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A Systematic Review of Senior Corps' Impact on Volunteers and Program Beneficiaries

This report was prepared by JBS International, Inc., 5515 Security Lane, Suite 800, North Bethesda, MD, 20852, pursuant to a contract with CNCS, a federal agency of the United States Government.

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Abstract

The Senior Corps Program, administered by the Corporation for National and Community Service (CNCS), engages adults 55 years and older in national service that benefits both local communities and the volunteers themselves. This report systematically reviews 27 evaluation studies completed between 1980 and 2019 on the effectiveness of the Senior Corps to (1) identify the strength of the evidence base for Senior Corps, (2) contextualize these findings within the larger literature on the impacts of volunteering for older adults, and (3) offer recommendations and lessons learned from this review. Findings show a positive impact of Senior Corps participation (75% of the outcomes studied having positive results) on both volunteers and beneficiaries. The majority of the evaluations reviewed examined psychosocial and physical health outcomes; consequently, the majority of the positive outcomes observed for volunteers are in these two domains. The majority of these positive findings (78%) are from non-experimental designs, and most did not directly test for statistical significance, so more rigorous evaluation will help address selection bias and further strengthen the evidence base.

Keywords: Systematic Review; Seniors; Volunteering; Health; Aging

Executive Summary

The Senior Corps Program, administered by the Corporation for National and Community Service (CNCS), engages adults 55 years and older in national service that provides benefits both to local communities and to the volunteers themselves. This report briefly describes the history and goals of the three Senior Corps programs (the Foster Grandparent Program [FGP], the Senior Companion Program [SCP], and the Retired and Senior Volunteers Program [RSVP]), then systematically reviews the literature on the effectiveness of these programs to (1) identify the strength of the evidence base for Senior Corps, (2) contextualize these findings within the larger literature on the impact of volunteering for older adults, and (3) offer recommendations and lessons learned from this review.

To identify the literature on the impact of Senior Corps and the impact of volunteering in older adults more generally, we searched academic databases for published reports and searched the gray literature from the National Archives, CNCS archives, and the library collections documented by WorldCat. Of the 67 studies identified, 27 met the inclusion criteria for the systematic review. These studies included a total of 110 individual outcomes or results (e.g.-volunteer physical health, depression). For each outcome, we documented study characteristics, the quality of study methodology, and key findings.

The findings from the systematic review show evidence of the positive impact of Senior Corps participation on the volunteers' health, particularly physical and psychosocial health outcomes. Specifically, 75% of the outcomes studied showed positive results, with about 22% of these positive outcomes being evaluated using QED or RCT design and 32% of these positive outcomes being statistically significant.

The majority of the positive outcomes were observed for volunteers (65%, with 42% of these positive volunteer outcomes being physical or psychosocial health outcomes), with only 35% of the positive outcomes being observed for program beneficiaries. We found no studies that examined impact on communities.

The majority of positive findings (78%) were from non-experimental designs and most did not directly test for statistical significance. More rigorous evaluation will help address selection bias and further strengthen the evidence base.

Introduction and Background

The Senior Corps Program, administered by the Corporation for National and Community Service (CNCS), engages adults 55 years and older in national service that provides benefits both to local communities and to the volunteers themselves. Senior Corps consists of three primary programs: the Foster Grandparent Program (FGP), the Senior Companion Program (SCP), and the Retired and Senior Volunteers Program (RSVP). Senior Corps volunteers commit their time to address critical community needs including, for example, academic tutoring and mentoring, elderly care, and disaster relief support. In this report, we systematically review the literature on the effectiveness of these programs to identify the strength of the evidence base for Senior Corps, contextualize these findings within the larger literature on the impacts of volunteering for older adults, and offer recommendations and lessons learned from this review.

History and Goals of Senior Corps

Before reviewing the literature on the effectiveness of Senior Corps, we first summarize the history of the three programs (including changes in program administration and policy) both in text and in a brief timeline highlighting major programmatic events and evaluation studies (see Figure 1 below). We then review the literature supporting the growing relevance and need for Senior Corps programs.

What are the Senior Corps programs?

The Senior Corps is a federal national service program that engages older adults (those 55 years or older) in meaningful community service and volunteer work. Within Senior Corps, there are three flagship programs:

Foster Grandparent Program (FGP). First initiated in 1965 as a part of President Lyndon B. Johnson's War on Poverty through the Office of Economic Opportunity (OEO), the FGP was originally designed as an anti-poverty employment program that would provide lowincome senior citizens (those within 150% of the federal poverty limit) with a modest stipend and small benefits (transportation reimbursement, an annual physical exam) in exchange for caring for and building relationships with children in institutions (such as hospitals, orphanages, and homes for children with disabilities). The program was designed to have a dual benefit by providing older adults with meaningful employment (roughly 20 hours a week) and addressing the unmet needs of children. In the 1970s, the program was incorporated into the newly created ACTION agency, and its Congressionally-mandated mission was expanded to include services for children in a much wider range of settings including those in day care centers, the Head Start program, and schools. Under ACTION, the FGP was no longer defined as an employment program, but became a community service program for older adults. FGP volunteers continued to receive a small tax-free stipend, but the stipend was no longer linked to the minimum wage. In 1993, the FGP was incorporated into CNCS. Presently, the FGP engages adults in providing supportive services to children and youth through local schools and community-based programs such as youth facilities, early childhood education, and day care centers. Foster Grandparent volunteers help children learn to read, provide one-on-one tutoring, mentor troubled teenagers and young mothers, and care for premature infants or children with disabilities. In 2018, close to (30,000 volunteers served more than 170,000 children). Current FGP volunteers serve an average

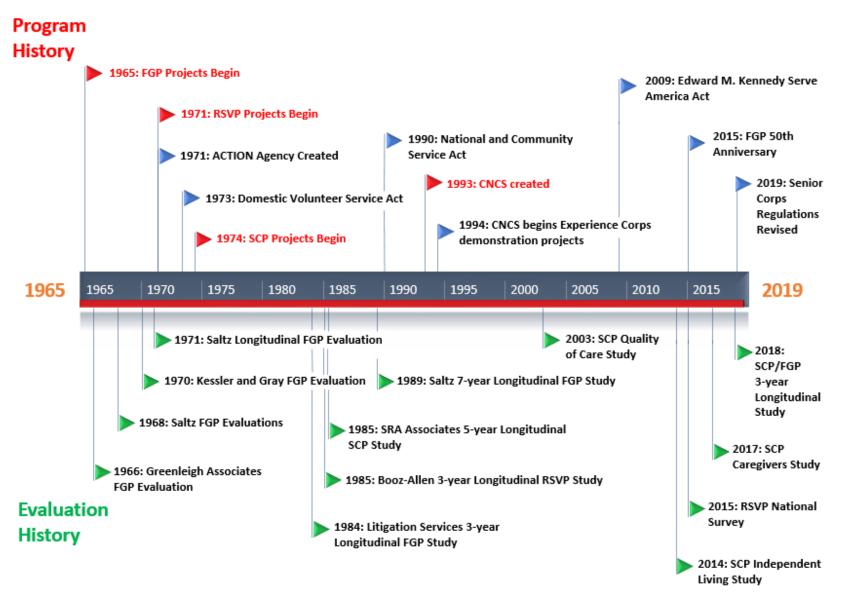
of 20 hours a week (with the option to serve between 5-20 hours) and those volunteers making less than 200% of the federal poverty limit receive a tax-free stipend of \$2.65 per hour.

Senior Companion Program (SCP). First initiated in 1974 under the ACTION agency, the SCP was modeled after FGP but designed to serve older adults instead of children. SCP engages adults in providing supportive, individualized services to help adults with special needs maintain their dignity and independence. SCP provides direct services to homebound clients to support independent living and provides support services to caregivers caring for family or friends having difficulty with daily living. Some of the types of services SCP volunteers provide include transporting clients to medical appointments, helping shop for food and necessities, providing companionship to offset isolation, and offering respite to family members, caregivers, and homebound clients. In 1993, the program was incorporated into CNCS. In 2018, more than 14,000 volunteers served more than 38,600 clients each year. Presently, SCP volunteers serve an average of 20 hours a week (with the option to serve between 5-20 hours.) and those volunteers making less than 200% of the federal poverty limit receive a tax-free stipend of \$2.65 per hour.

Retired and Senior Volunteer Program (RSVP). First initiated in 1971 under the ACTION agency, the RSVP engages older adults in volunteer service in a variety of activities to meet critical community needs such as, for example, disaster response and recovery, tax preparation services; and meal delivery services. RSVP is designed to provide older adults with flexible opportunities to use their skills and expertise to help solve problems affecting their local communities. In 1993, the program was incorporated into CNCS. In 2018, more than 174,000 volunteers served approximately 700,000 clients each year. RSVP does not have an income eligibility requirement, and the volunteers do not receive a stipend; they serve anywhere from 4-40 hours a week (to allow greater flexibility) and can choose their service placement from a wide range of settings such as crisis hotlines, literacy programs, job training programs, teen pregnancy and support services, drug abuse prevention and treatment centers, refugee support services, and disaster relief services.

Figure 1 on page 7 of this report provides a brief visual overview of the history of the three Senior Corps programs. Appendix A includes a detailed, interactive timeline of the history of the three programs.

Figure 1. Brief Timeline of Senior Corps Programmatic and Evaluation History from 1965-Present



Why are Senior Corps Programs Needed Now?

Senior Corps may be particularly relevant now because, as the U.S. population over 65 grows, lives and works longer, there is increased need to address the health challenges faced by older adults. Volunteer service opportunities such as those provided through Senior Corps may be one way to combat and support the aging process. We summarize data trends and the literature supporting each of these reasons why Senior Corps programs are needed now.

The proportion of the U.S. Population over 65 is growing rapidly. According to the U.S. Census Bureau's 2017 National Population Projections, by 2060, the number of Americans who are 65 or older is projected to more than double from 46 million today to more than 98 million; and their share of the population will rise from 15% to nearly 24% (U.S. Census Bureau, 2018). In 2035, for the first time in U.S. history, there will be more older people than children (U.S. Census Bureau, 2018). Declines in fertility and immigration during the Great Recession have contributed to increases in the proportion of the population over 65 relative to other age groups, so as the number of older adults increases, the working population available to support them is projected to decline.

Adults are living longer than ever before and working longer. In 1950, the average life expectancy in the United States was 68 years old; by 2016 that number had risen to almost 79 years (World Bank, 2018). These increases in life expectancy, along with declines in illness, have increased the duration of "healthy old age" (Fries, 1980), and, with this change, adults are staying in the workforce longer than in prior generations. According to a recent national survey (Benz, Sedensky, Tompson, and Agiesta, 2013), the average retirement age has shifted from 57 for those who retired prior to the Great Recession (December 2007 or earlier) to 62 for those who retired after (2008 or later). Furthermore, the U.S. Bureau of Labor Statistics (BLS, 2017), estimates that the labor force participation rate (the proportion of the population working or actively looking for work), is expected to increase faster for the oldest segments of the population—most notably, people ages 65 and older—through 2024. This increase is being fueled by the aging baby-boomer generation, individuals born between 1946 and 1964. By 2024, baby boomers will have reached ages 60 to 78, and many of them are expected to continue working even after they qualify for Social Security retirement benefits.

Older adults have increasing needs for health care. As adults are living longer and waiting longer to retire, they are also experiencing increased health care needs. According to a recent report from the Population Reference Bureau, "the aging of the baby boom generation could fuel a 75 percent increase in the number of Americans ages 65 and older requiring nursing home care, to about 2.3 million in 2030 from 1.3 million in 2010. Demand for elder care will also be fueled by a steep rise in the number of Americans living with Alzheimer's disease, which could nearly triple by 2050 to 14 million, from 5 million in 2013." Additionally, increases in obesity rates and divorce rates and declines in birth rates are all contributing to an increasing number of older adults living alone and needing health care (Mather, Jacobsen, and Pollard, 2015). Senior Corps is a potential resource to support the increasing needs for health care for the volunteers (who, as this systematic review will show, often report an increased social connection, financial stability, and a sense of purpose) and for the older adults served by the Senior Companion program.

Older adult volunteers contribute to the economy. According to the Bureau of Labor Statistics (2016), in 2015, almost 1 in 4 adults older than 65 reported volunteering during the prior year, and, in 2018, adults over age 55 contributed nearly 3 billion hours of service at an estimated value of more than \$73.5 billion (Corporation for National Community Service, 2018). Another study (Johnson & Schaner, 2005) suggests that the estimated total economic contribution of adult volunteer service may be more than \$160 billion if contributions associated with unpaid family caregiving are also included.

Volunteer service may be one way to combat health challenges and provide support to other aging adults. The high rates of volunteer service among older adults (BLS, 2016) are promising given that a recent review found that older adults who volunteer frequently live longer and report fewer disabilities than those who do not volunteer (Von Bonsdorff & Rantanen, 2011). Volunteering may enhance the health of older adults and has been linked to self-reported health improvements (Luoh and Herzog 2002; Piliavin and Siegl 2007; Krause 2009; Haski-Leventhal 2009), objective improvements in physical health (Lum and Lightfoot 2005; Tan et al. 2006), improvements in cognitive functioning (Carlson et al. 2008 and 2009; Burr, Tavares, and Mutchler, 2010), improvements in mental health and psychological well-being (Piliavin and Seigl, 2007, Musick and Wilson, 2008; Li and Ferraro 2006), and increased longevity (Mussick et al 1999; Luoh and Herzog 2002; Piliavin and Siegl 2007). Furthermore, the benefits of volunteering have been shown to be amplified among those with limited access to other social supports (e.g., those who cannot drive and those living in more rural areas, Lee et al. 2010).

Research Questions and Contribution of this Report

As Figure 1 above demonstrates, evaluation has been a core component of Senior Corps from the start of the Foster Grandparent Program in 1965 to the present day. In the 1960s, the Office of Economic Opportunity funded evaluations of FGP from the very first year of operation, and these evaluation efforts continued under funding from ACTION in the 1970s. Most of these evaluations included unmatched comparison groups consisting of individuals waiting to participate in the program and children from comparable institutions. These early evaluations showed positive impacts of FGP on older adults' financial well-being, sense of purpose, mental health, and physical health. They also demonstrated positive impacts on children's intelligence and social competency (Greenleigh Associates, 1966; Saltz, 1968; Takacs, 1970; Gray and Kasteler, 1970; Saltz, 1971; Saltz, 1973).

The primary objective of this report is to systematically review the evaluation literature on Senior Corps programs from 1980 to the present to determine what the academic literature and research says about the impact of Senior Corps on those who volunteer in its programs and on those served by Senior Corps volunteers. The specific research questions are:

- 1. What is the strength of the evidence base for Senior Corps?
 - a. What is the impact of Senior Corps service on volunteers and beneficiaries?
 - b. What is the effectiveness of specific Senior Corps service models or interventions?
- 2. How do findings from the research on volunteering among older adults generally compare to the findings from research about Senior Corps specifically?
- 3. What are the learnings, best practices and key resources that can inform the work of CNCS, its grantees, and other stakeholder groups?

Methods and Procedures

Our approach consists of two phases. First, we conducted a systematic search of the literature on Senior Corps and on volunteering in older adults; second, we conducted a detailed systematic review of Senior Corps outcome and impact studies between 1980 and the present. Methods and procedures for each of these phases are described below. The study review form for the systematic review (phase 2) is available in Appendix B.

Phase 1: Searching for Senior Corps Research Reports and Documentation

We conducted a three-step search process consisting of: 1) initial search; 2) inclusion assessments for the systematic review; and 3) selection of up to 35 research reports for full systematic review. The initial search process was broad in scope and included reviewing both research reports and historical documentation on the Senior Corps program by searching EBSCO, Google Scholar, PsychInfo, the CNCS archives, and the National Archives. We supplemented our search by conducting key informant interviews with current and past Senior Corps staff. We read the abstract or executive summary for each research report to assess each report's relevance to the research questions, report date, study design, and study methodology.

Systematic Review Inclusion

Criteria. We considered five criteria to determine which evaluation reports would be systematically reviewed. Reports had to be conducted between 1980 and the present, had to be focused on Senior Corps volunteers or beneficiaries specifically, had to be research reports with findings (theory, review, and design papers were excluded), and had to be relevant to this report's research questions. For the reports that met these criteria, we selected those that were impact or outcome evaluations. We excluded implementation-only reports.

Inclusion Criteria for the Systematic Review

- Conducted 1980 present
- Evaluation report with findings (no theory, review, or design papers)
- Focused specifically on Senior Corps volunteers or beneficiaries
- Relevant to the report's research questions
- An impact or outcome evaluation (no implementation-only reports)

Results of the Initial Search and Inclusion Assessments for the Systematic Review. Our search of the academic and gray literature yielded 67 reports on Senior Corps participants or beneficiaries that could be considered for inclusion in our systematic review (see Figure 2 below). These reports (including their date, author, abstract, and study design) are listed in the full annotated bibliography in Appendix C. From these 67 reports, we ultimately selected 27 reports (39%) for inclusion in the systematic review. We excluded 40 reports because 27 were implementation or output studies only, 8 were conducted prior to 1980, and 5 were not program evaluations (i.e.- they were theory or review papers, research papers that happened to use Senior Corps volunteers as participants, or were design reports with no findings).

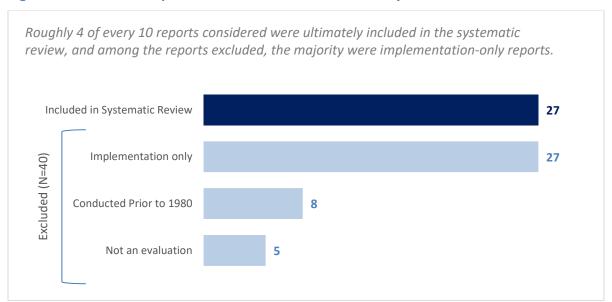


Figure 2. Number of Reports Included vs. Excluded in the Systematic Review

Timing of Reports Selected for Inclusion in the Systematic Review. Of the 27 reports selected for inclusion in the systematic review, 10 reports (37%) were released prior to 1990 (see Figure 3 below). These reports were predominately evaluations funded by the ACTION agency. In the 1990s, as FGP, SCP and RSVP were incorporated into CNCS (founded in 1993), the number of reports declined to a low of three reports (11%) but began to rise again in the 2000s. In subsequent decades, the number of reports continued to rise, reaching up to eight evaluation reports (30%) completed between 2011 and 2019.

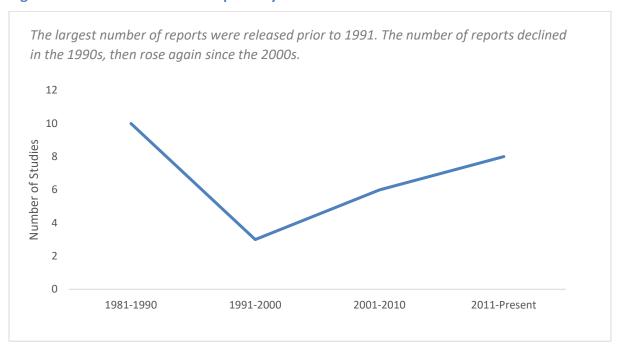


Figure 3. Number of Included Reports by Year

Search and Inclusion Criteria for the Review of the Literature on the Impact of Volunteering among Older Adults. In addition to our systematic review of the literature on Senior Corps, we also conducted a brief review of the literature on the impacts of volunteering among older adults. Given the large body of research on the impact of volunteering on older adults, we prioritized the most prominent articles (those most widely cited) and prioritized published meta-analysis or meta-synthesis reports (e.g.- Anderson et al., 2014). Our review of the broader literature is based on twelve meta-analyses and meta-syntheses that provided a comprehensive summary of the current state of the research on the impacts of volunteering in older adults (see Appendix D for a listing of reports included in this review). The results of our review are used to address the research question examining how findings from the research on volunteering among older adults compare to the findings from research about Senior Corps.

Phase 2: Systematically Reviewing Senior Corps Research Reports

As described above, a total of 27 reports on Senior Corps were ultimately selected for inclusion in the systematic review. In Phase 2, we coded these studies into an Access database that tracked study characteristics, methodology, and findings. A copy of the review form is in Appendix B. Study characteristics included basic information (e.g., report title, date, and author) and information about the program and intervention being studied (e.g., program name, CNCS focus area, community need, intervention, intervention topic area, and target population). Study

methodology included characteristics of study participants such as sample size, race, age, and study locations, all of which may impact the generalizability of findings, data collection and data analysis methods, and lessons learned. Under study implementation and findings, we coded key findings for each report's outcome and characterized the study design implemented (e.g.- RCT, QED with propensity score matching), outcome type (e.g., physical health benefits for the volunteer), a brief

Data Extracted for Systematic Reviews

- **Study Characteristics** (Title, date, author, program being studied, etc.)
- **Study Methodology** (data collection and data analysis methods, characteristics of study participants, etc.)
- Study Implementation and Findings (results, effect sizes, statistical significance, design used, and outcome area, etc.)

narrative summary of results, the statistical significance of the results, and the effect size of the results (when noted). Since study design was used as a proxy for study validity, study designs were coded based on how the study was actually implemented-- regardless of what the authors may have claimed the design to be. For example, if a report claimed to use a matched sample, but did not use statistical matching methods and/or did not demonstrate baseline equivalency, then the report was coded as a non-experimental design with a comparison group rather than as a QED with a matched comparison group.¹

¹ Four of the studies in the systematic review were authored by JBS. CNCS had these studies reviewed by two independent reviewers not affiliated with JBS. Each independent reviewer was given two studies and asked to comment on the studies' methodology rigor, including any observed weaknesses or strengths. The independent reviewers' assessments confirmed that JBS's classification of these studies' methodology and study design are appropriate. One independent reviewer noted that an alternate statistical test than the one used in one of the studies might have provided more reliable evidence of the relationship being tested.

Descriptive Results from the Systematic Review

During the systematic review phase (described as Phase 2 above), detailed information from 27 reports was entered into an Access database, and individual results for 110 outcomes were recorded. Reports often contained multiple outcomes (e.g.- physical health, depression, economic stability), so results for each study outcome were coded and analyzed separately (with an average of 4.1 outcomes per report and a range of 1-14 outcomes per report). Throughout this report, we present results at the outcome level rather than the report level since study designs and results within a given report often vary by outcome. The following breakdowns describe all 110 outcomes we coded from our systematic review.

Outcomes by Program and Year. As shown in Figure 4 below, the majority of the 110 Senior Corps outcomes that have been evaluated are for SCP (59 outcomes from 13 studies, or 54% of all outcomes) and FGP (30 outcomes from 10 studies, or 27% of all outcomes). Three studies looked at outcomes for both FGP and SCP volunteers; those outcomes are included in the total count for FGP and SCP totals. Fewer outcomes were evaluated for RSVP (21 outcomes from 7 studies, or 19% of all outcomes).

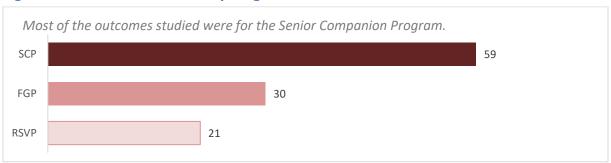


Figure 4. Number of Outcomes by Program

Figure 5 shows that the number of SCP and FGP outcomes studied increased since the 1990s and for RSVP, since 2001.

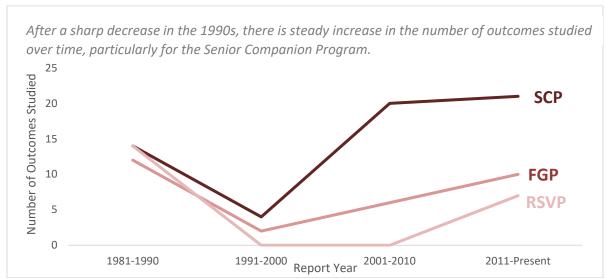
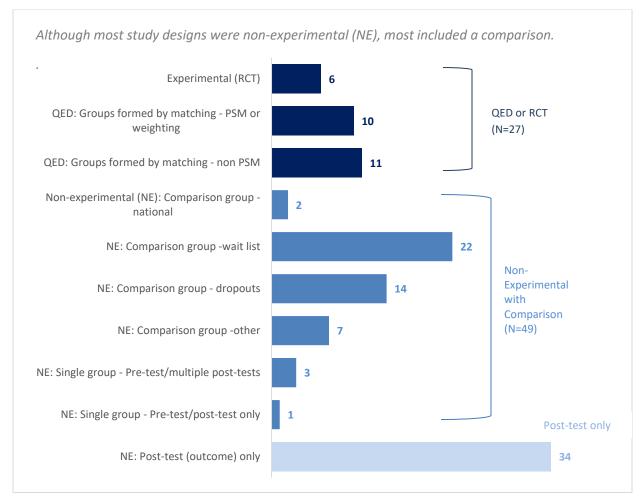


Figure 5. Number of Outcomes by Program and Year

Outcomes by Study Design. Most of the 110 outcomes evaluated used a non-experimental design, with 49 outcomes (44.5%) using a non-experimental with comparison group design such as a waiting list, a national sample, program dropouts, participants' pre-test scores (in which participants serve as their own comparison group), or some other counterfactual (such as another type of intervention). Additionally, 34 outcomes (31%) used a non-experimental (NE) post-test-only study design. Twenty-seven outcomes (24.5%) were evaluated using a quasi-experimental design (QED) with a matching comparison group or an experimental design (RCT) (see Figure 6)².

² As noted earlier in the report, studies were coded based on the design implemented rather than the intended design. As such, studies that were not able to successfully implement their intended design and those that did not adequately address threats to internal validity were coded according to the design actually implemented. For example, if a study intended to be a QED with PSM matching but was not ultimately able to match comparison and treatment individuals and demonstrate baseline equivalency, then the study was coded as a non-experimental design with a comparison group rather than as a QED. This means that studies in the QED or RCT category adequately address threats to internal validity.





Outcomes by Study Design and Year. Figure 7 shows that, since the 1990s, an increasing number of outcomes were evaluated using QED or RCT designs, and outcomes from non-experimental studies with comparisons increased in the 2000s after decreasing since 1981. Since 2011, there is an approximately equal number of outcomes from each of the three study types. Most of the outcomes from non-experimental studies with a comparison were studied in the 1980s.

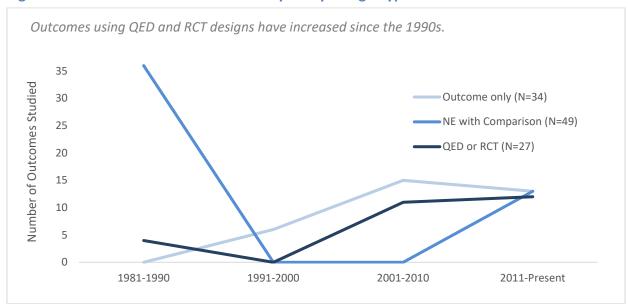


Figure 7. Number of Outcomes Studied by Study Design Type and Year

Outcomes by Study Design and Program. Figure 8 shows that, across all three programs, there were consistently fewer outcomes evaluated using QED or RCT designs compared to non-experimental designs with a comparison group and outcome-only designs. However, a larger proportion of outcomes for SCP were evaluated using QED or RCT. For SCP, 16 of 59 outcomes (27%) were evaluated using QED or RCT compared to 9 of 40 outcomes (23%) for FGP, and 2 of 21 outcomes (10%) for RSVP.

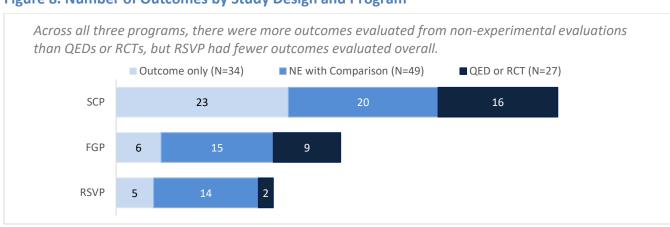


Figure 8. Number of Outcomes by Study Design and Program

Outcomes by Generalizability. Of the 110 outcomes studied, 71 (65%) were evaluated with a high degree of generalizability because the sample was drawn from multiple sites and states (see Figure 9). Of the 27 outcomes evaluated with a QED or RCT design, 21 outcomes (78%) were measured in multiple sites and states. Of the 49 outcomes evaluated with non-experimental designs using a comparison, 35 outcomes (71%) were measured in multiple sites and states. Among the 34 outcomes evaluated with post-tests only, 15 (44%) were based on samples drawn from multiple sites and states. Together, these findings suggest that results from this review can generally be considered generalizable across Senior Corps programs in multiple states and sites.

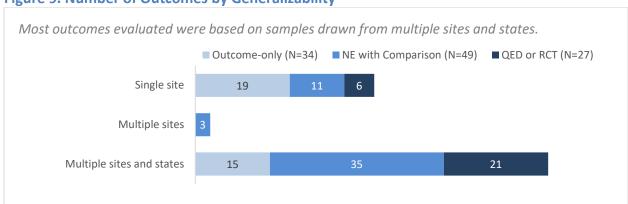


Figure 9. Number of Outcomes by Generalizability

Outcomes by Study Participant. Overall, 64 of the 110 outcomes (58%) focused on impacts to the volunteer, followed by 28 outcomes (25%) that looked at impacts to elderly clients³ (see Figure 10). Eight outcomes (7%) focused on program beneficiaries who were caregivers who received respite or other assistance (predominately from SCP volunteers). Ten outcomes (9%) looked at children ranging in ages from toddlers to high school youth, usually with special needs, that FGP volunteers serve in preschools, K-12 schools, and other institutions.

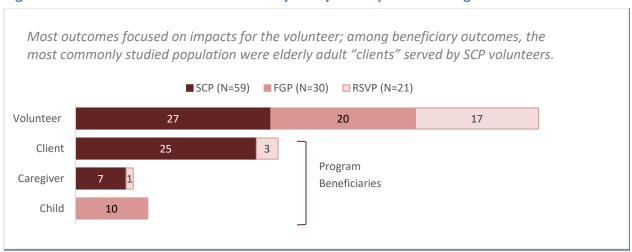


Figure 10. Number of Outcomes Studied by Study Participant and Program

³ As shown in Figure 10, 25 of the 28 client outcomes were based on samples of SCP beneficiaries.

Outcomes for volunteers. Of the 64 outcomes on volunteer impacts, 27 outcomes (42%) focused on Senior Companion volunteers, 20 (31%) on Foster Grandparents, and 17 outcomes (27%) on RSVP volunteers. The most frequently evaluated volunteer outcomes were psychosocial health outcomes; 40 of the 64 outcomes (63%) involved psychosocial health outcomes such as life satisfaction and social connectedness. Physical health, functioning, and economic resources were less frequently evaluated; 14 outcomes (22%) examined physical health improvements for volunteers. Six outcomes (9%) looked at "functioning," which typically referred to volunteers' self-reported overall economic resources, mental health, social resources, and physical health. Economic resources outcomes were studied among SCP and FGP volunteers because these volunteers receive small stipends for their service (see Figure 11).

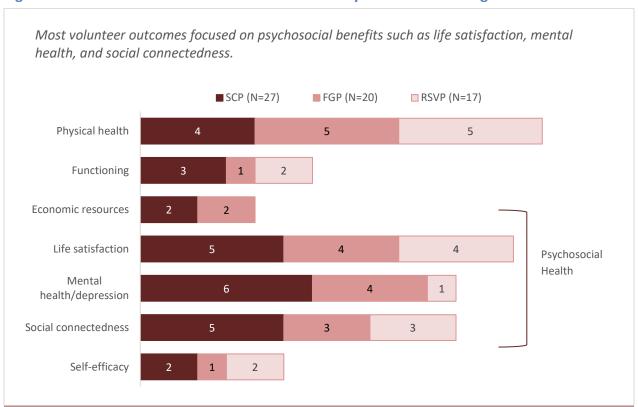


Figure 11. Number of Volunteer Outcomes Studied by Outcome and Program

Outcomes for client (older adult) beneficiaries. Clients were older adults receiving assistance or meeting regularly with the volunteer, usually in the client's home. Twenty-eight client outcomes were studied. Of these, 25 outcomes (89%) focused on Senior Companion clients, and 3 outcomes (11%) were based on RSVP clients. Sixteen of the 28 outcomes (57%) involved psychosocial health outcomes related to social isolation, such as depression and social connectedness, topics that are of special concern for homebound seniors. Six outcomes (21%) looked at the client's "functioning," which typically referred to activities of daily living, such as managing basic household and physical needs. A few of the client outcomes looked at physical health and improvements in access to health-related community services for these clients (see Figure 12).

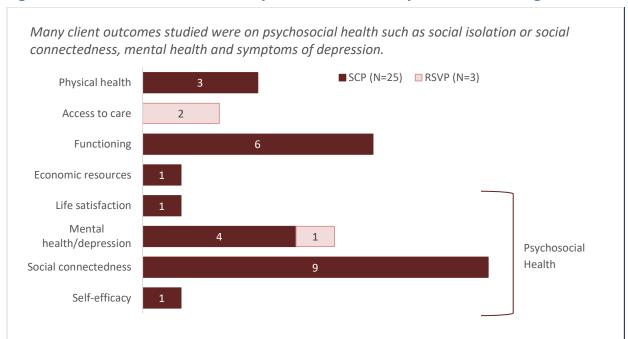


Figure 12. Number of Client Beneficiary Outcomes Studied by Outcome and Program

Outcomes for caregiver beneficiaries. Caregivers were family or friends responsible for the care of an older person receiving support from an SCP volunteer. Eight caregiver outcomes were studied. Seven of the 8 outcomes (88%) focused on caregivers assisted by the Senior Companion volunteers; one outcome (12%) measured caregiver benefits from an intervention where RSVP volunteers delivered a three-session reminiscence and creative activity to palliative care patients and their caregivers. Like client beneficiaries, the most frequently evaluated were psychosocial health outcomes; specifically, five of the eight outcomes (63%) looked at depression and social connectedness. One outcome examined improvements in the caregiver's self-reported health; another looked at self-efficacy, and a third looked at "functioning," which, in this case, was related to lessening demands on the caregiver (see Figure 13).

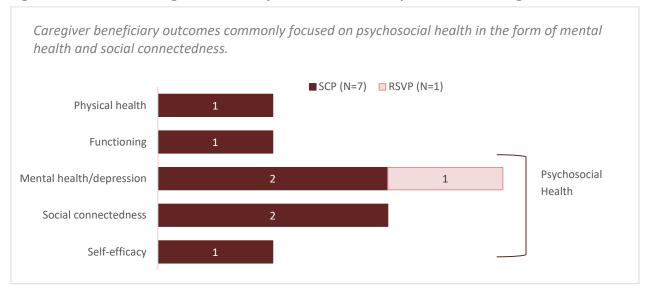
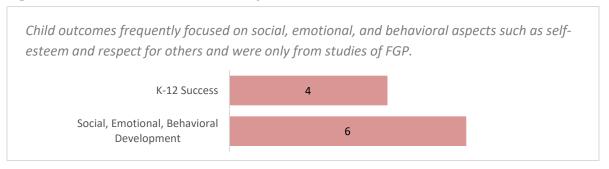


Figure 13. Number of Caregiver Beneficiary Outcomes Studied by Outcome and Program

Outcomes for child beneficiaries. The 10 outcomes, all based on samples of Foster Grandparent beneficiaries, looked at children ranging from toddlers to high school youth. The most commonly evaluated outcomes (6 of the 10) were social, emotional, and behavioral development, and these measures looked for changes in self-esteem, respect for others, and relationships with other children. Another four outcomes (40%) looked at K-12 success such as improved academic performance, school attendance, and study habits, although these studies also included behavioral aspects such as conflict resolution and avoidance of risky behaviors (see Figure 14).





Senior Corps Effectiveness - Results from the Systematic Review

This section presents key findings from our systematic review to assess the strength of the evidence base for Senior Corps' impact on the volunteers, the beneficiaries whom the volunteers serve, and the local communities where service occurs. We count the number of outcomes with positive results and then analyze these counts by study design for each of the three Senior Corps separately. For outcomes evaluated using QED or RCT, a positive outcome typically indicates a statistically significant result (p<.05). However, for outcomes evaluated using non-experimental designs with a comparison group and outcome-only designs, we count positive outcomes even when the statistical significance of the result is not noted. We use the count of positive outcomes to describe trends in evaluation findings across each of the three programs and outcome areas. We also compare findings from the Senior Corps literature to findings from the research on volunteering among older adults more generally.

What is the strength of the evidence base for Senior Corps?

Overall Positive, Null, and Negative Findings. Of the total of 110 outcomes, 75% (82 out of 110) showed positive impacts of Senior Corps participation (see Figure 15). Each of the three programs had a high percentage of positive outcomes. Specifically, 71% of SCP outcomes were positive (42 out of 59), 77% of FGP outcomes were positive (23 out of 30), and 81% of RSVP outcomes were positive (17 out of 21).

Across the three Senior Corps programs, there were fewer outcomes evaluated using QED or RCT designs; as such, it may not be surprising that fewer positive outcomes were from this type of design. Specifically, as shown in Figure 15, of the 82 positive outcomes, 41% (N=33) were found in outcome-only studies, 38% (N=31) were in non-experimental studies with a comparison group, and 22% (N=18) were in RCT or QED studies.

Figure 15 also shows the number of null or negative results by program. Of the 110 outcomes studied, 23% of outcomes (N=25) had null results. These null results almost all arose in situations where Senior Corps volunteers or beneficiaries were not doing any better or worse than individuals in a comparison group (typically a waiting list)⁴. The number of null outcomes ranged from 4 to 17 within each program, with the highest proportion of null outcomes in the SCP program (24%, 14 out of 59); 23% of the FGP outcomes were null (7 out of 30), and 19% of RSVP results were null (4 out of 21).

Of the 110 outcomes studied, only 3% (N=3) had negative results, and these negative findings should be interpreted with caution because all of these came from non-experimental studies and were not tested for statistical significance. All three negative findings were from studies of SCP beneficiaries. The first negative result was from a 2017 study that found that SCP caregivers had higher levels of depression than caregivers from a nationally representative (HRS) sample, but since the two groups were not matched this could be a reflection of differences in the

⁴ The majority of these null results came from non-experimental studies (N=16, 62%) in which Senior Corps volunteers and beneficiaries may not have been equivalent at baseline. Additionally, individuals in the comparison groups in these studies might have received additional outside services. Together, these two trends could weaken these studies' ability to detect the impact of Senior Corps services and may suggest that null findings do not necessarily indicate a lack of positive Senior Corps impact.

background and demographic characteristics of the two groups. The second negative result was from a 1990 study that found that SCP clients showed declines in their ability to perform activities of daily living over the study period while comparison clients did not. However, the study did not control for baseline differences between the groups or assess whether the decline over time significantly differed for SCP clients relative to comparison clients. Finally, the third negative result was from a 2006 study that found that SCP clients were more depressed, fatigued, and confused than a national sample of adults of all ages. While this is a negative finding, it is not necessarily a negative impact of Senior Corps services given that the comparison sample included adults of all ages and health statuses while SCP services are restricted to clients who have greater than average needs for support. Because of the low number of negative findings and the limitations of these findings, throughout the rest of the report (everything after Figure 15), we present these negative results along with the null results under the heading of "null" results.

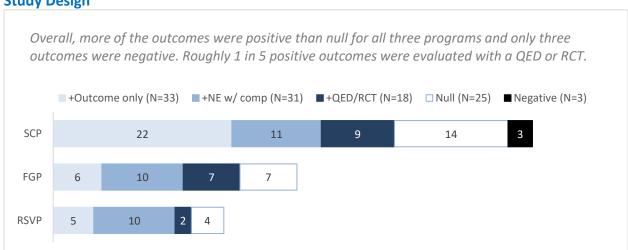


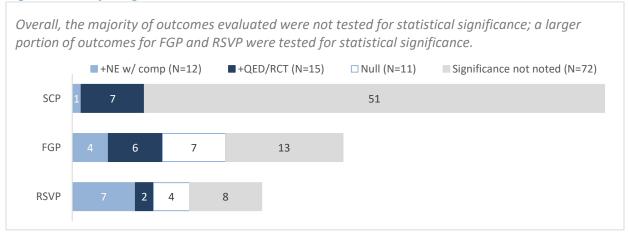
Figure 15. Number of Outcomes with Positive, Null, and Negative Results by Program and Study Design

Positive and statistically significant findings. Of the 110 outcomes, 35% were tested for statistical significance (38 out of 110). Figure 16 shows the number of outcomes tested for statistical significance by program and the number of outcomes that were positive and statistically significant. Of the outcomes tested for statistical significance, 71% (27 out of 38) were positive, and most of these were from studies that used either a QED or RCT (N=15) or from non-experimental studies with a comparison group (N=12). For SCP, most of the positive statistically significant outcomes were from QED or RCT designs (7 out of 8), whereas for FGP, positive statistically significant outcomes were more evenly split between study designs; four were in non-experimental studies, and six were in RCTs or QEDs. For RSVP, positive statistically significant outcomes were mostly from non-experimental studies with a comparison group designs (7 out of 9).

Figure 16 also shows the number of outcomes tested for statistical significance and found to be null. There were no statistically significant negative outcomes. Of 38 outcomes for which statistical significance was tested, 32% (12 out of 38) were found to be null. Specifically, none of the SCP outcomes were null; 41% of the FGP outcomes (7 out of 17) tested for statistical

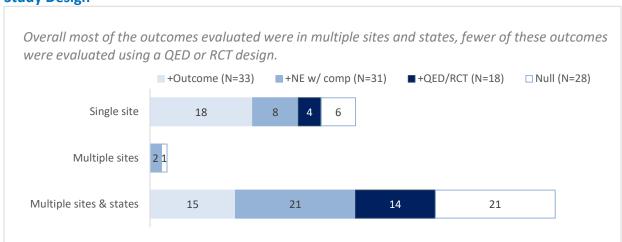
significance were null; and 4 of the 13 RSVP outcomes tested for statistical significance were null (see Figure 16).

Figure 16. Number of Outcomes with Positive and Null Results Tested for Statistical Significance by Program



Positive findings by generalizability. As previously noted, 74% (81 out of 110) of the overall outcomes studied were positive. Of those positive results, 62% (50 out of 81) were from studies that were at least somewhat generalizable—in other words, samples were drawn from both multiple states and sites. Most positive generalizable results were from non-experimental studies with a comparison group; fewer of the positive results were from outcome-only studies or studies that used a QED or RCT. Specifically, almost half (21 out of 50) of the positive outcomes from generalizable studies were from non-experimental studies; 15 were from outcome-only studies; and 14 were from QEDs or RCTs. Studies conducted in multiple states and multiple sites or in multiple states with multiple sites and multiple populations were most likely to use a QED or RCT. Figure 17 also shows the number of null results by type of outcomes from generalizable studies. Among all generalizable studies, 30% (21 out of 71) of outcomes were null.

Figure 17. Number of Outcomes with Positive and Null Results by Study Generalizability and Study Design



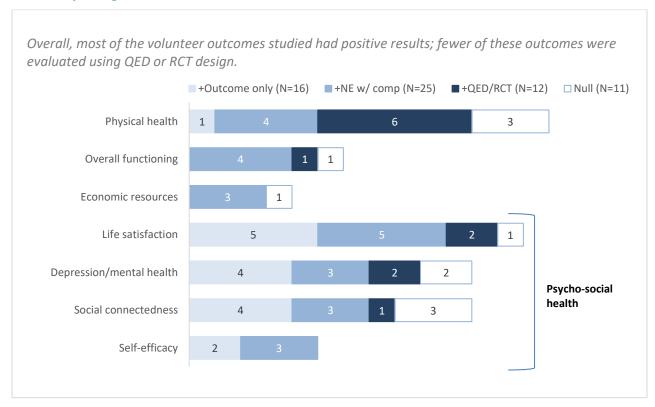
What is the impact of Senior Corps service on volunteers and beneficiaries?

To answer this question, we analyzed count of positive results by types of outcomes evaluated. This section first presents results on volunteer outcomes followed by outcomes for beneficiaries including clients and caregivers. We did not find any evaluation studies that examined impact on communities.

Volunteer outcomes. The types of volunteer outcomes evaluated include physical health, functioning, economic resources, and psychosocial health such as life satisfaction, depressive symptoms/mental health, social connectedness/social isolation, and self-efficacy. The majority (81%) of these volunteer outcomes (52 out of 64 outcomes) had positive results. Physical health was the most frequent positive volunteer outcome evaluated in RCT or QED designs; 6 of the 11 RCT or QED designs with positive impacts were on volunteers' physical health outcomes (see Figure 18). It is also notable that volunteer life satisfaction outcomes were most consistently found to be positive across all study designs compared to the other types of volunteer outcomes; 12 of the 52 positive outcomes were life satisfaction outcomes.

Figure 18 also shows the number of null results by type of outcomes. Of the 64 volunteer outcomes studied, only 17% (11 out of 64 outcomes) were found to be null. The number of null results ranged from 0 to 3 within each type of outcome, with the largest number of null results found in social connectedness. Specifically, 3 of the 11 social connectedness outcomes studied (27%) were null (see Figure 18).

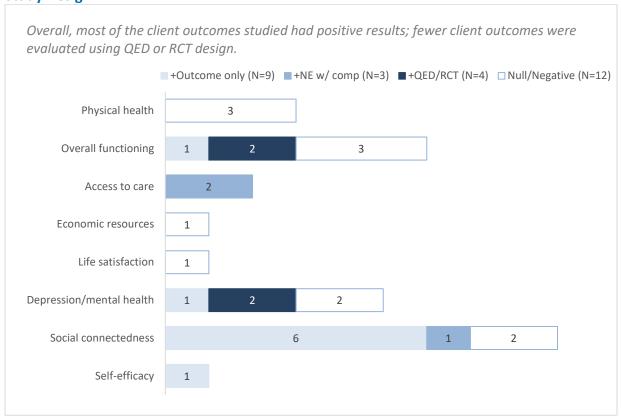
Figure 18. Number of Volunteer Outcomes with Positive and Null Results by Type of Outcome and Study Design



Client outcomes. Evaluation studies examined 28 outcomes for elderly adult clients (predominately those served by SCP volunteers), of which 57% (16 out of 28) had positive results⁵. As shown in Figure 19, 9 of the positive outcomes (56%) were found in outcome-only studies, 3 in non-experimental studies (19%), and 4 in QED or RCTs (25%). Social connectedness was the most frequent positive client outcome (9 out of 16 positive outcomes), but only from outcome-only or non-experimental studies. Overall functioning and depression/mental health had the only positive impacts from QEDs or RCTs, each with two such positive outcomes.

Figure 19 also shows the number of null or negative results by type of outcomes. Of the 28 client outcomes studied, 43% (12 out of 28 outcomes) were found to have null or negative results; ten were null results, and as previously mentioned, two of the client outcomes had negative results in the areas of functioning and depression/mental health. The number of null results ranges from 0 to 3 per outcome type, with the largest number of null results in overall functioning, with 3 out of the 6 overall functioning outcomes being null (50%).

Figure 19. Number of Client Outcomes with Positive and Null Results by Type of Outcome and Study Design

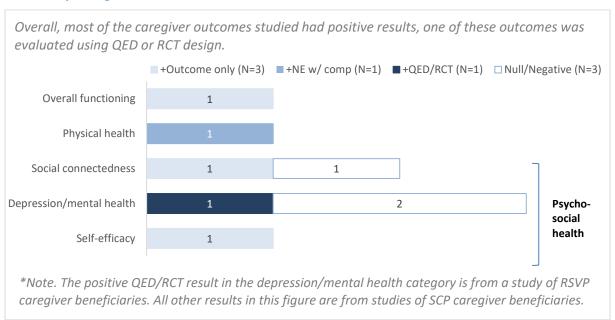


⁵ As illustrated in Figure 10 above, 25 of the 28 client outcomes came from studies of SCP while 3 of the outcomes came from studies of RSVP.

Caregiver outcomes. Caregiver outcomes were measured predominately for SCP, except for one QED/RCT outcome where RSVP volunteers delivered an intervention to palliative care patients and their caregivers with the goal of reducing symptoms of depression for both (see the note in Figure 20 below). Evaluation studies examined eight caregiver outcomes, of which 63% (5 out of 8) had positive results. Most positive results were from outcome-only evaluation studies or from non-experimental studies with a comparison group; fewer of the positive results were from studies that used a QED or RCT. As shown in Figure 20, three positive outcomes were found in outcome-only studies, one in a non-experimental study, and one in a QED or RCT study. Five outcome areas had just one positive outcome each (overall functioning, physical health, social connectedness, depression/mental health, and self-efficacy). The positive overall functioning, social connectedness, and self-efficacy outcomes were from outcome-only studies; the positive physical health outcome was from a non-experimental study; and the only positive outcome from a QED or RCT was depression/mental health. It is important to note that the single depression/mental health outcome from a QED or RCT was also the only RSVP caregiver outcome while all other caregiver outcomes were SCP.

Figure 20 also shows the number of null or negative results by type of outcome. Of the 8 caregiver outcomes studied, 38% (3 out of 8 outcomes) were found to have null or negative results. As previously mentioned, the single negative caregiver outcome was in the area of social connectedness. Two out of the five caregiver outcomes types had null results: social connectedness and depression/mental health. The number of null results ranges from 0 to 2 per outcome type, with the largest number of null results in depression/mental health. Specifically, two out of the three depression/mental health outcomes were null (67%).

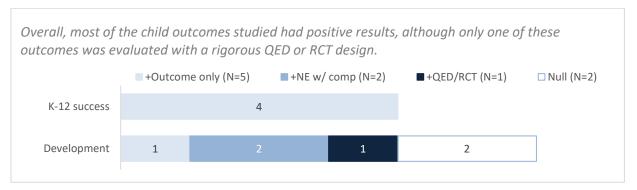
Figure 20. Number of Caregiver Outcomes with Positive and Null Results by Type of Outcome and Study Design



Child outcomes (from FGP). Evaluation studies examined 10 child outcomes from FGP beneficiaries, of which 80% (8 out of 10) were positive. Most positive results were from outcome-only evaluation studies or from non-experimental studies with a comparison group; fewer of the positive results were from studies that used a QED or RCT. Specifically, as shown in Figure 21, five positive outcomes were found in outcome-only studies, two in non-experimental studies, and one in a QED or RCT. Both outcomes types, K-12 success and development (social, emotional, behavioral) had four positive outcomes. All the K-12 success positive outcomes were from outcome-only studies. Of the positive development outcomes, one was from an outcome-only study, two were from non-experimental studies, and one was from a QED or RCT.

Figure 21 also shows the number of null results by type of outcomes. Of the 10 child outcomes studied, 20% (2 out of 10 outcomes) were found to have null results. Development had more diversity in types of studies and types of results and had the only null outcomes. Two out of six development outcomes had null results (see Figure 21).

Figure 21. Number of Child Outcomes with Positive and Null Results by Type of Outcome and Study Design



What is the effectiveness of specific Senior Corps models or interventions?

To answer this question, we examine the effectiveness of each of the three Senior Corps programs by counting the number of positive volunteer outcomes for each program and separating these findings by type of outcomes evaluated. Next, we expand the definition of Senior Corps models and interventions to determine whether any research exists to show how Senior Corps impacts vary based on programmatic elements such as dosage/hours (e.g., weekly volunteer hours and hours of support to beneficiaries), stipend amounts, other programmatic elements (e.g., different types of tutoring or support services).

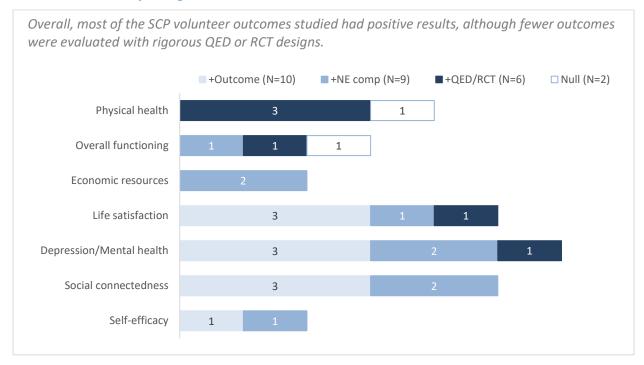
⁶ Program-specific results are presented at the volunteer-level but not the beneficiary level because most beneficiary outcomes are already program-specific. In particular, as noted above, Figures 19-20 show caregiver and client outcomes that are largely drawn from SCP, while Figure 21 shows child outcomes that are exclusively from FGP.

Effectiveness of the Senior Corps Programs for Volunteers

Senior Companion Program volunteer impacts. Senior Corps evaluations examined 27 SCP volunteer outcomes, of which 93% were positive (25 out of 27). Most positive volunteer results were from outcome-only evaluation studies or from non-experimental studies with a comparison group; fewer of the positive results were from studies that used QED or RCT. Specifically, as shown in Figure 22, 10 outcomes were from outcome-only studies; 9 were from non-experimental studies with a comparison group or pre-to-post designs; and 6 were from QEDs or RCTs. Physical health was the most frequent positive volunteer outcome from RCT or QED studies; 3 of the 6 RCT or QED studies with positive impacts were on volunteers' physical health outcomes (see Figure 22). However, the outcome type with the most positive outcomes in total was depression/mental health (6 out of 25). In fact, most of the positive outcomes for volunteers were in psycho-social health (18 out of 25), but only two positive outcomes were from QEDs or RCTs, one each in depression/mental health and life satisfaction.

Figure 22 also shows the number of null results by type of outcome. Of the 27 SCP volunteer outcomes studied, only 7% (2 out of 27) had null results. Only two categories had null results, physical health and overall functioning. None of the psycho-social health outcomes, which had the highest number of positive outcomes, had null results.

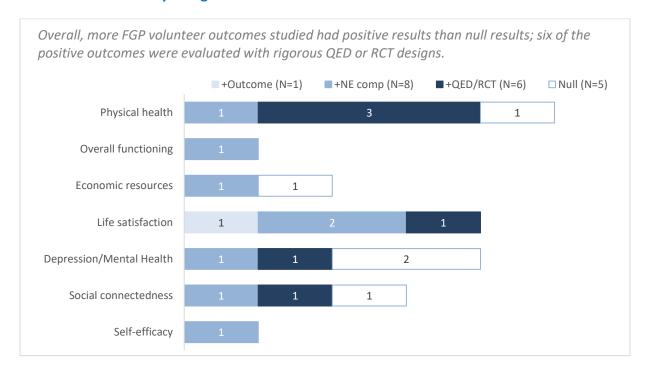
Figure 22. Number of SCP Volunteer Outcomes with Positive and Null Results by Type of Outcome and Study Design



FGP volunteer outcomes. Of the 20 FGP volunteer outcomes studied, 70% (14 out of 20) had positive results. Most positive FGP volunteer results were from non-experimental studies with a comparison group or from a QED or RCT, and only one of the positive results was from an outcome-only study. Specifically, as shown in Figure 23, one positive outcome was from an outcome-only study; eight positive outcomes were from non-experimental studies; and five were from QEDs or RCTs. Physical health was the most frequent positive volunteer outcome in QED or RCT studies; 3 of the 4 positive outcomes from QED or RCT studies were volunteers' physical health outcomes (see Figure 23). Two psycho-social health outcomes, life satisfaction and depression/mental health, each had one positive outcome in a QED or RCT, but life satisfaction had more positive results overall (4 out of 4).

Figure 23 also shows the number of null results by type of outcomes. Of the 20 FGP volunteer outcomes, 25% (5 out of 20) had null results. The number of null results ranges from 0 to 2 per outcome type, with the largest number of null results in the psycho-social outcomes of depression/mental health.

Figure 23. Number of FGP Volunteer Outcomes with Positive and Null Results by Type of Outcome and Study Design

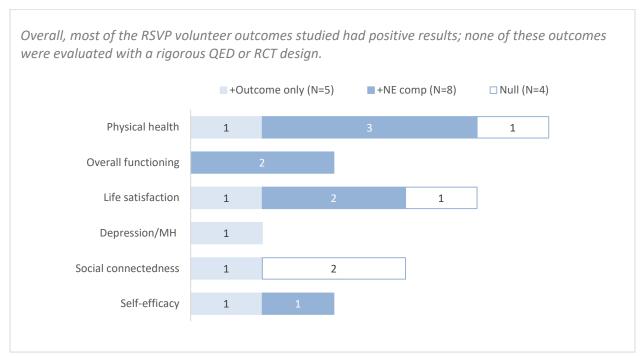


RSVP volunteer outcomes. Of the 17 RSVP volunteer outcomes studied, 76% (N=13) had positive results. All of the positive volunteer results were from outcome-only evaluation studies or from non-experimental studies with a comparison group; none of the positive results were from studies that used a QED or RCT. For volunteers, the most positive outcomes were in the areas of physical health and life satisfaction. Specifically, physical health had four positive outcomes, three of which were from non-experimental studies with a comparison group. In addition, life satisfaction had three positive outcomes, two of which were from non-experimental studies with a comparison group. The psycho-social outcomes of depression/mental health and

social connectedness had the fewest positive outcomes (one each), both of which were from outcome-only studies.

Figure 24 also shows the number of null results by type of outcomes. Of the 17 RSVP outcomes, 24% (4 out of 17) had null results. The number of null results ranges from 0 to 2 per outcome type, with social connectedness having the highest number of null outcomes as well as the highest number of null outcomes relative to positive outcomes (two out of three). Though physical health and life satisfaction also had one null outcome each, they also had more positive outcomes than other categories (Figure 24).

Figure 24. Number of RSVP Volunteer Outcomes with Positive and Null Results by Type of Outcome and Study Design



Effectiveness of Specific Senior Corps Programmatic Elements

In addition to determining how Senior Corps impacts vary across the three programs, we were also interested in identifying studies that showed how Senior Corps impacts vary based on programmatic elements such as dosage/hours (e.g., weekly volunteer hours and hours of support to beneficiaries), stipend amounts, or other programmatic elements (e.g., different types of tutoring or support services). Although some studies compared Senior Corps program dropouts to those who stayed in the program, these studies did not investigate whether or not there was an ideal dosage (e.g., number of hours served) in order for program benefits to occur. Additionally, there were no outcome or impact evaluations showing how the impact of the Senior Corps program directly varied based on programmatic elements.

How do the findings from research about Senior Corps compare to findings from the research on volunteering among older adults more generally?

To answer this question, we reviewed 12 published articles (see Appendix D), including 6 meta-analyses that provided a comprehensive summary of the current state of the research on the impacts of volunteering among older adults and 6 systematic reviews that were widely cited in the literature. Our analytic approach to this question is a qualitative synthesis of the general research literature; we then compare the findings from this qualitative synthesis to the results presented in the current report.

Physical Health and Mortality Benefits for Older Volunteers

Overview of the literature. The research literature consistently shows that volunteering is associated with physical health benefits for older adults such as self-rated health and physical functioning (e.g., walking up stairs) (Anderson et al, 2014; Okun et al, 2013; Von Bonsdorff, M. & Rantanen, T., 2011; Population Reference Bureau, 2011; Grimm et al, 2007; Onyx, J., & Warburton, J., 2003) as well as reduced mortality risk (Anderson et al, 2014; Jenkinson et al, 2013; Okun et al, 2013; Population Reference Bureau, 2011; Grimm et al, 2007; Onyx, J., & Warburton, J., 2003). The literature suggests a threshold effect where physical health benefits are evident at moderate but not at high-intensity volunteer service commitments (Anderson et al, 2017; Von Bonsdorff, M. & Rantanen, T., 2011), where high-intensity is defined at approximately 100 annual hours (2 to 3 hours per week); Anderson and colleagues suggests this this threshold is similar for physical benefits.

Findings from our review. Our synthesis of the Senior Corps literature shows similar findings to the broader literature. Senior Corps national service is associated with physical health benefits. This was true for volunteers in all three Senior Corps programs although more outcomes were evaluated with RCT/QED designs for SCP and FGP volunteers than for RSVP volunteers. Overall functioning, which usually included some aspect of self-reported physical health, improved for volunteers in all three program types and was most frequently evaluated using non-experimental designs. None of the Senior Corps evaluations examined mortality risk outcomes.

Psychosocial Benefits for Older Volunteers

Overview of the literature. The general literature shows volunteering is associated with psychosocial benefits for older adults. These psychosocial benefits include reduced symptoms of depression (Anderson et al, 2014; Population Reference Bureau, 2011; Von Bonsdorff, M. & Rantanen, T., 2011; Grimm et al, 2007; Onyx, J., & Warburton, J., 2003), improvements in life satisfaction and sense of well-being (Anderson et al, 2014; Von Bonsdorff, M. & Rantanen, T., 2011; Morrow-Howell, N., 2010; Grimm et al, 2007; Onyx, J., & Warburton, J., 2003; Wheeler et al, 1998), and self-esteem (Anderson et al, 2014; Onyx, J., & Warburton, J., 2003). One review also found evidence for improved cognitive functioning among older adult volunteers (Population Reference Bureau, 2011).

Findings from our review. Our synthesis of the Senior Corps literature shows similar results in that national service is associated with positive psychosocial health benefits for volunteers. Our synthesis shows Senior Corps volunteers in all three programs had reduced

symptoms of depression although there was more evidence of benefits to SCP volunteers. FGP studies showed mixed results, and there was only one (outcome-only) outcome that looked at depression among RSVP volunteers. Of the nine positive outcomes for depression/mental health, two were evaluated using RCT/QED design; another three were evaluated using non-experimental designs with a comparison group; and four were evaluated using outcome-only designs.

Social connectedness was measured as perceived social support, availability of a social network or social resources, or feelings of loneliness or isolation. Here again, there is more evidence of benefits to SCP volunteers; social connectedness outcomes for FGP and RSVP volunteers showed mixed results. However, none of the social connectedness outcomes were measured with rigorous designs.

Volunteer life satisfaction was measured frequently and defined in various ways (e.g., perceived sense of purpose, self-esteem, overall quality of life); all three programs consistently showed benefits. Two of these outcomes, for FGP and SCP volunteers, were measured using a rigorous design; another five were non-experimental designs with a comparison group. Self-efficacy outcomes were positive across programs, but there was less data in this area, and all outcomes were measured with non-experimental designs.

Benefits of Intergenerational Connections

Overview of the literature. We found two articles that specifically examined the benefits of intergenerational programs aiming to bring young and old together through interventions designed to encourage interaction. One of the articles is a meta-analysis that examined the benefits to older adults; the second is a review that examined the benefits to both older adults and children.

Yan Su (2017) examined the effectiveness of intergenerational programs for older adults through a meta-analysis of 15 studies using pre-post assessments conducted between 2000 and 2016. Two programs involved younger participants serving elderly participants; four were elderly participants serving younger ones; and ten of the programs involved mutual support. Activities included reminiscence, learning English, picture book reading, listening to music, excursions, and other leisure activities. Younger participants ranged from preschool-aged children to college-aged youth.

The meta-analysis found that, overall, intergenerational programming was effective for older adults' psychological well-being (enhanced life satisfaction and self-esteem; reduced depressive symptoms), but the effectiveness varied. The meta-analysis found that the younger participants' age was significantly related to higher program effectiveness for older adults. Intergenerational programming was most effective for the older participants when the younger participants were college aged.

In their review, Haber, E.A., & Short-DeGraff, M.A. (1989) found that most intergenerational programs are reported by staff and participants to be successful. The review considered intergenerational programs that aim to bridge the gap between young and old and challenge stereotypes that each generation may have about the other. These include intergenerational volunteer programs, nursery schools, and childcare that may be incorporated into a retirement home or adult day care facility. The review found reports of positive findings of

school age children's attitudes toward the elderly, but findings were not consistent across studies. For example, one study found that preschoolers seemed to hold more negative attitudes after a year of visiting a nursing home. The review found little information on how intergenerational programs affect elderly participants' attitudes toward children although it noted other benefits for the elderly. One systematic study found cognitively impaired elderly participants at an intergenerational nursery school program showed enhanced social interaction. Another study found participants reported improved self-esteem, life satisfaction, and health that appeared to be related to their participation in an intergenerational volunteer program.

Findings from our review. Although RSVP volunteers may participate in activities that serve children, in our research, only the Foster Grandparent Program was an intergenerational model. We did not find research that looked at older adults' changes in attitude toward children, or children's change in attitude toward elders; however, we did find evidence for better physical health outcomes and life satisfaction for Foster Grandparents. Four outcomes, including three measured with RCT/QED designs, showed Foster Grandparents reported better physical health than a comparison group. Four outcomes, including one RCT/QED, showed Foster Grandparents reported higher life satisfaction ratings. Our research did not find consistent results on how participation in FGP affects older adults' social connectedness or symptoms of depression.

Benefits to children receiving support from Foster Grandparents are noted below.

Benefits to People Served by Volunteers

Overview of the literature. While most reviews and meta-analyses focused on benefits to older adult volunteers, two discussed positive effects for those served by volunteers. Wheeler et al (1998) conducted a meta-analysis that included nine studies focusing on benefits to people served by volunteers; clients were older people and their families (seven studies) and children with disabilities (two studies). The meta-analysis found that 85% of clients who received service from an older volunteer did better (e.g., less isolated or depressed) than the average person in comparison conditions did. In addition, the meta-analysis found that clients as well as volunteers benefited most when the service involved face-to-face assistance.

Siette, J. et al (2017) reviewed studies on "befriending" interventions involving one-on-one support from volunteers that aim to alleviate loneliness and provide social support, much like SCP, for individuals with physical or mental health impairments. They found moderate quality evidence to support the intervention – an overall improvement benefit in patient-reported outcomes – though a small effect size.

Findings from our review. While there were more Senior Corps studies that focused on volunteers than beneficiaries of services, we did find 10 studies that focused on older adult clients and 5 studies that looked at caregivers receiving respite services from Senior Companion or RSVP volunteers. SCP beneficiaries studied showed improvement in social connectedness, client functioning, and symptoms of depression. There were three RSVP client and caregiver outcomes that showed decreased caregiver depression and clients increasing access to care.

Clients were older adults at risk of social isolation due to becoming frail or homebound. Like the Wheeler et al (1998) and Siette, J. et al (2017) publications, our research showed mostly positive results on psychosocial benefits. Two RCT/QED outcomes showed improvement in mental health indicators and symptoms of depression, and there were positive results for increased social connectedness.

Our research did not show positive physical health benefits for clients receiving assistance; however, this may be a reflection on the clients' needs rather than the service itself. Research was mixed on clients' improvement in functioning (i.e. activities of daily living), with three of the six outcomes showing benefits. The two outcomes, based on a non-experimental with comparison design, showed positive results on clients' increased access to care.

For caregivers who are responsible for homebound or frail adults, respite services may show benefits related to reduced stress and time constraints such as improved social connectedness, physical and mental health. There was some data supporting psychosocial benefits; one RCT/QED showed some initial postintervention gains for palliative caregivers who reported increased meaning in life; another outcome-only study found increased social connectedness. Additionally, one non-experimental comparison outcome showed positive physical health benefits.

Our systematic review included five studies (10 outcomes) that focused on the benefits to children served by Foster Grandparent volunteers (including many children with special needs and disabilities). Although the meta-analysis conducted by Wheeler et al (2017) did not specify how children with disabilities benefit from their time with volunteers, our research found positive results for 8 of the 10 outcomes studied, especially children's social/emotional or behavioral development. However, like the client and caregiver results, most outcomes were not evaluated using a rigorous design; only one was studied using an RCT/QED, and two used non-experimental with comparison group designs.

Discussion

This final section of this report synthesizes the findings of our systematic review to address the third research question: "What are the learnings, best practices and key resources that can inform the work of CNCS, its grantees, and other stakeholder groups?" We explore learnings and key findings from our review, identify the potential limitations of our review, and then conclude with recommendations for future research that may inform the work of CNCS, its grantees, and other key stakeholders.

Learnings and Key Findings

Strength of the evidence base for Senior Corps. Results suggest that national service with Senior Corps is associated with positive physical and psychosocial health outcomes, with 75% of outcomes having positive results. However, the evidence base of this research could be strengthened since only 22% of these positive results used rigorous QED or RCT designs, and only 32% of these positive results were shown to be statistically significant. As such, evaluation studies that employ designs that address selection bias and use inferential statistics to test for statistical significance will be helpful in strengthening the evidence base over time.

Impacts on volunteers and the communities they serve. Senior Corps' impact was most commonly measured for the volunteer rather than the beneficiary or the community. We found 81% of the volunteer outcomes had positive results, largely in the domains of physical health and life satisfaction, with the most rigorous evidence being found for physical health. There was also evidence of Senior Corps impacts on older adult clients (primarily among beneficiaries of SCP services); this evidence was also predominately based on findings from non-experimental designs and concentrated in the area of social connectedness. There were few outcomes examining Senior Corps' impacts on caregivers (N=8) or children (N=10). Finally, there were no studies at all examining community-level impacts of Senior Corps services. These results suggest the need for additional research looking at beneficiary impacts, especially among caregivers and children, as well as community-level impacts. These results also indicate the need to use designs that address selection bias.

Strength of the evidence for SCP. There were far more outcomes looking at the impact of SCP compared to FGP and RSVP. Most of the SCP outcomes studied did have positive results, and this was particularly pronounced among volunteer outcomes, where 93% of the outcomes were positive and 3 positive physical health outcomes came from QED or RCT designs. SCP also showed evidence of potential impacts on volunteer's psychosocial health. In addition to showing benefits to the volunteer, there were also promising findings suggesting benefits to SCP clients and caregivers as well. The majority of the studies of client impacts were from SCP evaluation studies, with results suggesting that SCP benefits clients' social connectedness. Studies of caregiver impacts were also largely based on SCP beneficiaries, but none of these caregiver outcomes were examined with a QED or RCT design.

Strength of the evidence for FGP. Outcomes from FGP were less common than SCP outcomes. The majority of FGP outcomes studied looked at impacts on the volunteer, and 70% of volunteer outcomes had positive results. The most common positive impacts were for physical health and life satisfaction, with the most rigorous evidence found in the physical health domain (3 QED/RCT results). Although there were very few outcomes examining FGP impacts on

children (N=10), those included showed evidence of K-12 success and improvement on development outcomes, with 80% of the results being positive. This suggests that future research may be warranted to further demonstrate the positive impact of FGP both on volunteers and the children they serve.

Strength of the evidence for RSVP. Findings for RSVP almost exclusively looked at impacts on volunteers, with 76% of the outcomes having positive results. The most common positive impacts were in physical health and life satisfaction. There was only one outcome evaluated using QED/RCT design, so the additional use of these designs would strengthen the evidence base for RSVP.

Findings in comparison to the literature on volunteering in older adults. The findings from our current review of the Senior Corps literature generally align with the broader research on the impact of volunteering among older adults. Like the findings in the general literature, our systematic review of the Senior Corps literature found physical health and psychosocial health benefits for the volunteers. In general, our review found relatively few outcomes looking at benefits to the people being served by the Senior Corps volunteers. However, the outcomes that were evaluated showed improvement on clients' sense of social connectedness. There were only a handful of outcomes looking at impacts for SCP caregivers and children served by FGP, and these outcomes generally aligned with the positive findings from the broader literature. Finally, although the larger literature suggested that volunteering may have benefits to the volunteers' mortality and could facilitate intergenerational connections, these outcomes have not been evaluated in the Senior Corps literature.

Limitations of the Evidence Base

This review shows positive evidence of the impact of Senior Corps programs on volunteers and beneficiaries. There are three main limitations to the current evidence base: the rigor of the designs, the timing of study data collections, and the limited availability of Senior Corps reports. The majority of the outcomes were evaluated using non-experimental design without a comparison, and only one in four outcomes were evaluated with a design that addressed selection bias (e.g. an RCT or QED) and had a high level of internal validity. That being said, the majority of findings were based on samples pulled from multiple sites and multiple states, so they could be considered to have a high degree of external validity or generalizability. Second, even though our review was based on studies from 1980 to the present, 42% of the outcomes included in our review were collected prior to the year 2000 (more than 20 years ago). While the core components of the Senior Corps program have not changed significantly between 1980 and the present, as changes to program administration and policy are implemented, the findings from the current evaluation studies may become less applicable. Ongoing rigorous evaluation is needed to determine whether and how the evidence base from the existing body of studies may differ under new program administration and policy. Finally, although our systematic review identified 67 Senior Corps evaluation reports to consider for inclusion (see Appendix C for a full annotated bibliography of all reports identified), we did see references to several other large evaluations of Senior Corps programs in the 1980s (under the ACTION agency) that were unable to be located. Since we could not confirm the existence of these reports, we could not include them in our systematic review; since we can't determine the extent to which the findings of our review would or would not align with the findings of these lost evaluation reports, we consider this a limitation.

Directions for Future Research

The findings of our review speak to several directions of future research including the need for:

- 1. More rigorous evaluation of SC programs overall
- 2. Additional beneficiary studies
- 3. Additional studies on the impact of RSVP

Need for more rigorous evaluation overall. The evidence base of the impact of Senior Corps national service could be strengthened. There are few outcomes evaluated with QED or RCT designs (N=27 outcomes, 24.5%) that account for selection bias. There is a substantial number of non-experimental evaluations with a comparison group (N=49, 44.5%), but these evaluations do not address selection bias. Consequently, it is not possible to document how significantly different the findings are for Senior Corps participants and beneficiaries in comparison to similar eligible adults who do not participate in or benefit from Senior Corps. Furthermore, only 35% of the outcomes were tested for statistical significance, so it is not feasible to conduct a meta-analysis at this time (please see the meta-analysis feasibility memo for additional information on this). To address this, future studies will need to apply more rigorous designs that better address threats to internal validity and clearly demonstrate the unique impact of Senior Corps.

Additionally, future studies should expand the health outcomes to go beyond self-report and consider how Senior Corps participation may impact objective measures such as biometric markers of physical health (e.g.- cholesterol levels, body mass index, HB1Ac levels, or blood pressure) or standardized assessments of mental health (for example the Geriatric Depression Scale). Longevity is another physical health measure that has been examined in the literature but was not included in any of the Senior Corps studies in our review. An integrated mixed methods approach of more rigorous quantitative and qualitative data from volunteers could more deeply explore the complex and multiple ways that volunteering activities promote better physical health.

Need for beneficiary studies. Only 42% of the outcomes included in our review examined impacts on program beneficiaries, and when the beneficiary subpopulation was specified (clients, caregivers, children), this number was even smaller. For example, there were only eight outcomes looking at impacts on caregivers and ten outcomes looking at impacts on children. These results suggest that it would be helpful for CNCS to consider investing in additional beneficiary studies, particularly for SCP caregivers and children served by FGP, in order to determine the program's unique impact on these populations.

Need for more research on RSVP. Finally, our review included relatively few studies and outcomes of RSVP (N=21, 19% of all outcomes), and almost all of these outcomes focused on benefits to the volunteer. Additionally, only 10% of the RSVP outcomes studied were examined using a QED or RCT design, so there is a need for more RSVP evaluation overall and particularly more evaluation of RSVP beneficiaries (at both the individual and community-level) and more rigorous evaluation.

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Appendix A: Senior Corps Timeline



Appendix B. Study Review Form

Section I. Study Characteristics

to address (1-2 sentences).

I.A. Report Information
Report Title:
Date published: (Month/Year):
Report Source:
Data collection date: (free response) The date range should include baseline through final data collection. It is not necessary to describe the range for different waves of data collection.
Author/Evaluator Name:
Author/Evaluator Type: □ Internal evaluator □ External evaluator □ Unclear
Study description (or abstract if available): (free response) Please paste in the study abstract here or include a brief (2-3 sentence) description of the study design and key findings if an abstract is not available.
I.B. Program Information
Grantee Name: (free response) Name of legal applicant or other organizational entity that holds the current or most recent
CNCS grant for the project or program (if known)
Program Name: (free response)
CNCS Focus Area(s): (select all that apply)
□ Capacity Building/Non-profit organizational capacity
☐ Disaster Services
□ Economic Opportunity□ Education
☐ Environmental Stewardship
☐ Healthy Futures
□ Veterans and Military Families
□ Other community priorities (specify under 'CNCS Focus Area Other'):
Community Need: (free response) Brief description of community need or challenge that the evaluated intervention seeks

Intervention name and description: (free response)

Please specify the name of the specific program model or intervention (e.g.- America Reads) being implemented and provide a brief (1-2 sentence) description of the intervention.

Intervention Topic Area: (select all that apply)

	The intervention refers to what programs are doing and not just what they are evaluating.
	Access to health care
	After school program
	At-risk ecosystems
	Awareness and stewardship
	College readiness
	Creating green spaces
	Employability
	Energy efficiency
	Financial education or financial management counseling
	Financial literacy
	Housing
	Independent Living
	K-12 Success
	Legal assistance for veterans
	Mentoring/tutoring
	Non-profit organizational capacity
	Obesity and food
	Other: ESL education
	Participation in a volunteer program
	Post-High School Education Support
	Respite Care
	School readiness
	Summer programs
	Supportive family environments
	Teacher preparation or development
Other (free response):
7 50 4	
Target	Population/Community: (select all that apply)
	Target population refers to the intervention target as well as the subjects of the evaluation.
	Opportunity youth
	Non-profits
	Veterans and Military Families
	Low-income communities
	Rural communities
	Suburban communities
	Urban communities
	Schools (children in schools)
	Senior volunteers
	Tribes
	Home-bound adults
	Other (please specify in 'Target Population Other'):

I.C. Study Design

Type of Evaluation (select all that apply)

- Cost-Benefit or Cost Effectiveness
 Feasibility Is it feasible to do an evaluation of this in the future?

 Feasibility studies are designed to provide information on what types of evaluation strategies might work well with the program as it currently operates and any barriers that have been found that might need to be overcome for the impact evaluation to be conducted, such as time, human resources, and/or budget constraints.

 Implementation (Process) What is my program about? How does my program work? Is it working in the way that I think it should?
 - Assesses the extent to which the program or intervention was implemented as intended. The intention usually is expressed through the program theory and logic model. Can include evaluation of the following:
 - *Fidelity to program design* (or Adherence) the extent to which program components are delivered as prescribed by the model (the proportion of program components delivered compared to the number prescribed, e.g.- only 14 of the 28 key components of the program were administered)
 - Program exposure (or dosage) the amount of program delivered in relation to the amount prescribed by the program model (e.g.- the number of sessions or contacts, attendance, and the frequency and duration of sessions)
 - Program participant responsiveness the manner in which participants react to
 or engage in a program (e.g.- level of interest in the program, perceptions of the
 relevance and usefulness of a program, level of engagement, enthusiasm, and
 willingness to engage in discussion or activities)
 - Program differentiation the degree to which the critical components of a
 program are distinguishable from each other and from other programs. Can also
 refer to the process of identifying the critical components of a program that are
 essential for producing positive outcomes (i.e., component analysis).
 - Participant satisfaction
 - Quality of delivery the manner in which a program is delivered (e.g.- provider preparedness, use of relevant examples, enthusiasm. Interaction style, respectfulness, confidence, and ability to respond to questions and communicate clearly)
 - o Outputs only (how many served)
- □ **Outcomes** Does my program work?
 - Assesses the extent to which the program achieved its outcome-oriented objectives.
 - o Identifies the results or effects of a program
 - o Measures program beneficiaries' change in knowledge, attitude(s), and/or behaviors that result from a program (e.g.- Senior's life satisfaction, improvements over time without an external comparison group)
- ☐ **Impact** Does my program work better than nothing or the usual alternative? What is the value-added of your program?
 - This is a study which includes a comparison group or other counterfactual (e.g., RCT/OED).
 - O An impact evaluation is designed to determine if the outcomes observed among program participants are due to having received program services/ the intervention. Compares

findings in the treatment group to what would have happened in the absence of the program (which usually involves a counterfactual)/

	Review or Meta-Analysis	
	A quantitative statistical analysis of seven Other:	rai separate but similar studies.
Sectio	on II. Methodological Quality	
II.A. S	Study Participant Characteristics	
Partic	ipants – total N: (free response) Describe participant(s) $N(s)$, including comp	arison groups if applicable.
	er (if a primary focus of the intervention):	
	Male	
	Female Not a primary focus of the intervention	
	Not a primary rocus of the intervention	
Race /	Ethnicity (select all that apply and that con	prise at least 25% of the sample):
	American Indian or Alaska Native	

	White	
A	6 D 6	
Ages o	of Beneficiaries Studied (select all apply): No beneficiaries studied	
_	0-5 (Early childhood)	
	6-12 (Childhood)	
	10.15	
	(
	55+ (Older adult)	
Study	Location(s): (free response)	List study locations (city and state).
II.B. 1	Data Collection and Analysis Methods	
Doto T	Fyna (calcat all that apply).	
Data 1	Type (select all that apply): Administrative	
	G 10	
	Interview	
	Focus group	
	Case study	
	Other:	

Analysis Methods (select all that apply): Descriptive statistics: Mean, Median, Mode, and/or Standard Deviations Inferential statistics: Associations/correlations (Pearson's R, Spearman's Rho) Inferential statistics: Differences between two groups on an interval-ratio or ordinal variable (Ttests, Mann-Whitney, Wilcoxin) Inferential statistics: Differences between two groups on a categorical variable (Chi-squared) Inferential statistics: Differences between multiple groups (ANOVA, ANCOVA, MANOVA) Inferential statistics: Regression Other (please specify): II.C. Lessons Learned
11.C. Lessons Learnea
Lessons Learned (Free response) Key lessons learned from the evaluation, intervention modifications to improve effectiveness, inform future evaluations, and use findings for continuous program improvement. In particular, this section will highlight any learnings, best practices, and resources that might inform the work of CNCS, its grantees, or other stakeholder groups.
Section III. Extraction of Study Results - Outcomes
Add outcomes in separate Forms. If including more than four outcomes, they should be confirmatory.
Study: (Pull from dropdown)
Program Type: □ Experience Corps □ Foster Grandparent Program □ Senior Companion Program □ RSVP
Participants Type: □ Program participants □ Program beneficiaries
Study Participant Caregiver Client Child Volunteer Other

Outcon	nes (select all that apply)
	Access to care
	Aging in place - functioning, ADL
	Aging in place - Other
	Aging in place - physical health
	Aging in place - psycho-social health, life satisfaction
	Aging in place - psycho-social health, self-efficacy
	Aging in place - psycho-social health, social isolation and loneliness, social well-being
	Aging in place - psycho-social health, symptoms of depression, mental health
	Awareness of environmental issues
	Benefit to national service member of volunteer - psycho-social health, self-efficacy
	Benefit to national service member or volunteer - other (specify below)
	Benefit to national service member or volunteer - physical health
	Benefit to national service member or volunteer - psycho-social health, life satisfaction
	Benefit to national service member or volunteer - psycho-social health, social isolation and
	loneliness
	Benefit to national service member or volunteer - psycho-social health, symptoms of depression
	Disaster assistance provided
	Energy efficiency
	Financial literacy
	Green jobs
	Housing
	Improving CNCS
	K-12 success
	Non-profit development
	Obesity and food
	Other
	Post-secondary education support
	School readiness (Pre-K)
	Unemployment
	Veterans and military families served
	Other (specify under Other Outcome:)
Results	s summary: (Free response)
	1-2 sentence summary of key findings for each outcome including group means, standard
	deviations, and exact p-values for any inferential results. Refer to a table in the report if needed.
Statisti	cal significance of findings (select one):
	No statistically significant findings
	Statistical significance not noted - negative
	Statistical significance not noted - null
	Statistical significance not noted - positive
	Statistically significant negative findings (p<.01)
	Statistically significant negative findings (p<.05)
	Statistically significant negative findings (p<.10)
	Statistically significant positive findings (p<.001)
	Statistically significant positive findings (p<.01)
	Statistically significant positive findings (p<.05)
	Statistically significant positive findings (p<.10)

Effect	sizes (if noted): (Free response)
	Provide the name of the effect size statistic being reported and result observed (e.g Cohen's d
	= 0.02) if provided.
Effect	z size type
	Cohen's d
	Hedges' g
	Pearson r (correlation coefficient)
	Cohen's f-squared
	r-squared
	Partial eta-squared
	Cohen's f
	Eta-squared
	Cramer's V
	Odds Ratio
Study	Design (select all that apply—see chart on next page for more detailed information)
	Experimental (RCT)
	Non-experimental: Comparison group - dropouts
	Non-experimental: Comparison group - national
	Non-experimental: Comparison group - similar program
	Non-experimental: Comparison group -other
	Non-experimental: Comparison group -wait list
	Non-experimental: Post-test (outcome) only
	Non-experimental: Single group - Pre-test/multiple post-tests (longitudinal, time series)
	Non-experimental: Single group - Pre-test/post-test only
	Other
	QED: Differences in Differences (DID)
	QED: Groups formed by cutoff score, Regression discontinuity design (RDD)
	QED: Groups formed by matching - non PSM
	QED: Groups formed by matching - propensity score matching or weighting
	QED: Interrupted time series (ITS) with comparison group
	QED: Single group interrupted time series (ITS)
	Other (specify under Study Design Other):
Study	Generalizability (select all that apply)
	Conducted in multiple sites
	Conducted in multiple states
	Conducted with multiple populations

Study Design Descriptions

Category	Design type	Description
Experimental – Impact	Randomized controlled trial (RCT)	An experimental design where participants are randomly assigned to receive or not receive an intervention. It typically provides the strongest level of evidence for causality
Quasi- Experimental - Impact	Groups formed by matching - PSM	Design in which a comparison group is formed by matching study participants, or clusters of study participants, on a set of pre-intervention measures of the program outcome (i.e., pre-test scores for an academic program, pre-participation employment status for a job-related program) and/or pre-intervention measures that are likely correlated with the program outcome, and/or other characteristics using propensity score matching (nearest neighbor, radius, etc.) or weighting techniques
	Groups formed by matching – non-PSM	Design in which a comparison group is formed by matching study participants, or clusters of study participants, on a set of pre-intervention measures of the program outcome (i.e., pre-test scores for an academic program, pre-participation employment status for a job-related program) and/or pre-intervention measures that are likely correlated with the program outcome, and/or other characteristics using some other method than propensity score matching (e.g exact matching).
	Groups formed by cutoff score (also known as regression discontinuity design)	Design in which a comparison group is formed based on a well-defined and quantifiable cutoff score; differences in outcomes for participants just above and just below the cutoff score can be attributed, with some reservations, to program participation
	Single group - interrupted time series	Design in which multiple measures are taken both before and after an intervention
	Interrupted time series with comparison group	Design in which several waves of observation in both treatment and comparison groups occur before and after an intervention
	Difference in differences	Design that calculates the effect of a treatment on an outcome by comparing the average change over time in the outcome variable for the treatment group, compared to the average change over time for the control group. Although it is intended to mitigate the effects of extraneous factors and selection bias, depending on how the treatment group is chosen, this method may still be subject to certain biases (e.g., mean regression, reverse causality and omitted variable bias). In contrast to a time-series estimate of the treatment effect on subjects (which analyzes differences over time) or a cross-section estimate of the treatment effect (which measures the difference between treatment and control groups), difference in differences uses panel data to measure the differences, between the treatment and control group, of the changes in the outcome variable that occur over time.
Non- experimental	Comparison group – Impact	Design in which a comparison group is used, but is not formed by matching or cutoff scores; these have additional limits on validity and generalizability, as there may be many explanations for why outcomes for comparison group members differ from intervention recipients
	Single group–pre- test/post-test only - Outcome	Design in which there is a single pre-test and a post-test, or a single pre-test and multiple post-tests (reflexive control design)

Category	Design type	Description
	Single group – Pre- test/multiple post-tests (longitudinal, time series) - outcome	Design in which there is a single pre-test and multiple post-tests measuring the same individual over time
	Single group—outcome (post-test) only - outcome	Outcomes are measured at only one time point for one or more programs, with no comparisons
Other		Includes implementation studies, feasibility studies, purely qualitative studies, and in-depth case studies without any quantitative information about outcomes

Appendix C: Annotated Bibliography of Senior Corps Reports Considered for Review

The following table includes citations for all Senior Corps reports that we were able to locate and consider for inclusion in our review. Please note that a more detailed and searchable version of this bibliography (including abstracts) is available in a separate Excel document. Additionally, an Access database containing detailed information (as specified in Appendix B) on each of the studies ultimately included in the systematic review (indicated in shaded rows below) is also available.

Citation (Shaded rows are impact and outcome studies selected for inclusion in the review)	RSVP	SCP	FGP	Type of Evaluation (Select all: Impact, implementation, outcomes)	Study Design (RCT, QED, etc.)	Included in review? (Y/N) If no, reason for exclusion?
Greenleigh Associates. (1966). An evaluation of the Foster Grandparent Program. Report prepared for the Administration on Aging. Department of Health, Education, and Welfare. New York, NY: Greenleigh Associates.			X	Implementation/ Outcome	Non- experimental: Unmatched comparison group	N - Too old, prior to 1980
Saltz, R. (1967). Evaluation of a foster-grandparent program findings of the foster-grandparent research project. Report prepared for the U.S Office of Economic Opportunity.			X	Impact	Non- experimental: Unmatched comparison group	N - Too old, prior to 1980
Saltz, R. (1968). Foster-grandparents and institutionalized young children: two years of a foster-grandparent program. Report prepared for the Administration on Aging. Department of Health, Education, and Welfare. Detroit, Michigan: Merrill Palmer Institute.			X	Implementation/ Outcome	Non- experimental: Unmatched comparison group	N - Too old, prior to 1980
Nash, B. (1968). Foster Grandparents in Child-care settings. Report prepared for the Administration on Aging. Department of Health, Education, and Welfare.			X	Implementation		N - Too old, prior to 1980

Citation (Shaded rows are impact and outcome studies selected for inclusion in the review)	RSVP	SCP	FGP	Type of Evaluation (Select all: Impact, implementation, outcomes)	Study Design (RCT, QED, etc.)	Included in review? (Y/N) If no, reason for exclusion?
Gray, R., & Kasteler, J.R. (1970). An evaluation of the effectiveness of a Foster Grandparent Project. <i>Sociology</i> & <i>Social Research</i> , 54, pp. 181-189.			X	Impact	Non- experimental- Comparison group	N - Too old, prior to 1980
Takacs, K.B. (1970). Foster grandparents: A unique contribution to the mentally retarded (MS). University of Wisconsin, Madison, Wisconsin.			X	Outcome	Non- experimental- Single group - outcome (pre- test/post-test)	N - Too old, prior to 1980
Saltz, R. (1971). Aging Persons as Child-care Workers in a Foster-Grandparent Program: Psychosocial effects and work performance. <i>The International Journal of Aging and Human Development</i> , 2(4), pp. 314-340.			X	Impact	QED - groups formed by matching - non- PSM	N - Too old, prior to 1980
Saltz, R. (1973). Effects of Part-time "Mothering" on IQ and SQ of Young Institutionalized Children. Report prepared for U.S Office of Economic Opportunity.			X	Impact	Non- experimental- Comparison group	N - Too old, prior to 1980
Kornblum, S.F. (1981). <i>Impact of a Volunteer Service Role Upon Aged People</i> (PhD). Bryan Mawr College, Bryan Mawr, Pennsylvania.	X			Impact	Non- experimental- Comparison group	Y
Ziegler, S., & King, J. (1982). Evaluating the Observable Effects of Foster Grandparents on Hospitalized Children. <i>Public Health Reports</i> , 97(6), pp. 550-557.			X	Impact	Non- experimental- Comparison group	Y

Citation (Shaded rows are impact and outcome studies selected for inclusion in the review)	RSVP	SCP	FGP	Type of Evaluation (Select all: Impact, implementation, outcomes)	Study Design (RCT, QED, etc.)	Included in review? (Y/N) If no, reason for exclusion?
Trammel-Seck, E. (1983). National Intergenerational Research and Dissemination Project: Final Report on Opportunities for Older Workers in the Children's Preschool Network. Report prepared for the Administration on Aging and Administration for Children, Youth, and Families.	X		X	Implementation	Implementation: Case studies, surveys, interviews	N - Implementation only study
Fengler, A.P. (1984). Life Satisfaction of Subpopulation of Elderly: The Comparative Effects of Volunteerism, Employment, and Meal Site Participation. Report prepared for AARP Andrus Foundation. Thousand Oaks, California: Sage Publications, Inc.	X			Impact	Non- experimental- Comparison group	Y
Litigation Support Services. (1984). Impact evaluation of the foster grandparent program on the foster grandparents: Final report. Report prepared for ACTION. Evaluation Division. Washington, DC: ACTION.			X	Impact	Non- experimental- Comparison group	Y
Arella, L.R. (1984). <i>The Green County RSVP: A case study</i> . Report prepared for ACTION.	X			Implementation	Implementation: case study, Impact: Non- matched comparison group	N - Implementation only study
ACTION. (1984). The Effect of Foster Grandparents on Juvenile Offenders in Georgia Youth Development Centers. Washington, DC: ACTION.			X	Impact	Non- experimental- Comparison group	Y

Citation (Shaded rows are impact and outcome studies selected for inclusion in the review)	RSVP	SCP	FGP	Type of Evaluation (Select all: Impact, implementation, outcomes)	Study Design (RCT, QED, etc.)	Included in review? (Y/N) If no, reason for exclusion?
Brummel, S. W. (1984). Senior Companions: An unrecognized resource for long term care. Report prepared for New York: Pride Institute.		X		Implementation		N - Implementation only study
Booz, Allen, & Hamilton Inc. (1985). <i>National Retired Senior Volunteer Program Participant Impact Evaluation: Final report</i> . Report prepared for ACTION. Office of Compliance/Evaluation Division. Washington, DC: ACTION.	X			Impact	QED: Groups formed by matching - non- PSM (longitudinal)	Y
SRA Technologies. (1985). Senior Companion Program impact evaluation: Final report. Report prepared for ACTION. Evaluation Division. Washington, DC: ACTION.		X		Impact	Non- experimental: comparison group- Impact	Y
Keller, K.L., Flattend, E.K., & Wilhite, B.C. (1988). Friendly Visiting as a Means of Informing Homebound Senior Citizens of Health-Related Community Services. Report prepared for the Administration on Aging and Office of Human Development Services. Department of Health, Education, and Welfare. New York, New York: Human Sciences Press.	X			Impact	RCT	Y
Saltz, R. (1989). Research Evaluation of Foster Grandparent Program. Philadelphia, Pennsylvania: The Haworth Press, Inc.			X	Impact	Pre- test/multiple post-tests (longitudinal) with comparison group	Y

Citation (Shaded rows are impact and outcome studies selected for inclusion in the review)	RSVP	SCP	FGP	Type of Evaluation (Select all: Impact, implementation, outcomes)	Study Design (RCT, QED, etc.)	Included in review? (Y/N) If no, reason for exclusion?
ACTION Office of Policy and Planning: Evaluation Division. (1990). Volunteers as Care Givers: ACTION's National Long-term Care Demonstration Research Project - Volume III Final Impact Evaluation Report. Washington, DC: ACTION.		X		Impact	Non- experimental- Comparison group	Y
Cook, A.F. (1991). The Foster Grandparent Program: An analysis of changing trends. Graduate Student Theses, Dissertations, & Professional Papers. 8908. https://scholarworks.umt.edu/etd/8908			X	Implementation	Implementation: Cross-sectional design looking at program participant characteristics over time, longitudinal	N - Implementation only study
The Alzheimer's Association Patient and Family Services. (1991) Senior Companion Program Alzheimer's Association In-home Respite Care Demonstration. Report prepared for ACTION. Chicago, Illinois: Alzheimer's Disease and Related Disorders Association, Inc.		X		Implementation/ Outcome	Non- experimental: Single group - post-test (outcome)	Y
Lee, C.F., & Gray, L.C. (1992). Respite service to family caregivers by the senior companion program: an urban-rural comparison. Report prepared for ACTION.		X		Implementation	Implementation: Surveys	N - Implementation only study
Research Triangle Institute [RTI]. (1992). Retired Senior Volunteer Program activities in alcohol and drug abuse prevention and education. Report prepared for ACTION.	X			Implementation	Implementation: Surveys, site visits	N - Implementation only study
Freedman, M. (1994). Seniors in National and Community Service: A Report prepared for the Commonwealth Fund's Americans over 55 at Work Program.	X	X	X	Review/theory paper/implementation		N - Implementation only study (TP)

Citation (Shaded rows are impact and outcome studies selected for inclusion in the review)	RSVP	SCP	FGP	Type of Evaluation (Select all: Impact, implementation, outcomes)	Study Design (RCT, QED, etc.)	Included in review? (Y/N) If no, reason for exclusion?
Griffith, J.D., Powers, L.L., Rist, L.M., & Matheson, J.L. (1994). Evaluation of the SCP/AoA Joint Initiative for the Vulnerable Elderly Program. Report prepared for the Corporation for National and Community Service. Office of Evaluation and Policy Coordination. Washington, DC: Corporation for National and Community Service.		X		Implementation/ Outcome	Non- experimental: outcome only	Y
ACTION. (1994). An evaluation report on the Foster Grandparent Program. Report prepared for the Corporation for National and Community Service. Washington, DC: ACTION.			X	Implementation/ Outcome	Non- experimental: Single Group- outcome (post test)	Y
Carrocio, J., Marks, L.N., Nippes, J.K., Pryor, J. (1996). <i>A senior volunteer/home care agency national collaboration: assessment of the partnership.</i> Report prepared for		X		Implementation	Implementation: case studies	N - Implementation only study
Strang, W., Von Glatz, A., & Stolzberg, S. (1997). <i>Retired and Senior Volunteer Program, Summer Evaluation Report</i> . Report prepared for the Corporation for National Service.	X			Implementation	Implementation: Surveys	N - Implementation only study
Achatz, M. (1998). Effective practices of foster grandparents in Head Start Centers: Benefits for children, classrooms, and centers. Report prepared for the Corporation for National and Community Service. Washington, DC: Corporation for National and Community Service.			X	Implementation/ Outcome	Implementation: case studies, Non- experimental: outcome only	N - Implementation only study

Citation (Shaded rows are impact and outcome studies selected for inclusion in the review)	RSVP	SCP	FGP	Type of Evaluation (Select all: Impact, implementation, outcomes)	Study Design (RCT, QED, etc.)	Included in review? (Y/N) If no, reason for exclusion?
Aguirre International. (1999). Retired and Senior Volunteer Program Accomplishment Report. Report prepared for the Corporation for National Service.	X			Other: Outputs	Other: Outputs - Surveys	N - Implementation only study
Aguirre International. (1999). Senior Companion Program Accomplishment Report. Report prepared for the Corporation for National Service.		X		Other: Outputs	Other: Outputs - Surveys	N - Implementation only study
Aguirre International. (1999). Foster Grandparent Program Accomplishment Report. Report prepared for the Corporation for National Service.			X	Other: Outputs	Other: Outputs - Surveys	N - Implementation only study
Thomas, C., & Silva, P. (2002). Senior Corps Futures Study Final Report. Report prepared for the Corporation for National and Community Service.	X	X	X	Implementation	Implementation: Interviews, focus groups	N - Implementation only study
McGowan, T. G. (2002). The National Study of Foster Grandparent Program Directors: Identifying Effective Practices, Project Barriers and Needs. Report prepared for the National Association of Foster Grandparent Program Directors.			X	Implementation	Implementation: Survey, interviews, focus groups	N - Implementation only study
Dulin, P.L., & Hill, R.D. (2003). Relationships between Altruistic Activity and Positive and Negative Affect among Low-Income Older Adult Service Providers. <i>Aging & Mental Health</i> , July 2003. 7(4): 294-299.		X	X	Outcome	Non- experimental: Single group - post-test (outcome)	N - Not an evaluation
Rook, K.S., & Sorkin, D.H. (2003). Fostering social ties through a volunteer role Implications for older-adults' psychological health. Report prepared for the National			X	Impact	Experimental (RCT)	Y

Citation (Shaded rows are impact and outcome studies selected for inclusion in the review)	RSVP	SCP	FGP	Type of Evaluation (Select all: Impact, implementation, outcomes)	Study Design (RCT, QED, etc.)	Included in review? (Y/N) If no, reason for exclusion?
Institute on Aging. Amityville, New York: Baywood Publishing Co., Inc.						
RTI International. (2003). Final Report of Senior Companion Quality of Care Evaluation. Report prepared for the Corporation for National and Community Service. Washington, DC: Corporation for National and Community Service.		Y		Implementation/ Outcome (station study); Impact (client and family member studies)	Non- experimental: Single group- post-test (outcome) (station study); QED: Groups formed by matching - non- PSM (client and family member studies)	Y
ETR Associates. (2003). <i>Profile of Senior Corps Faith-Based Partnerships</i> . Report prepared for Corporation for National and Community Service.	X	X	X	Descriptive or Implementation	Implementation: survey, interviews	N - Implementation only study
Westat. (2005). Technical Report of the Foster Grandparent Mentoring Service Recipient Study. Report prepared for the Corporate for National and Community Service. Washington, DC: Corporation for National and Community Service.			X	Implementation/ Outcome	Implementation: Interviews. Outcome: Non- experimental: Single group - post-test (outcome)	Y

Citation (Shaded rows are impact and outcome studies selected for inclusion in the review)	RSVP	SCP	FGP	Type of Evaluation (Select all: Impact, implementation, outcomes)	Study Design (RCT, QED, etc.)	Included in review? (Y/N) If no, reason for exclusion?
Westat. (2005). DRAFT: Public Report on the Results of the 2005 Independent Living Survey of the Senior Companion Program. Report prepared for the Corporate for National and Community Service. Washington, DC: Corporation for National and Community Service.		X		Outcome	Non- experimental: Single group - post-test (outcome)	Y
Pigatti, L.A. (2005). Retired Senior Volunteers AARP Tax Aide Program evaluation, <i>Activities, Adaptation & Aging</i> , 29:3, 21-31, DOI: 10.1300/J016v29n03_02.	X			Implementation	Implementation: interviews	N - Implementation only study
Peacock, J.R., & O'Quin, J. (2006). Higher Education and Foster Grandparent Programs: Exploring Mutual Benefits.			X	Other: theory		N - Implementation only study (Theory Paper)
Peacock, J.R., & Flythe, M.K., & Jones, K. (2006) A Service-learning collaboration: A graduate gerontology program and a foster grandparent program, <i>Educational Gerontology</i> , 32: 335–349, DOI: 10.1080/03601270600564096.			X	Other: theory		N - Implementation only study (Theory Paper)
Butler, S. S. (2006). Evaluating the Senior Companion Program: A Mixed-Method Approach. <i>Journal of Gerontological Social Work</i> , 47:1-2, 45-70, DOI: 10.1300/J083v47n01_05.		X		Outcome	Non- experimental: Single group - post-test (outcome)	Y
Butler, S. S., MSW, & Eckart, D. (2007). Civic Engagement Among Older Adults in a Rural Community, <i>Journal of Community Practice</i> , 15:3, 77-98, DOI: 10.1300/J125v15n03_05.		X		Implementation	Implementation: case studies	N - Implementation only study

Citation (Shaded rows are impact and outcome studies selected for inclusion in the review)	RSVP	SCP	FGP	Type of Evaluation (Select all: Impact, implementation, outcomes)	Study Design (RCT, QED, etc.)	Included in review? (Y/N) If no, reason for exclusion?
Shelton, L., Dietz, N., Nicholas, B., & Jennings, S. (2008). Senior Corps Reports. Report prepared for the Corporation for National and Community Services. Washington, DC: Corporation for National and Community Services.	X	X	X	Implementation/ Outcome	Outcome: Non- experimental - single group - outcome (post- test). Implementation: Surveys	Y
Evans, G., & Carnegie, L. (2009). New York City's Foster Grandparent Program: A Model of Older Volunteer Management. Report prepared for New York: Springer Publishing Company.			X	Implementation	Implementation: case study or descriptive	N - Implementation only study
Tan, E., Harding, V., Spera, C., & DeGraff, K.M. (2012). Senior Corps RSVP: Disaster Services and Community Resilience During 2012 Colorado Wildfires, <i>Public Policy & Aging Report</i> , 2016, Vol. 00, No. 00, 1–4 doi:10.1093/ppar/prw011.	X			Implementation	Implementation: case study or descriptive	N - Implementation only study
Van Orden, K.A., Stone, D.M., Rowe, J., McIntosh, W.L., Podgorski, C., & Conwell, Y. (2013). The Senior Connection: Design and rationale of a randomized trial of peer companionship to reduce suicide risk in later life, <i>Contemporary Clinical Trials</i> , 117-126, DOI: 10.1016/j.cct.2013.03.003.	X			Impact	RCT	N – Not an evaluation Design report with no findings
Nerino, A. (2013). Senior Corps RSVP 2013 GARP: Exploring Why Some Organizations Did Not Apply. Report prepared for the Corporation for National and Community Service.	X			Implementation	Implementation: survey	N - Implementation only study

Citation (Shaded rows are impact and outcome studies selected for inclusion in the review)	RSVP	SCP	FGP	Type of Evaluation (Select all: Impact, implementation, outcomes)	Study Design (RCT, QED, etc.)	Included in review? (Y/N) If no, reason for exclusion?
McDonald, T.W., Chown, E.L., Tabb, J.E., Schaeffer, A.K., & Howard, E.K.M. (2013). The Impact of Volunteering on Seniors' Health and Quality of Life: An Assessment of the Retired and Senior Volunteer Program. <i>Psychology</i> , 4, 283-290. DOI: 10.4236/psych.2013.43A042.	X			Outcome	Non- experimental: Single group - post-test (outcome)	Y
Pratt, D., Lovegrove, P., Birmingham, C., Lombas, L., Vicinanza, N., Georges, A., & Gabbard, S. (2014). SCP Independent Living Performance Measurement Survey: Process, Rationale, Results, and Recommendations. Report prepared for the Corporation for National and Community Service. North Bethesda, MD: JBS International, Inc.		X		Outcome	Non- experimental: Single group - post-test (outcome)	Y
Allen, R. S., (2014). Can Senior Volunteers Deliver Reminiscence and Creative Activity Interventions? Results of the Legacy Intervention Family Enactment Randomized Controlled Trial. <i>Journal of Pain and Symptom Management</i> , 48, 590-601. https://doi.org/10.1016/j.jpainsymman.2013.11.012.	X			Impact	RCT	Y
Georges, A., Gabbard, S., & Kranjac, A.W. (2015). First Report of the National Evaluation of RSVP. Report prepared for the Corporation for National and Community Service. North Bethesda, MD: JBS International, Inc.	X			Outcome	Non- experimental: Single group - post-test (outcome)	N - Implementation only study

Citation (Shaded rows are impact and outcome studies selected for inclusion in the review)	RSVP	SCP	FGP	Type of Evaluation (Select all: Impact, implementation, outcomes)	Study Design (RCT, QED, etc.)	Included in review? (Y/N) If no, reason for exclusion?
Ulsperger, J. S., McElroy, J., Robertson, H., & Ulsperger, K. (2015). Senior Companion Program Volunteers: Exploring Experiences, Transformative Rituals, and Recruitment/Retention Issues. <i>The Qualitative Report</i> , 20(9), 1458-1475. Retrieved from https://nsuworks.nova.edu/tqr/vol20/iss9/9		X		Implementation	Other: interviews	N - Implementation only study
JBS International. (2015). Type of Service Activity and Perceived Health Benefits from Volunteering: Preliminary Evidence from the National Evaluation of RSVP Volunteers. Report prepared for the Corporation for National and Community Service. North Bethesda, MD: JBS International, Inc.	X			Implementation/ Outcome	Non- experimental: Single Group outcome (post- test)	Y
Azuero, C.B., Durkin, D.W., Kvale, E., Csikai, E.L., Shin, H.J., Burgio, L.D., Parmelee, P.A., & Allen, R.S. (2016). "It Was Very Rewarding for Me": Senior Volunteers' Experiences With Implementing a Reminiscence and Creative Activity Intervention, <i>Gerontologist</i> , 2016, Vol. 56, No. 2, 357–367, DOI: 10.1093/geront/gnu167	X			Implementation	Implementation: Descriptive, participatory research	N - Implementation only study
Tan, E.J., Georges, A., Gabbard, S.M., Pratt, D.J., Nerino, A., Roberts, A.S., Wrightsman, S.M., & Hyde, M. (2016). The 2013-2014 Senior Corps Study: Foster Grandparents and Senior Companions. <i>Public Policy & Aging Report</i> , 2016, Vol. 26, No. 3, 88–95, DOI: 10.1093/ppar/prw016.		X	X	Impact	QED: Groups formed by matching - PSM	Y

Citation (Shaded rows are impact and outcome studies selected for inclusion in the review)	RSVP	SCP	FGP	Type of Evaluation (Select all: Impact, implementation, outcomes)	Study Design (RCT, QED, etc.)	Included in review? (Y/N) If no, reason for exclusion?
Georges, A., Fung, W., Liang, J., Smith, J., Pratt, D., Sum, C., Birmingham, C., & Gabbard, S. (2017). <i>Does the Senior Companion Respite Service Matter for the Health and Well-being of Caregivers?</i> Report prepared for the Corporation for National and Community Service. North Bethesda, MD: JBS International, Inc.		X		Impact	QED: Difference in Differences	Y
Guardians of Honor, LLC. (2017). Senior Corps Focus Groups Thematic Analysis Report. Report prepared for the Corporation for National and Community Service.	X	X	X	Implementation	Implementation: Focus groups	N - Implementation only study
Hood, S., Lu, Y.Y., Jenkins K., Brown, E.R., Beaven, J., Brown, S.A., Hendrie, H.C., & Austrom, M.G. (2018). Exploration of Perceived Psychosocial Benefits of Senior Companion Program Participation Among Urban-Dwelling, Low-Income Older Adult Women Volunteers. <i>Innovation in Aging</i> , 2(2). https://doi.org/10.1093/geroni/igy018.		X		Outcome	Non- experimental: Single group - outcome (post- test)	Y
ICF. (2018). Comparative Analysis and Case Studies of RSVP and SCP Grantees Implementing Evidence Based Programs Task 10. Report prepared for the Corporation for National and Community Service.	X	X		Implementation	Implementation: Case studies	N - Implementation only study
ICF. (2018). Comparative Analysis and Case Studies of RSVP and SCP Grantees Implementing Evidence Based Programs Task 3. Report prepared for the Corporation for National and Community Service.	X			Implementation	Implementation: Case studies	N - Implementation only study

Citation (Shaded rows are impact and outcome studies selected for inclusion in the review)	RSVP	SCP	FGP	Type of Evaluation (Select all: Impact, implementation, outcomes)	Study Design (RCT, QED, etc.)	Included in review? (Y/N) If no, reason for exclusion?
Georges, A., Fung, W., Liang, J., Sum, C., & Gabbard, S. (2018). Longitudinal Study of Foster Grandparent and Senior Companion Programs: Service Delivery Implication and Health Benefits to the Volunteers. Report prepared for the Corporation for National and Community Service. North Bethesda, MD: JBS International, Inc.		X	X	Impact	QED: Groups formed by matching - PSM, longitudinal	Y
Crittenden, J.A. (2019). Juggling Multiple Roles: An examination of role conflict and its relationship to older adult volunteer satisfaction and retention (PhD). The University of Maine.	X			Implementation	Implementation: Survey	N - Implementation only study

Appendix D: Bibliography of Research on Volunteering among Older Adults

Systematic Reviews

- Anderson, N.D., Damianakis, T., Kroger, E., Wagner, L.M., Dawson, D.R., Binns, M. A., Bernstein, S., Caspi, E., & Cook, S.L. (2014). The Benefits Associated with Volunteering Among Seniors: A Critical Review and Recommendations for Future Research. *Psychological Bulletin*, 140(6), pp. 1505-1533.
- Grimm, R., Spring, K., & Dietz, N. (2007). *Health Benefits of Volunteering: A Review of Recent Research*. Washington, DC: Corporation for National and Community Service.
- Haber, E.A., & Short-DeGraff, M.A. (1989). Intergenerational Programming for an Increasingly Age-Segregated Society. *Activities, Adaptation, & Aging*, 14(3), pp. 35-50.
- Morrow-Howell, N. (2010). Volunteering in Later Life: Research Frontiers. *The Journals of Gerontology*, 65B(4), pp. 461-469.
- Onyx, J., & Warburton, J. (2003). Volunteering and health among older people: A review. *Australian Journal on Ageing*, 22(2), pp. 65-69.
- Population Reference Bureau. (2011). Volunteering and Health for Aging Populations. *Today's Research on Aging*, 21, pp. 1-7. Retrieved from https://assets.prb.org/pdf11/TodaysResearchAging21.pdf
- Von Bonsdorff, M. B. & Rantanen, T. (2011). Benefits of formal voluntary work among older people. A review. *Aging Clinical and Experimental Research*, 23(3), pp. 162-169.

Meta-Analyses

- Jenkinson, C.E., Dickens, A.P., Jones, K., Thompson-Coon, J., Taylor, R.S., Rogers, M., Bambra, C.L., Lang, I., & Richards, S.H. (2013). Is Volunteering a Public Health Intervention? A Systematic Review and Meta-Analysis of the Health and Survival of Volunteers. *BMC Public Health 2013*, 13:773.
- Okun, M.A., Yeung, E.W., & Brown, S. (2013). Volunteering by Older Adults and Risk Mortality: A Meta-Analysis. *Psychology and Aging*, 28(2), pp. 564-577.
- Siette, J., Cassidy, M., & Priebe, S. (2017). Effectiveness of befriending interventions: A Systematic Review and Meta-Analysis. *BMJ Open*, 7(4), pp. 1-12.
- Su, Y. (2017). Impacts of Intergenerational Programs on Older Adults' Psychological Well-Being: A Meta-Analysis (MS). Iowa State University, Ames, Iowa.
- Wheeler, J.A., Gorey, K.M., & Greenblatt, B. (1998). The Beneficial Effects of Volunteering for Older Volunteers and the People They Serve: A Meta-Analysis. *International Journal of Aging & Human Development*, 47(1), pp. 69-79.