Bias in the Treatment-Only Sample.* We performed non-response bias analysis for the treatment group only (Table B3). Relative bias was low in the treatment group, in part because of the higher response rate in this group. The relative bias for the variables age, prior employment status, application assessment score, parent has college degree, and working participant were all zero, indicating no level of bias. In this treatment-only analysis, the variable that had the highest relative bias was for individuals who identified as Hispanic or Latino with a relative at five percent (0.05), which indicates they were more likely to participate in the first follow-up.



**Table B3. Non-Response Bias—Treatment Members**

Variable	Mean - all	Mean - respondents	Mean - nonrespondents	Total	Total respondents	Total nonrespondents	Difference in means	Relative Bias
Female	0.51	0.51	0.49	1252	1011	241	0.02	0.01
Age	21.03	21.09	20.78	1252	1011	241	0.30	0.00
Prior employment	0.89	0.89	0.90	1252	1011	241	-0.02	0.00
Number of jobs	2.63	2.68	2.43	1114	896	218	0.26	0.02
Prior volunteer experience	0.81	0.83	0.75	1252	1011	241	0.07	0.02
Veteran status	0.18	0.18	0.15	1241	1001	240	0.03	0.03
NCCC application score	66.57	66.75	65.83	1158	928	230	0.92	0.00
College degree	0.42	0.44	0.36	1252	1011	241	0.08	0.03
Parent college degree	0.74	0.74	0.73	998	806	192	0.01	0.00
Non-Hispanic White	0.57	0.55	0.62	1241	1000	241	-0.07	-0.02
Hispanic or Latino	0.25	0.27	0.20	1251	1010	241	0.06	0.05
Single or no parent household	0.31	0.32	0.28	1183	965	218	0.04	0.02
Working Participant	0.60	0.60	0.61	1252	1011	241	-0.01	0.00

We ran a logistic regression model to predict non-response within the treatment group. When examining the treatment group only, we found that participants who had some form of employment prior to their service were significantly less likely to respond to the first follow-up. Participants who had previous volunteer experience were significantly more likely to be a respondent (Table B4). Both the logistic regression and the relative bias analysis indicate that there is no bias due to non-response in the treatment group.

**Table B4. Likelihood of Non-Response Based on Participant Characteristics—Treatment**

Variable	B	S.E.	Wald	Df	Sig.	Exp(B)
Female	-0.013	0.0737	0.031	1	0.8602	0.974
Age	-0.1901	0.4158	0.2091	1	0.6475	0.827
Prior employment	0.2324	0.1279	3.3008	1	0.0692	1.592
Prior volunteer experience	-0.2461	0.0913	7.2761	1	0.007	0.611
Veteran status	-0.1317	0.0999	1.7373	1	0.1875	0.768
NCCC application score	-0.0116	0.0462	0.0631	1	0.8017	0.988
College degree	-0.133	0.0978	1.8491	1	0.1739	0.766
Parent college degree	-0.0572	0.0953	0.3601	1	0.5485	0.892
Non-Hispanic White	0.0973	0.0993	0.9599	1	0.3272	1.215
Hispanic or Latino	-0.1421	0.1156	1.511	1	0.219	0.753

*Non-Response Bias in the Comparison-Only Sample.* We performed non-response bias analysis on the comparison group only. The relative bias was low, but as high as eight percent (-0.08) for participants with an immediate family member of active duty, National Guard or Veteran, which indicates these individuals were less likely to participate in the study in the comparison group. Relative bias for non-Hispanic White participants was 5 percent (-0.05), indicating that, in the comparison group, non-Hispanic White individuals were less likely to participate (Table B5). All other variables had a relative bias of zero to four percent, once again indicating that non-response rates would not bias the results.

**Table B5. Non-Response Bias—Comparison Members**

Variable	Mean - all	Mean - respondents	Mean – nonrespondents	Total	Total respondents	Total nonrespondents	Difference in means	Relative Bias
Female	0.66	0.66	0.66	989	738	251	0.00	0.00
Age	22.09	22.16	21.88	948	709	239	0.28	0.00
Prior employment	0.94	0.94	0.93	989	738	251	0.01	0.00
Number of jobs	2.97	3.02	2.82	926	692	234	0.20	0.02
Prior volunteer experience	0.84	0.84	0.83	989	738	251	0.01	0.00
Veteran status	0.18	0.16	0.22	973	727	246	-0.05	-0.08
NCCC application score	66.85	66.74	67.17	929	693	236	-0.42	0.00
College degree	0.63	0.66	0.55	989	738	251	0.11	0.04
Parent college degree	0.73	0.72	0.80	693	546	147	-0.09	-0.03
Non-Hispanic White	0.50	0.48	0.57	914	683	231	-0.09	-0.05
Hispanic or Latino	0.27	0.28	0.23	983	735	248	0.05	0.04
Single or no parent household	0.41	0.40	0.44	918	710	208	-0.04	-0.02
Working Participant	0.66	0.67	0.61	989	738	251	0.06	0.02

We also ran a logistic regression model to determine which variables were significant predictors of non-response within the comparison-only sample. Within the comparison-only group, participants with at least a college degree or higher had significantly lower odds of being a non-respondent. Participants who have at least one parent with a college degree or higher were significantly more likely to be a non-respondent (Table B6).

**Table B6. Likelihood of Non-Response Based on Participant Characteristics—Comparison**

Variable	B	S.E.	Wald	Df	Sig.	Exp(B)
Female	0.0607	0.0813	0.5584	1	0.4549	1.129
Age	-0.1319	0.3219	0.1679	1	0.682	0.876
Prior employment	0.0757	0.1549	0.239	1	0.6249	1.164
Prior volunteer experience	-0.0134	0.1064	0.0159	1	0.8997	0.974
Veteran status	0.1344	0.0958	1.9668	1	0.1608	1.308
NCCC application score	0.0465	0.049	0.9001	1	0.3428	1.048
College degree	-0.2715	0.0914	8.8288	1	0.003	0.581
Parent college degree	0.2444	0.1203	4.1293	1	0.0421	1.63
Non-Hispanic White	0.1518	0.104	2.1312	1	0.1443	1.355
Hispanic or Latino	-0.0137	0.1137	0.0146	1	0.9038	0.973

### **Appendix C: Socioeconomic Status Construct**

We constructed a socioeconomic status (SES) variable using multiple questions from the baseline survey. SES can be defined broadly as one’s access to financial, social, cultural, and human capital resources. Traditionally, a student’s SES has included, as components, parental educational attainment, parental occupational status, and household or family income, with appropriate adjustment for household or family composition (Cowen, 2012). The history of SES measurement and the identification of possible explanatory correlates show that SES is defined as a broad construct, ideally measured with several diverse indicators. In the construction of the SES variable, we follow the guidelines set by a panel of experts convened for the National Center for Education Statistics (NCES). The panel concluded that the components of a core student SES measure were the “big 3” variables (family income, parental educational attainment, and parental occupational status). Table C1 shows the original baseline survey questions we used to construct the SES variable.

**Table C1: Baseline Survey Questions Used for SES**

<b>Variable</b>	<b>Question</b>	<b>Response Options</b>
BQ29	If you live in more than one household, answer about the parent or guardians you live with most of the time. Please choose one parent to begin. What is this parent's or guardian's relationship to you?	Biological Mother Biological Father Adoptive Mother Adoptive Father Stepmother Stepfather Foster Mother Foster Father Female Partner of your Parent or Guardian Male Partner of you Parent of Guardian Grandmother Grandfather Other Female Relative Other Male Relative Other Female Guardian Other Male Guardian No Parent
BQ30	What is the highest level of education completed by the parent/guardian?	Less than high school completion Completed a high school diploma, GED, or alternative high school credential Completed a certificate or diploma from a school that provides occupational training Completed an Associate degree Completed a Bachelor's degree Completed a Master's degree Completed a Ph.D., or other high level professional degree Don't know
BQ31	Does this parent/guardian currently hold a job for pay?	Yes No Don't know
BQ33	Do you have another parent or guardian in the same household?	Yes No

**Table C1 continued**

<b>Variable</b>	<b>Question</b>	<b>Response Options</b>
BQ34	What is this parent's or guardian's relationship to you?	Biological Mother Biological Father Adoptive Mother Adoptive Father Stepmother Stepfather Foster Mother Foster Father Female Partner of your Parent or Guardian Male Partner of you Parent of Guardian Grandmother Grandfather Other Female Relative Other Male Relative Other Female Guardian Other Male Guardian No Parent
BQ35	What is the highest level of education completed by the parent/guardian?	Less than high school completion Completed a high school diploma, GED, or alternative high school credential Completed a certificate or diploma from a school that provides occupational training Completed an Associate degree Completed a Bachelor's degree Completed a Master's degree Completed a Ph.D., or other high level professional degree Don't know
BQ36	Does this parent/guardian currently hold a job for pay?	Yes No Don't know

Based on the questions in Table C1, we created three additional variables that aggregate the individual's parent employment, parent education and family structure. The variables are shown in Table C2.

**Table C2: Aggregated Parent Characteristics**

<b>Variable</b>	<b>Indicator</b>	<b>Assignment Options</b>
<b>Parent_employed</b>	Is at least one parent/guardian in the household employed?	0 = no one in the household is employed 1 = one parent/guardian is employed but not all 2 = all parents/guardians in the household are employed (this includes single parent houses) . = Participant does not know/no answer
<b>Parent_degree</b>	Does at least one parent/guardian in the household have a college degree or higher?	0 = No parent in the household has a college degree or higher 1 = Yes, at least one parent/guardian has a college degree or higher but not all 2 = all parents/guardians in the household have a college degree or higher (this includes single parent houses) . = Participant does not know/no answer
<b>Parent_structure</b>	How many parent/guardians in the household?	0 = Participant said no parent in household 1 = There are no biological parent/adoptive parent in the household, but there are either 1 or 2 guardians (step parent, foster parent, grandmother, family friend) 2 = Single parent household: There is one biological parent/adopted parent 3 = New partner household: There is one biological parent/adopted parent and one other guardian that is not a biological parent or adoptive parent 4 = Nuclear family: There are two biological parents or adoptive parents in household . = Participant did not want to answer

A composite score was then created using the three variables (parent\_employed, parent\_degree, and parent\_structure). Per the panel, there are reporting and interpretation advantages and disadvantages for treating SES as a single measured variable, as several single measured variables, or as a composite of several measured variables. The advantages of a composite variable over the use of single variables outweigh the disadvantages. The composite variable was constructed using principal component analysis. As SES is treated as a latent variable with reflective indicators. A rationale for treating SES as a latent variable with reflective indicators is that the components correlate. Treating SES as a latent variable with reflective indicators implies that changing SES would result in a change in income, parental education, and parental occupational status, which seems implausible. The use of PCA resulted in a single SES composite variable for each participant. We then scaled the composite variable to be in a range of one to three: 1 – low SES, 2 – medium SES, 3 – high SES.



## Appendix D: Composite Measure of Motivation for Service

We use Principal Component Analysis (PCA), a data reduction which allows for a meaningful interpretation of the data by reducing the number of items that measure motivation to a few linear combinations of the data. Each linear combination corresponds to a principal component. We performed the PCA on the 24 items included in the baseline and first follow-up using the prior communality estimates (Eigenvalue = 1.00). We use the principal axis method and varimax rotation to identify the parsimonious items. The PCA revealed seven principal components with an eigenvalue greater than 1.0. Combined, these seven principal components account for a total variation of 52 percent (Table D1).

*Table D1: Eigenvalues and the proportion of variation are explained by the principal components*

Principal component	Eigenvalue	Difference	Proportion of variation explained	Cumulative proportion explained
1	3.914879	1.858897	0.1631	0.1631
2	2.055982	0.28587	0.0857	0.2488
3	1.770113	0.42794	0.0738	0.3225
4	1.342173	0.06144	0.0559	0.3785
5	1.280733	0.141057	0.0534	0.4318
6	1.139676	0.117081	0.0475	0.4793
7	1.022595	0.042275	0.0426	0.5219
8	0.98032	0.039351	0.0408	0.5628
9	0.940969	0.042802	0.0392	0.602
10	0.898168	0.040239	0.0374	0.6394
11	0.857929	0.049715	0.0357	0.6751
12	0.808214	0.027069	0.0337	0.7088
13	0.781145	0.050781	0.0325	0.7414
14	0.730364	0.035416	0.0304	0.7718
15	0.694948	0.063397	0.029	0.8008
16	0.631552	0.023712	0.0263	0.8271
17	0.60784	0.027685	0.0253	0.8524
18	0.580155	0.011614	0.0242	0.8766
19	0.568541	0.027026	0.0237	0.9003
20	0.541515	0.030434	0.0226	0.9228
21	0.511081	0.030509	0.0213	0.9441
22	0.480571	0.032307	0.02	0.9641
23	0.448264	0.035992	0.0187	0.9828
24	0.412273		0.0172	1
<b>Total</b>	24			

We then used factor analysis, a data reduction method, to interpret the seven types of motivation. An item loads into a factor if the loading was 0.40 or greater for that item and less than 0.40 for

the other factor. We set the number of factors to seven based on the PCA results. Using this criterion there are seven groups of motivations to serve, defined as: 1) altruistic 2) network / travel, 3) professional and career development, 4) financial, 5) commitment to service, 6) external factors and 7) gap year. Table D2 shows the original survey item.

**Table D2. Original Survey Item List and Corresponding Factor**

<b>Factor</b>
<b>Altruistic</b>
I want to make a difference/serve my country
I want to reduce social or economic inequality
NCCC will give me a sense of purpose
<b>Network / Travel</b>
I want to meet new people / make friends
I want to travel the country / I want to leave the town that I am living in right now
<b>Professional and Career Development</b>
To try something new to find what direction I want to take in my career
To gain leadership skills
To gain professional skills / carpentry or construction skills / build resume
I want the opportunity to network with professionals in my field of interest
<b>Financial</b>
I want to earn money/I needed to get a job
NCCC was my only employment option
There are not enough jobs where I live
I wanted to have stable housing and other benefits
I want to earn money to pay off student loans
<b>Commitment to Service</b>
I want to gain experience to serve in other AmeriCorps programs
I want to gain experience to join the Peace Corps
I want to gain experience to join the military
<b>External Factors</b>
I have a friend or family member who was applying or participating
My parents/guardians wanted me to join NCCC
An AmeriCorps organization or one like it helped you or a loved one in the past
<b>Gap year</b>
I want to take a break before college
I want to take a break between college/grad school

## **Appendix E: Results from Multilevel Model Predicting the Odds of Service**

To analyze the odds of participants opting in to join AmeriCorps NCCC after being accepted into the program, we utilized a multilevel mixed linear model. Multilevel models (MLMs) have been developed to properly account for the hierarchical (correlated) nesting of data (Bell, 2013). Research has shown that ignoring a level of nesting can affect estimated variances and the available power to detect treatment or covariate effects (Donner & Klar, 2000; Julian, 2001; Moerbeek, 2004; Murray, 1998; Shadish, Cook & Campbell, 2002), can seriously inflate Type I error rates (Wampold & Serlin, 2000), and can lead to substantive errors in interpreting the results of statistical significance tests (Goldstein, 2003; Nich & Carroll, 1997).

Multilevel models can be conceptualized as regression models occurring at different levels. In this case, we are utilizing participant level characteristics (level-1) of both the treatment group (members) and the comparison group to model the likelihood of a participant choosing to serve in AmeriCorps NCCC after being admitted into the program. We take into account the nesting of data by cluster within NCCC classes (level-2).

**Table E1: Multilevel Analysis of the likelihood of opting into service**

<b>Variable</b>	<b>B</b>	<b>SE</b>	<b>p-value</b>	<b>Odds ratio</b>	<b>95% Confidence Interval – Upper limit</b>	<b>95% Confidence Interval – Lower limit</b>
SES	-0.039	0.083	0.635	0.961	0.817	1.131
Age	-0.078	0.035	0.025	0.925	0.864	0.99
Female (Ref=Male)	-0.754	0.130	<.0001	0.47	0.365	0.606
Non-Binary (Ref=Male)	-0.941	0.373	0.012	0.39	0.188	0.811
Black or African American (Ref = White)	-0.399	0.224	0.075	0.671	0.432	1.041
American Indian or Alaska Native (Ref = White)	-0.598	0.706	0.398	0.55	0.138	2.198
Asian (Ref=White)	-0.788	0.269	0.004	0.455	0.268	0.771
Native Hawaiian and Other Pacific Islander (Ref = White)	1.099	1.448	0.448	3.001	0.175	51.404
Multi-racial (Ref = White)	1.358	0.462	0.003	3.889	1.572	9.62
Hispanic or Latino (Ref= White)	-0.256	0.139	0.065	0.774	0.589	1.017
Physical or Mental impairment (Ref = No)	-0.878	0.326	0.007	0.416	0.219	0.788
Definitely will not vote in future elections (Ref = Definitely will vote in future elections )	0.139	0.327	0.670	1.149	0.605	2.183
Probably will not vote in future elections (Ref = Definitely will vote in future elections )	0.149	0.306	0.627	1.16	0.637	2.114
Probably will vote in future elections (Ref = Definitely will vote in future elections )	0.712	0.189	0.0002	2.039	1.408	2.951
Motivated by career development	-0.024	0.103	0.816	0.976	0.797	1.195
Motivated by finances	-0.623	0.105	<.0001	0.536	0.437	0.659
Motivated by travel	0.271	0.094	0.004	1.311	1.092	1.576
Motivated by altruism	0.416	0.097	<.0001	1.516	1.254	1.833
Has a college degree (Ref = No college degree)	-0.518	0.157	0.001	0.596	0.438	0.811
In FEMA Corps (Ref = Not in FEMA Corps)	0.382	0.159	0.016	1.465	1.073	2.001
Volunteer experience (Ref= No)	-0.125	0.148	0.401	0.883	0.66	1.181

Table E1 shows the MLM results including the coefficients, standard errors, p-values, odds ratio estimates and the 95% confidence intervals. The interpretation of the odds ratio depends on whether the predictor is categorical or continuous. Odds ratios that are greater than 1 indicate that the event is more likely to occur as the predictor increases for continuous variables. Odds ratios that are less than 1 indicate that the event is less likely to occur as the predictor increases. For categorical predictors, the odds ratio compares the odds of the event occurring at category of the predictor. Odds ratios that are greater than 1 indicate that the event is more likely to happen at event 1 (i.e. if a participant is female compared to the reference of male). Odds ratios that are less than 1 indicate that the event is less likely at event 1. The independent variables include SES level, age, level of educational attainment, gender, race & ethnicity, physical or mental impairments, motivations to apply, likelihood of voting in future election, and prior volunteer experience.

### **Appendix F: Composite Measures of Leadership Skills**

We use Principal Component Analysis (PCA), a technique of dimensionality reduction, to identify relevant scale items to create each construct of leadership development. We performed the PCA on the 50 survey items included in all three surveys using the prior communality estimates (Eigenvalue = 1.00). We use the principal axis method and varimax rotation to identify the parsimonious components. The PCA revealed seven components with eigenvalues greater than 1.00. We also reviewed the screen plot test, which suggests the seven components are meaningful. Therefore, seven components are retained for the rotation pattern. Combined, these seven components account for a total variation of 60.0 percent (baseline control group), 57.3 percent (baseline treatment group), 61.0 percent (follow-up control group), and 65.0 percent (first follow-up treatment group).

An item loads on a given component if the factor loading was 0.40 or greater for that component and less than 0.40 for the other components. Using this criterion, the corresponding items of each construct comprise seven components. We defined these seven major constructs as Professional Skills, Life Skills, Communication Skills, Appreciation for Varied Perspectives, Collaborative Practices, Community and Civic Efficacy, and Solving Community Problems.

We computed average scores for each of the seven leadership development constructs. We used these average scores to calculate the impacts of service on members at the first follow-up survey compared to comparison participants at the same stage. Table F1 lists the original survey items from both the baseline and first follow-up and the factor it is a part of.

**Table F1. Original Survey Item List and Corresponding Factor**

<b>Factor</b>	<b>Baseline Survey</b>	<b>First Follow-Up Survey</b>
<b>Professional Skills</b>		
Plan, coordinate and manage meetings or events	BQ12A	F1Q16A
Deliver presentations	BQ12B	F1Q16B
Work with the media and public relations	BQ12C	F1Q16C
Manage a project	BQ12D	F1Q16D
Community outreach	BQ12E	F1Q16E
Recruit, manage or train volunteers	BQ12F	F1Q16F
Set priorities for multiple tasks	BQ13A	F1Q17A
<b>Life Skills</b>		
I am confident that I could deal efficiently with unexpected events	BQ14A	F1Q18A
Thanks to my resourcefulness, I know how to handle unforeseen situations	BQ14B	F1Q18B
I can solve most problems if I invest the necessary effort	BQ14C	F1Q18C
I can remain calm when facing difficulties because I can rely on my coping abilities	BQ14D	F1Q18D
When I am confronted with a problem, I can usually find several solutions	BQ14E	F1Q18E
If I am in trouble, I can usually think of a solution	BQ14F	F1Q18F
I can usually handle whatever comes my way	BQ14G	F1Q18G
<b>Communication Skills</b>		
I can verbally communicate my ideas to other people	BQ15A	F1Q19A
I listen to other people's opinions or positions on an issue	BQ15B	F1Q19B
I collaborate on projects as a team member to achieve a shared goal	BQ15C	F1Q19C
I get along with other people in my work environment	BQ15D	F1Q19D
I resolve conflicts through discussion and dialog	BQ15E	F1Q19E
I treat other people with courtesy and respect	BQ15F	F1Q19F
<b>Appreciation for Varied Perspectives</b>		
I try to understand other people's ideas and opinions before arguing or stating my own	BQ16A	F1Q20A
I try to present my ideas without criticizing the ideas of others	BQ16B	F1Q20B
I encourage different points of view without worrying about agreement	BQ16C	F1Q20C
I try to consider all points of view or possible options before forming an opinion or making a decision	BQ16D	F1Q20D
I encourage the participation of other people and support their right to be heard	BQ16E	F1Q20E
<b>Collaborative Practices</b>		
If people from different backgrounds took the time to understand each other, there wouldn't be so many social problems	BQ17A	F1Q21A
I feel comfortable belonging to groups where people are different from me	BQ17B	F1Q21B
Diverse viewpoints bring creativity and energy to a work group	BQ17C	F1Q21C
Multicultural teams can be stimulating and fun	BQ17D	F1Q21D
People are more motivated and productive when they feel they are accepted for who they are	BQ17E	F1Q21E
Diversity brings many perspectives to problem-solving	BQ17F	F1Q21F

**Table F1 continued**

<b>Factor</b>	<b>Baseline Survey</b>	<b>First Follow-Up Survey</b>
<b>Collaborative Practices</b>		
I feel comfortable in forming friendships with people who are different from me	BQ17G	F1Q21G
<b>Community and Civic Efficacy</b>		
I feel a personal obligation to contribute in some way to my community.	BQ18A	F1Q22A
I am actively involved in issues that positively affect my community	BQ18B	F1Q22B
I can make a difference in my community or neighborhood.	BQ18C	F1Q22C
I feel I have the ability to make a difference in my community.	BQ18E	F1Q22E
I try to find the time or a way to make a positive difference in my community.	BQ18F	F1Q22F
<b>Solving Community Problems</b>		
Create a plan to address the problem	BQ19A	F1Q23A
Get other people to care about the problem	BQ19B	F1Q23B
Organize and run a meeting	BQ19C	F1Q23C
Express your views in front of a group of people	BQ19D	F1Q23D
Identify individuals or groups who could help you with the problem	BQ19E	F1Q23E
Express your views on the Internet or through social media	BQ19F	F1Q23F
Call someone on the phone you had never met before to get their help with the problem	BQ19G	F1Q23G
Contact an elected official about the problem	BQ19H	F1Q23H

### **Appendix G: Results from Latent Growth Curve Analysis**

We used the Latent Growth Curve Analysis (LGCA) technique to determine the growth in leadership skills prior to service, after graduation from service, and one year after graduation. The latent growth curve model is a powerful tool in analyzing longitudinal data. It compares the lines of change across a set of individuals and determines the overall model’s line of change (Burant, 2016). LGCA considers change over time in terms of an underlying, latent, unobserved process and can represent unique curves for each individual or groups of individuals, represented as deviations from the average function, in addition to testing hypothesis about trajectories of interest (Fuzhong, 2013).

We ran seven LGCA models and compared average leadership development scores between the comparison and treatment participants at three different times (baseline, first follow-up and second follow-up) while controlling for several individual level covariates (age, gender, race and ethnic, SES, and education)

The intercept values in the table are the estimated component scores among the treatment group (members) at baseline. Treatment=0 values are the intercepts for the comparison group, meaning they are the estimated component scores among the comparison group participants at baseline. The Time value is the slope of the treatment group, this indicates the estimated growth amount per period for the treatment group. The Treatment=0 X Time value is the slope of the comparison group; this indicates the estimated growth amount per period for the comparison group. The growth trajectory indicates how many points higher or lower the comparison group is growing compared to the treatment group across the three time points.

Table G1 shows the latent growth analysis results for three components: professional skills, life skills and problem-solving abilities. For professional skills, the treatment group had a growth of 0.094 points per period, while the comparison group saw a decrease of 0.008 points per period. The growth trajectory of -0.10 indicates that AmeriCorps members have a growth trajectory that is 0.10 points higher than comparison participants across the three timepoints.

**Table G1: Latent Growth Curve Analysis Results**

Indicator	Professional Skills			Life Skills			Problem-Solving		
	B	SE	p-value	B	SE	p-value	B	SE	p-value
Estimate baseline score for treatment group (Intercept)	3.02	0.18	<.0001	3.97	0.13	<.0001	3.85	0.15	<.0001
Estimate baseline score for comparison group (Treatment=0)	3.23	0.04	<.0001	4.02	0.03	0.10	3.97	0.04	0.0006
Estimate slope for treatment group (Time)	0.09	0.01	<.0001	0.04	0.01	0.00	0.02	0.01	0.14
Estimate slope for comparison group (Treatment=0 X Time)	-0.01	0.02	<.0001	-0.004	0.02	0.03	-0.02	0.02	0.03
Male	-0.15	0.04	0.00	-0.04	0.03	0.19	-0.10	0.03	0.002
Black or African American	-0.05	0.07	0.47	-0.06	0.05	0.23	0.12	0.06	0.04
Asian	-0.16	0.08	0.06	-0.17	0.06	0.00	-0.15	0.07	0.03
Multiracial	0.07	0.10	0.50	0.03	0.07	0.72	0.05	0.08	0.54
Native Hawaiian/Other Pacific or American Indian/Alaskan Native	0.08	0.17	0.63	0.05	0.12	0.66	0.11	0.14	0.42
Hispanic or Latino	0.03	0.04	0.49	0.01	0.03	0.79	0.03	0.04	0.35
Education	0.05	0.01	0.00	0.00	0.01	0.62	0.00	0.01	0.75
Age	0.02	0.01	0.04	0.01	0.01	0.13	0.01	0.01	0.31
SES	0.04	0.03	0.16	0.02	0.02	0.34	0.03	0.02	0.14

For life skills, the treatment group had a growth of 0.036 points per period, while the comparison group saw a decrease of 0.004 points per period. The growth trajectory of -0.04 indicates that AmeriCorps members have a growth trajectory that is 0.04 points higher than comparison participants across the three timepoints. For community problem solving abilities, the treatment group had a growth of 0.018 points per period, while the comparison group saw a decrease of 0.021 points per period. The growth trajectory of -0.04 indicates that AmeriCorps members have a growth trajectory that is 0.04 points higher than comparison participants across the three timepoints.

Three components: communication skills, collaborative practices, and appreciation for varied perspectives, were found to have a negative trajectory from baseline to first follow-up, and then a positive trajectory from first follow-up to second follow-up. This indicates that AmeriCorps members reported a decrease in these skills at the end of their service compared to what they reported before their service. However, when surveyed a year after graduation, AmeriCorps



members reported a higher level of confidence in these skills compared to what was reported directly after the end of their service.

**Table G2: Latent Growth Curve Analysis Results (Baseline to First Follow-Up)**

Indicator	Communication Skills			Collaborative Practices			Appreciation for Varied Perspectives		
	B	SE	p-value	B	SE	p-value	B	SE	p-value
Estimate baseline score for treatment group (Intercept)	4.06	0.03	<.0001	4.66	0.12	<.0001	4.21	0.14	<.0001
Estimate baseline score for comparison group (Treatment=0)	4.22	0.04	<.0001	4.62	0.03	0.18	4.23	0.04	0.00
Estimate slope for treatment group (Time)	-0.02	0.03	0.56	-0.21	0.02	<.0001	-0.10	0.01	0.14
Estimate slope for comparison group (Treatment=0 X Time)	-0.02	0.04	0.88	-0.02	0.03	<.0001	0.003	0.02	0.03
Male	-0.16	0.04	<.0001	-0.11	0.03	<.0001	-0.09	0.03	0.002
Black or African American	-0.03	0.06	0.59	-0.19	0.04	<.0001	-0.01	0.05	0.90
Asian	-0.07	0.08	0.38	-0.06	0.05	0.27	0.00	0.06	0.95
Multiracial	0.17	0.09	0.07	0.04	0.06	0.52	0.18	0.08	0.02
Native Hawaiian/Other Pacific or American Indian/Alaskan Native	-0.03	0.15	0.85	-0.22	0.11	0.04	0.14	0.13	0.27
Hispanic or Latino	0.03	0.04	0.52	-0.06	0.03	0.05	0.03	0.03	0.37
Education	-0.16	0.04	<.0001	0.00	0.01	0.88	0.00	0.01	0.99
Age	-0.03	0.06	0.59	0.00	0.01	0.96	0.01	0.01	0.40
SES	-0.07	0.08	0.38	0.02	0.02	0.23	-0.01	0.02	0.52

Table G2 shows the latent growth analysis results for baseline to first follow-up. For communication skills, the treatment group had a decrease of 0.016 points per period, while the comparison group saw a decrease of 0.023 points per period. For collaborative practices skills, the treatment group had a decrease of 0.209 points per period, while the comparison group saw a decrease of 0.018 points per period. For appreciation for varied perspectives, the treatment group had a decrease of 0.101 points per period, while the comparison group saw a growth of 0.003 points per period.

**Table G3: Latent Growth Curve Analysis Results (First Follow-Up to Second Follow-Up)**

Indicator	Communication Skills			Collaborative Practices			Appreciation for Varied Perspectives		
	B	SE	p-value	B	SE	p-value	B	SE	p-value
Estimate baseline score for treatment group (Intercept)	4.11	0.13	<.0001	4.42	0.13	<.0001	4.12	0.15	<.0001
Estimate baseline score for comparison group (Treatment=0)	4.23	0.03	<.0001	4.57	0.03	<.0001	4.25	0.04	0.0005
Estimate slope for treatment group (Time)	0.11	0.02	<.0001	0.12	0.02	<.0001	0.08	0.02	0.0006
Estimate slope for comparison group (Treatment=0 X Time)	-0.02	0.03	<.0001	-0.05	0.03	<.0001	-0.04	0.04	0.0004
Male	-0.09	0.03	0.00	-0.11	0.03	<.0001	-0.10	0.03	0.002
Black or African American	0.01	0.05	0.77	-0.16	0.05	0.00	-0.01	0.05	0.89
Asian	-0.05	0.06	0.41	-0.09	0.06	0.12	0.00	0.07	0.94
Multiracial	-0.02	0.07	0.79	-0.06	0.07	0.41	0.14	0.08	0.09
Native Hawaiian/Other Pacific or American Indian/Alaskan Native	0.03	0.12	0.78	-0.15	0.12	0.22	0.21	0.13	0.13
Hispanic or Latino	0.03	0.03	0.42	-0.05	0.03	0.13	0.02	0.04	0.62
Education	-0.01	0.01	0.59	0.00	0.01	0.96	0.003	0.01	0.77
Age	0.01	0.01	0.19	0.00	0.01	0.87	0.003	0.01	0.66
SES	0.04	0.02	0.04	0.03	0.02	0.22	0.002	0.02	0.93

Table G3 shows the latent growth analysis results for first follow-up to second follow-up. For communication skills, the treatment group had a growth of 0.105 points per period, while the comparison group saw a decrease of 0.025 points per period. The growth trajectory of -0.13 indicates that AmeriCorps members had a growth trajectory that is 0.13 points higher than comparison participants across the three timepoints. For collaborative practices, the treatment group had a growth of 0.124 points per period, while the comparison group saw a decrease of 0.046 points per period. The growth trajectory of -0.17 indicates that AmeriCorps members had a growth trajectory that is 0.17 points higher than comparison participants across the three timepoints. For appreciation for varied perspectives, the treatment group had a growth of 0.083 points per period, while the comparison group saw a decrease of 0.044 points per period. The growth trajectory of -0.13 indicates that AmeriCorps members have a growth trajectory that is 0.13 points higher than comparison participants across the three timepoints.

Community and civic efficacy has a constant negative trajectory throughout all three time periods. AmeriCorps members as well as comparison participants reported a decrease in community and civic efficacy throughout the study period. Table G4 shows the latent growth analysis results for community engagement. The treatment group saw a decrease of 0.050 points per period, while the comparison group saw a decrease of 0.064 points per period. Both AmeriCorps members and the comparison group saw a decrease in their community and civic

efficacy level; however, the growth trajectory of -0.01 indicates that AmeriCorps members have a growth trajectory that is 0.01 points higher than comparison participants across the three timepoints, meaning the gap between the two groups is closing by 0.01 points each period.

**Table G4: Latent Growth Curve Analysis Results**

<b>Indicator</b>	<b>Community and Civic Efficacy</b>		
	<b>B</b>	<b>SE</b>	<b>p-value</b>
Estimate baseline score for treatment group (Intercept)	4.07	0.03	<.0001
Estimate baseline score for comparison group (Treatment=0)	4.23	0.04	<.0001
Estimate slope for treatment group (Time)	-0.05	0.01	0.0006
Estimate slope for comparison group (Treatment=0 X Time)	-0.06	0.02	0.51
Male	-0.15	0.04	<.0001
Black or African American	-0.02	0.06	0.68
Asian	-0.06	0.07	0.46
Multiracial	0.14	0.09	0.14
Native Hawaiian/Other Pacific or American Indian/Alaskan Native	0.00	0.15	0.98
Hispanic or Latino	0.03	0.04	0.48
Education	0.01	0.01	0.26
Age	0.001	0.001	0.45
Socioeconomic Status	0.03	0.03	0.27

### **Appendix H: Results from Multilevel Model of the Association between Service Projects and Leadership Skills**

To analyze the impacts of service project characteristics on AmeriCorps members’ leadership development, we utilized a multilevel mixed linear model which accounts for the hierarchical (correlated) nesting of data (Bell, 2013).

Research shows ignoring a level of nesting in data can impact estimated variances and the available power to detect treatment or covariate effects (Donner & Klar, 2000; Julian, 2001; Moerbeek, 2004; Murray, 1998; Shadish, Cook & Campbell, 2002) can seriously inflate Type I error rates (Wampold & Serlin, 2000), and can lead to substantive errors in interpreting the results of statistical significance tests (Goldstein, 2003; Nich & Carroll, 1997). Multilevel models can be conceptualized as regression models occurring at different levels. In this case, we are modeling the leadership skills of AmeriCorps members (at level-1) and exploring the influence of characteristics associated with service projects the AmeriCorps members work on in teams (at level-2). Additionally, a third level is added by accounting for the clustering of teams within regions (level-3).

There are several advantages of fitting multilevel linear models to hierarchically structured data (Raudenbush, 1993). First, both continuous and categorical variables can be specified to have random effects. Variability can be partitioned at each level, which becomes an important process when accounting for dependency due to clustering effects. In addition, independent variables or

covariates can be included in the model at different levels. For example, predictors pertaining to the participant (e.g., age, gender) as well as information regarding the region in which participants are nested can be included in the model at each level (Suzuki, 1999).

**Table H1: Multilevel Analysis Results**

	<b>Collaborative Practices</b>	<b>Comm. Skills</b>	<b>Life Skills</b>	<b>Prof. Skills</b>	<b>Civic Efficacy</b>	<b>Problem Solving</b>	<b>Varied Perspectives</b>
SES	0.02 (0.04)	0.07 (0.04)	0.05 (0.04)	0.08** (0.04)	0.07* (0.04)	0.13*** (0.04)	0.02 (0.05)
Black or African American (=1)	-0.40** (0.20)	-0.15 (0.19)	-0.21 (0.19)	0.06 (0.17)	-0.05 (0.19)	0.10 (0.19)	-0.17 (0.21)
Asian (=1)	-0.23 (0.21)	0.21 (0.20)	0.17 (0.21)	0.12 (0.19)	0.08 (0.20)	0.19 (0.20)	0.01 (0.23)
Multi race (=1)	-0.39** (0.17)	-0.27 (0.16)	-0.54 (0.17)	-0.40 (0.15)	-0.25 (0.17)	-0.40** (0.16)	-0.22 (0.18)
Hispanic or Latino (=1)	-0.10 (0.10)	0.08 (0.09)	0.05 (0.01)	0.07 (0.09)	-0.02 (0.09)	0.05 (0.09)	0.04 (0.10)
Native Hawaiian or Alaskan Native (=1)	0.22 (0.55)	0.14 (0.53)	-0.40 (0.55)	0.07 (0.49)	0.81 (0.53)	0.41 (0.53)	0.24 (0.58)
Male (=1)	-0.29*** (0.08)	-0.26*** (0.08)	-0.18*** (0.08)	-0.21*** (0.07)	-0.09 (0.08)	-0.16** (0.08)	-0.34*** (0.09)
Baseline score	0.40*** (0.04)	0.47*** (0.04)	0.46*** (0.04)	0.58*** (0.03)	0.53*** (0.04)	0.50*** (0.04)	0.41*** (0.04)
Disaster impacts	0.05** (0.02)	0.04* (0.02)	0.00 (0.02)	0.01 (0.02)	0.02 (0.02)	0.01 (0.02)	0.03 (0.02)
Intangible impacts	0.004 (0.01)	-0.001 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.02** (0.01)	0.00 (0.01)
Tangible Impacts	-0.001 (0.02)	0.00 (0.03)	0.05* (0.03)	0.04* (0.02)	0.05** (0.03)	0.01 (0.02)	0.01 (0.03)

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.001; Standard errors in parenthesis. Explanatory variables SES and baseline score, as well as all seven outcome variables have been standardized (z-score).

Table H1 shows the MLM results for each of the seven leadership skills as well as covariates. The analysis indicates that members' socioeconomic status is significantly associated with several aspects of leadership skills. AmeriCorps members' SES has a positive relationship with professional skills, community and civic efficacy, and community problem solving abilities, indicating that AmeriCorps members with higher socioeconomic statuses report higher average scores in those categories. The biggest impact is seen in community problem solving abilities, with one standard deviation increase in SES resulting in a 0.13 standard deviation increase in problem solving abilities.

Based on our findings, it appears that members who are male reported lower scores in each of the leadership skills, except community and civic efficacy. Compared to female or non-binary identifying AmeriCorps members, male members reported a lower appreciation for varied perspectives score by 0.34 standard deviations, lower collaborative practices score by 0.29 standard deviations and lower communication skills score by 0.26 standard deviations. In general, there are no significant differences in leadership skills by race and ethnicity. The exceptions are members who identify as Black or African American reported lower collaborative

practices score by 0.40 standard deviations, members who identified with multiple race and ethnicity reported lower collaborative practices score by 0.39 standard deviations and lower problem-solving skills score by 0.40 standard deviations.

When analyzing the project level predictors, projects that have tangible impacts are positively associated with life skills, professional skills, and community and civic efficacy skills. Projects where members mitigate disaster (e.g., focus on disaster recovery, mitigation, prevention, or preparedness) are positively associated with members' ability to communicate as well as collaborate with others. The analysis shows that AmeriCorps members' problem-solving abilities are positively associated with projects that have intangible impacts.

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