

## **PRIORITY BRIEFING**

The purpose of this briefing paper is to aid Stakeholders in prioritising topics to be taken further by PenCLAHRC as the basis for a specific evaluation or implementation research project. They were compiled in 2-3 days.

### **Can a high-impact intergenerational volunteering programme (Experience Corps) in an English setting provide the same range of health and social benefits the US programme has delivered?**

#### **Question ID: 6**

**Question type:** Intervention

**Question:** Can a high-impact intergenerational volunteering programme (Experience Corps) in an English setting provide the same range of health and social benefits the US programme has delivered?

**Population:** Adults aged 60 and over living in the community who are willing to volunteer for the programme. (Benefits to children are also relevant (primary) to the Experience Corps programme)

**Intervention:** Each participant will be asked to volunteer for at least 15 hours per week with a commitment to complete a full school year, working with children aged 4-8years. The activities the volunteers undertake will include one-on-one or small group literacy support, library support, violence prevention activities, attendance enhancement, and other formal roles; in each case they will receive appropriate training.

**Control:** Participants randomised to the control will be placed in a waiting list for one to two years before being offered the opportunity to participate in the programme.

**Outcome:** For individual volunteers (older adults): maintenance of physical function, global function, and cognitive function, improved quality of life, and reduced health care costs. For schools: improved aggregate academic performance, school climate, and teacher retention, and increased community involvement. For children: improved literacy, overall academic achievement, and classroom behaviour. The US version of this intervention has been both popular and successful and has spread from one initial location to 22 cities across the US. If an English version has the same level of success we anticipate that the programme could be rolled out to other locations and provide the same benefits.

**Experience Corps:** In the US Experiences Corps (EC) programme ([www.experiencecorps.org](http://www.experiencecorps.org)), older adults volunteer in schools as literacy tutors and mentors. Each extensively-trained Experience Corps member commits a minimum of 15 hours per week for the entire school year. A team of 15-20 adults is placed in each school. The volunteers work at the direction of the teacher to support students in the areas of reading, writing, language and math. The particular service performed by members varies but might also include library help, behavioural support, health promotion, enrichment activities, and improving

attendance and parent involvement. EC is a high-intensity volunteer programme designed as a health promotion intervention, and has demonstrated a range of benefits for volunteers and for children.

### **The Health Problem:**

This preventive intervention aims to improve the health and wellbeing of older people and at the same time bring benefits to young people and schools.

In 2009 the estimated number of people aged 65 years and over in the south west peninsula was 350,000. This is 4% of the total for people aged 65 years and over in England (8,434,400) and 11% of the total population (3,342,800) in the south west peninsula (Office for National Statistics). A Government Report 'Building a society for all ages' (2009) reports that one million people over 65 feel "trapped in their own homes" and more than 180,000 have gone for a whole week without speaking to friends, neighbours or family. This suggests direct social benefit to people who take part in volunteering, which may bring health benefits through gains in physical and mental well being (Office of Research and Policy Development, Corporation for National and Community Service, 2007). The Building a Society for All Ages report (2009) also suggests that increasing volunteer hours among the over 65s by 10 per cent is estimated as being worth over £500 million indicating potential economic benefit.

The main outcome of the Experience Corps programme is improved wellbeing in the older volunteers. However, there is also some evidence for benefits towards children's outcomes such as improved academic achievement and classroom behaviour.

In Devon over 11,000 primary school aged children have SEN (Special Educational Needs) – with and without statements (21% of the whole primary school population). In Cornwall at least 11% of primary school children have SEN supported by School Action Plus (the total figure on SEN is likely to be much higher). Providing extra assistance in the classroom may benefit all the children in the class.

Each EC affiliate (team of 15-20 volunteers placed in a school) is expected to cost \$100,000 per year to run/manage. The UK Government provided almost £5.2 billion (in 2009/10 financial year) to enable SEN provision for children. Successful implementation of an EC programme may be able to reduce expenditure on SEN for education as well as bringing health promotion benefits for older people.

Based only on assessment of the effects on older people's health (not school or student outcomes), economic analysis of pilot data showed the intervention had a cost per QALY of \$205,000 dollars (around £130,000/QALY). Additional simulations, which included estimates of the beneficial effects on children,

indicated that if 0.3% of children exposed to the programme completed high school rather than dropping out the incremental cost-effectiveness ratio would be \$49,000/QALY (about £31,000/QALY) and if an additional 0.1% of students completed high school the programme would be cost-saving – this has been added by the submitter<sup>10</sup>.

### **Guidelines:**

There was no evidence of NICE guidelines for this subject area. However, "Putting People First" a Department of Health policy document and "Improving Care And Saving Money: Learning The Lessons On Prevention And Early Intervention For Older People" a Department of Work and Pensions policy document emphasize the need for local authorities and health partners to make a strategic shift to prevention and early intervention. This document also suggests engagement of older people in volunteer work as an indicator for improved quality of life, although there are no guidelines as to how this should happen. There is also a drive towards more provision for the volunteer sector through the coalition Government's currently emerging 'Big Society' set of policies.

### **NHS Priority:**

#### **Regional**

#### **SW SHA Priorities framework 2008-11**

- Due to the high proportion of older people in the South West, particular priority will be placed on ensuring health and wellbeing in old age." (paragraph 5.25)
- Increase life expectancy to match the highest of Europe by 2013

QIPP has an aim to improve mental health and learning difficulties and aims to 'promote purpose and participation to enhance positive well-being through a balance of physical and mental activity, relaxation, generating a positive outlook, creativity and purposeful community activity'.

#### **Local**

- Improve learning disabilities (Plymouth PCT)

### **Existing Research:**

#### **Published research**

There has been much research on the effectiveness of the EC programme in the US<sup>1,3,4,6-12</sup> although no systematic review has yet been carried out. No studies have been conducted on this specific programme in the UK or other countries outside the USA. There are two studies<sup>2,13</sup> on an alternative but similar intergenerational programme in Japan called REPRINTS. This works on a similar basis to EC and has reported similar positive outcomes for volunteers.

The EC programme is reported to sustain increased levels of physical activity<sup>1,7</sup> (53% in EC increased activity versus 23% in control group), improvements in executive function<sup>3,6</sup> ( $p < .01$ ) and memory<sup>6</sup> ( $p < .05$ ) and decreased depressive symptoms<sup>12</sup> in the older volunteers and improved reading/academic achievement and classroom behavior in the students<sup>9</sup>. However, one observational study on the benefits of volunteering in older people in general suggests that there are certain levels of volunteer engagement beyond which the well-being of the volunteer is diminished rather than improved<sup>5</sup>.

### **Ongoing research**

No ongoing research was identified in this area.

### **Feasibility:**

The Chief Investigator of the US Experience Corps, Linda Fried (Dean of the Mailman School of Public Health at Columbia University) has expressed her interest in supporting the development of a comparable programme in England (though it may need a new name). The Directory of Social Change notes that £1.5 million of funding will be given towards projects that encourage interactions between different generations of people through volunteering. Age Concern in Harrow run a similar project for people aged 50+ years called 'Trans-age inter-generational volunteering project' where older volunteers go into schools to help support children in the classroom (this may not have been evaluated). The time commitment needed for this project is much less than the Experience Corps programme.

### **References:**

1) Tan, E. J., G. W. Rebok, et al. (2009). "The long-term relationship between high-intensity volunteering and physical activity in older African American women." *J Gerontol B Psychol Sci Soc Sci* **64**(2): 304-11.

**OBJECTIVES:** Experience Corps (EC) places older volunteers in public elementary schools in 20 cities across the country. The EC program in Baltimore is a health promotion intervention designed to improve the academic outcomes of children and increase older adult volunteer physical activity. We sought to determine if there were sustained increases in physical activity with participation in EC. **METHODS:** Seventy-one African American women volunteers in the Baltimore EC were compared with 150 African American women in the Women's Health and Aging Studies (WHAS) I and II; all were aged 65-86 years with comparable Social Economic Status, frailty, and self-reported health status. Using a regression model, we evaluated physical activity adjusting for a propensity score and time of follow-up over 3 years. **RESULTS:** EC volunteers reported a sustained increase in physical activity as compared with the comparison cohort. Baseline physical activity for individuals with a median propensity score was 420 kcal/wk for both groups. At 36 months, EC volunteers reported 670 kcal/week compared with 410 kcal/week in WHAS ( $p = .04$ ). **Discussion** These findings suggest that high-intensity senior service programs

that are designed as health promotion interventions could lead to sustained improvements in physical activity in high-risk older adults, while simultaneously addressing important community needs.

2) Fujiwara, Y., N. Sakuma, et al. (2009). "REPRINTS: Effects of an intergenerational health promotion program for older adults in Japan." Journal of Intergenerational Relationships 7(1): 17-39.

We launched a new intervention study called REPRINTS in which senior volunteers engaged in reading picture books to children. Sixty-nine volunteers and 72 participants in a control group, all aged 60 years and over, living in three urban locations, participated in a baseline health checkup in June 2004. After completion of a three-month training seminar, volunteers visited public elementary schools and kindergartens in groups of 6 to 10 for an 18 month period. They were assessed again by a follow-up health checkup in March 2006. At the follow-up, social network scores (frequency of contact with grandchildren and others around the neighborhood) and self-rated health improved or was maintained at a significantly higher rate for the 37 individuals volunteering most intensively as compared to those who did not volunteer or volunteered minimally. In conclusion, through intensively being engaged in the intergenerational volunteer programs during 21 months, self-rated health and social networks were more likely to improve or be maintained among senior volunteers than controls.

3) Carlson, M. C., K. I. Erickson, et al. (2009). "Evidence for neurocognitive plasticity in at-risk older adults: the experience corps program." J Gerontol A Biol Sci Med Sci 64(12): 1275-82.

**OBJECTIVE:** To determine whether Experience Corps (EC), a social service program, would improve age-vulnerable executive functions and increase activity in brain regions in a high-risk group through increased cognitive and physical activity. **METHODS:** Eight community-dwelling, older female volunteers and nine matched wait-list controls were recruited to serve in the ongoing EC: Baltimore program in three elementary schools. We employed functional magnetic resonance imaging (fMRI) preintervention and postintervention to examine whether EC volunteers improved executive function and showed increased activity in the prefrontal cortex relative to controls. fMRI volunteers were trained and placed with other volunteers 15 h/wk for 6 months during the academic year to assist teachers in kindergarten through third grade to promote children's literacy and academic achievement. **RESULTS:** Participants were African American and had low education, low income, and low Mini-Mental State Examination scores ( $M = 24$ ), indicative of elevated risk for cognitive impairment. Volunteers exhibited intervention-specific increases in brain activity in the left prefrontal cortex and anterior cingulate cortex over the 6-month interval relative to matched controls. Neural gains were matched by behavioral improvements in executive inhibitory ability. **CONCLUSIONS:** Using fMRI, we demonstrated intervention-specific short-term gains in executive function and in the activity of prefrontal cortical regions in older adults at elevated risk for cognitive impairment. These pilot results provide proof of concept for use-dependent brain plasticity in

later life, and, that interventions designed to promote health and function through everyday activity may enhance plasticity in key regions that support executive function.

4) Barron, J. S., E. J. Tan, et al. (2009). "Potential for intensive volunteering to promote the health of older adults in fair health." Journal of Urban Health **86**(4): 641-53.

Volunteer service opportunities for older adults may soon be expanded. Although volunteering is thought to provide health benefits for healthier older adults, it is not known whether older adults in less than very good health are suitable candidates for high-intensity volunteering and can derive health benefits. This manuscript presents a prospective analysis of 174 older adult volunteers serving in Experience Corps Baltimore, a high-intensity senior volunteer program in Baltimore, Maryland. Volunteers served  $>$  or  $=$  15 h per week, for a full school year, in elementary schools helping children with reading and other skills between 1999 and 2002. Volunteers were assessed with standardized questionnaires and performance-based testing including grip strength, walking speed, chair stand speed, and stair-climbing speed prior to school volunteering and at the end of the school year. Results were stratified by health status. Among 174 volunteers, 55% initially reported "good" and 12% "fair" or "poor" health status. At baseline, those in fair health reported higher frequencies of disease and disability than volunteers in excellent or very good health. After volunteering, a majority of volunteers in every baseline health status category described increased strength and energy. Those in fair health were significantly more likely to display improved stair-climbing speed than those in good or excellent/very good health (100.0% vs. 53.4% vs. 37.5%,  $p = 0.05$ ), and many showed clinically significant increases in walking speed of  $>0.5$  m/s. Satisfaction and retention rates were high for all health status groups. Clinicians should consider whether their patients in fair or good health, as well as those in better health, might benefit from high-intensity volunteer programs. Productive activity such as volunteering may be an effective community-based approach to health promotion for older adults.

5) Windsor, T. D., K. J. Anstey, et al. (2008). "Volunteering and psychological well-being among young-old adults: How much is too much?" The Gerontologist **48**(1): 59-70.

Purpose: Research concerned with the relationship between volunteer activity and psychological well-being has typically reported higher levels of well-being among older adult volunteers relative to non-volunteers. However, few studies have examined nonlinear associations between frequency of volunteer activity and well-being. We examined nonlinear associations between hours spent volunteering and psychological well-being, controlling for employment status, partner status, physical health, and education. We also investigated associations between different domains of volunteer activity and well-being, along with the possible moderating effects of gender on these relationships. Design and Methods: We used data from the PATH Through Life Project, a population-based

study of Australian adults. Participants consisted of 2,136 older adults aged 64 to 68. Results: Nonlinear associations between hours spent volunteering and psychological well-being were evident, with these associations characterized by inverted U shapes, with nonvolunteers and those volunteering at high levels producing lower well-being scores relative to those volunteering at moderate levels. Few associations between specific domains of volunteer activity and well-being were evident, and no notable gender interactions emerged. Implications: The results point toward optimal frequency of engagement in volunteer activity for psychological well-being as being bounded by upper and lower levels, outside of which benefits to well-being diminish.

6) Carlson, M. C., J. S. Saczynski, et al. (2008). "Exploring the effects of an "everyday" activity program on executive function and memory in older adults: Experience Corps." Gerontologist **48**(6): 793-801.

PURPOSE: There is little empirical translation of multimodal cognitive activity programs in "real-world" community-based settings. This study sought to demonstrate in a short-term pilot randomized trial that such an activity program improves components of cognition critical to independent function among sedentary older adults at greatest risk. DESIGN AND METHODS: We randomized 149 older adults to Experience Corps (EC) or a wait-list control arm. Participants randomized to EC trained in teams to help elementary school children with reading achievement, library support, and classroom behavior for 15 hr/week during an academic year. We compared baseline and follow-up assessments of memory, executive function (EF), and psychomotor speed at 4 to 8 months by intervention arm, adjusting for exposure duration. We observed a range of EF abilities at baseline and stratified analyses according to the presence of baseline impairment using established norms. RESULTS: Overall, EC participants tended to show improvements in EF and memory relative to matched controls ( $ps < .10$ ). EC participants with impaired baseline EF showed the greatest improvements, between 44% and 51% in EF and memory at follow-up, compared to declines among impaired-EF controls ( $ps < .05$ ). IMPLICATIONS: Short-term participation in this community-based program designed to increase cognitive and physical activity in a social, real-world setting may train memory and, particularly, executive functions important to functional independence. This community-based program represents one potentially effective model to bring high doses of sustainable cognitive exercise to the greatest proportion of older adults, particularly those sedentary individuals at elevated risk for health disparities.

7) Tan, E. J., Q. L. Xue, et al. (2006). "Volunteering: a physical activity intervention for older adults--The Experience Corps program in Baltimore." Urban Health **83**(5): 954-69.

There is compelling evidence supporting the benefits of increased regular physical activity in older adults. The Experience Corps program in Baltimore MD was designed in part as a community based approach to increasing physical activity that would also appeal to older adults who have historically not utilized

health promotion programs. The Baltimore Experience Corps program places older volunteers in public elementary schools for 15 h a week in roles designed to improve the academic outcomes of children and, simultaneously, increase the physical, cognitive and social activity of volunteers. This paper reports on the change in physical activity levels among older adults associated with participation in the Baltimore Experience Corps. In a pilot randomized controlled evaluation, older adults were randomly assigned to Experience Corps (EC participants) or a waiting list control group. Ages ranged from 59-86 years, 96% were African American, 94% were women, and 84% had annual incomes less than \$15,000. EC participants were required to serve  $\geq 15$  h a week. At follow-up after 4-8 months, an analysis of 113 randomized volunteers revealed 53% of the EC participants were more active than the previous year by self-report, as compared to 23% of the controls ( $p < 0.01$ ). When adjusted for age, gender and education, there was a trend toward increased physical activity in the EC participants as calculated by a kilocalorie per week increase of 40%, versus a 16% decrease in the controls ( $p = 0.49$ ). EC participants who reported "low activity" at baseline experienced an average 110% increase in their physical activity at follow-up. Among the controls who were in the "low activity" group at baseline, there was, on average, only a 12% increase in physical activity ( $p = 0.03$ ). Among those who were previously active, there was no significant difference ( $p = 0.30$ ). The pilot results suggest that a high intensity volunteer program that is designed as a health promotion intervention can lead, in the short-term, to significant improvements in the level of physical activity of previously inactive older adult volunteers.

8) Martinez, I. L., K. Frick, et al. (2006). "Engaging older adults in high impact volunteering that enhances health: recruitment and retention in The Experience Corps Baltimore." *J Urban Health* **83**(5): 941-53.

Engagement in social and generative activities has benefits for the well-being of older adults; hence, methods for broadly engaging them in such activities are desired. Experience Corps Baltimore, a social model for health promotion for older adult volunteers in public schools, offers insight to such successful recruitment and retention. We report on data over a 4-year period in Baltimore City, Maryland, and describe a five-stage screening process implemented to recruit a diverse group of senior volunteers who would remain in the program for at least 1 year. The sample consisted of 443 older adults expressing an interest in and screened for volunteering. Comparisons were made with Chi-square and Fisher's t-test between those who entered the program and those who did not and those who were retained in the program. Gender, race, age group, and prior volunteering were significant in ultimate volunteer service in the schools. Overall, 38% of 443 persons recruited entered the schools; 94% of participants were over 60 years ( $p = 0.05$ ) with a mean age of 69 years; 90% were women ( $p = 0.03$ ), and 93% African-American ( $p = 0.005$ ); 57% had not volunteered in the past year ( $p = 0.004$ ). Ninety-two percent were retained in the first year; 80% returned a second year. Among the latter, 83% had  $< 12$  years of education ( $p = 0.001$ ). Participants remained in the program for a second year of volunteering

regardless of baseline MMSE score, self-reported health, and motivation for volunteering. In conclusion, it is possible to recruit and retain a diverse pool of older adults to participate in a high-intensity volunteer program, including non-traditional volunteers. Of special note is the success in recruiting African-American women and those with lower education, who may particularly benefit from health promotion.

9) Rebok, G. W., M. C. Carlson, et al. (2004). "Short-term impact of Experience Corps participation on children and schools: results from a pilot randomized trial." J Urban Health **81**(1): 79-93.

This article reports on the short-term impact of a school-based program using older adult volunteers and aimed at improved academic achievement and reduced disruptive classroom behavior in urban elementary school students. The Experience Corps Baltimore (Maryland) program places a critical mass of older adult volunteers, serving 15 hours or more per week, in public schools to perform meaningful and important roles to improve the educational outcomes of children and the health and well-being of the volunteers. This article reports on the preliminary impact of the program on children in grades K-3. A total of 1,194 children in grades K-3 from six urban elementary schools participated in this pilot trial. At follow-up, third grade children whose schools were randomly selected for the program had significantly higher scores on a standardized reading test than children in the control schools, and there was a non-significant trend for improvement in alphabet recognition and vocabulary ability among kindergarten children in the program. Office referrals for classroom misbehavior decreased by about half in the Experience Corps schools, but remained the same in the control schools. Teachers had somewhat more favorable attitudes toward senior volunteers as a result of having older volunteers in the classroom, although the difference between the intervention and control schools was not statistically significant. In this pilot trial, the Experience Corps program led to selective improvements in student reading/academic achievement and classroom behavior while not burdening the school staff.

10) Frick, K. D., M. C. Carlson, et al. (2004). "Modeled cost-effectiveness of the Experience Corps Baltimore based on a pilot randomized trial." J Urban Health **81**(1): 106-17.

The Experience Corps program was designed to harness the social capital of an aging society to improve outcomes for public elementary schools. The objectives of this article are (1) to model the cost-effectiveness of the Experience Corps Baltimore using data from a pilot randomized trial, including costs, older adults' health status, and quality of life and cost data from the Medical Expenditure Panel Survey, and (2) to describe the relationship between children experiencing increased expected lifetime earnings through improved educational attainment resulting from exposure to the Experience Corps Baltimore volunteers and the program's costs and cost-effectiveness. On average, each quality adjusted life year (QALY) gained by older adults in Experience Corps Baltimore costs \$205,000. The lower bound of the 95% confidence interval for the cost-

effectiveness is \$65,000/QALY. The upper bound is undefined as 15% of the simulations indicated no QALY improvements. If 0.3% of students exposed to the Experience Corps Baltimore changed from not graduating to graduating, the increased lifetime earnings would make the incremental cost-effectiveness ratio \$49,000/QALY. If an additional 0.1% changed to graduating from high school, the program would be cost-saving. Using conservative modeling assumptions and excluding benefits to teachers, principals, and the surrounding community, the Experience Corps Baltimore appears expensive for the older adults' health improvements, but requires only small long-term benefits to the target children to make the program cost-effective or cost-saving.

11) Rabiner, D. J., E. C. Koetse, et al. (2003). "An overview and critique of the experience corps for independent living initiative." J Aging Soc Policy **15**(1): 55-78.

This article presents findings of the evaluation of the Experience Corps for Independent Living (ECIL) initiative. The ECIL initiative was a two-year demonstration program designed to test innovative ways to use the experience, time, and resources of volunteers over 55 to expand significantly the size and scope of volunteer efforts on behalf of independent living services for frail older people and their caregivers in specific communities. Six demonstration projects were selected to participate in this initiative. The intensive volunteers, the critical component of the program, were more highly skilled than typical volunteers from existing senior volunteer programs. ECIL volunteers collaborated with agency partners to develop new programs, supervise direct service activities, and enhance the performance of the agencies being served. Although the projects addressed many of the goals of the initiative, they did not fully accomplish all of their objectives. The ECIL initiative was particularly successful in providing independent living services to frail elders and their families in the communities served. It was less successful in developing and maintaining the team and corps concept, in attracting and retaining the anticipated numbers of volunteers during the study period, and in becoming self-sufficient by the end of Year Three.

12) Hong, S. I. and N. Morrow-Howell "Health outcomes of Experience Corps: a high-commitment volunteer program." Soc Sci Med **71**(2): 414-20.

Experience Corps (EC) is a high-commitment US volunteer program that brings older adults into public elementary schools to improve academic achievement of students. It is viewed as a health promotion program for the older volunteers. We evaluated the effects of the EC program on older adults' health, using a quasi-experimental design. We included volunteers from 17 EC sites across the US. They were pre-tested before beginning their volunteer work and post-tested after two years of service. We compared changes over time between the EC participants (n = 167) and a matched comparison group of people from the US Health and Retirement Study (2004, 2006). We developed the comparison group by using the nearest available Mahalanobis metric matching within calipers combined with the boosted propensity scores of those participating in the EC. We corrected for clustering effects via survey regression analyses with robust

standard errors and calculated adjusted post-test means of health outcomes, controlling for all covariates and the boosted propensity score of EC participants. We found that compared to the comparison group, the EC group reported fewer depressive symptoms and functional limitations after two years of participation in the program, and there was a statistical trend toward the EC group reporting less decline in self-rated health. Results of this study add to the evidence supporting high-intensity volunteering as a social model of health promotion for older adults.

13) Fujiwara, Y., N. Watanabe, et al. "[Indirect effects of school volunteering by senior citizens on parents through the "REPRINTS" intergenerational health promotion program]." Nippon Koshu Eisei Zasshi **57**(6): 458-66.

**BACKGROUND AND PURPOSE:** We have launched a new intervention study, called "REPRINTS" (Research of productivity by intergenerational sympathy), in which senior volunteers aged 60 years and over are engaged in reading picture books to school children, regularly visiting public elementary schools since 2004. **METHODS:** So far, no repeated cross-sectional studies to demonstrate indirect effects on parents have been reported, although reciprocal effects on senior volunteers and children have been demonstrated. The purpose of this study was to examine the changes of evaluation of "REPRINTS" program by parents of school children during the 2 years. **Subjects & setting:** Four to six volunteers as a group visited an elementary school in a suburb of Kawasaki city twice a week to read picture books. A baseline survey was conducted one month after launching the volunteer activity. First to fourth follow-up surveys were conducted every 6 months after baseline survey. Of 368 parents, 230 whose children were in 1st-4th grade were analyzed. **Measurements:** School grade of children, gender, emotional image scale of older adults by the SD (Semantic Differential) method (13 items), parents' evaluation of activity of "REPRINTS" volunteers such as promotion of reading for children, or children's respect for older adults, appreciation, familiarity with older adults, indirect effects on promotion of safety in the community, and reducing parent's physical and psychological burdens of volunteer service for school. Repeated cross-sectional analyses by ANCOVA, adjusted for confounding factors, were conducted in order to compare changes in responses between parents of 1st-2nd grade children (lower-grade children) with those of 3rd-4th grade-children (middle-grade children). We examined experiences of being read with picture books, greeting and having conversations with volunteers among all of 330 students of 1st-4th grade. These three items were examined using Chi-squared test to compare longitudinal change between parents of lower-grade and middle-grade children. **RESULTS:** Evaluation of children's familiarity with older adults significantly declined among parents of middle-grade children, but was maintained among those of lower-grade children during the 2 years. Physical burdens of volunteer service for school were lower among parents' of lower-grade children at baseline, and were significantly reduced among parents' of all grades. Promotion of reading for children, indirect effects on promotion of safety in the community, and frequency of hearing episodes of "REPRINTS" volunteers from children were higher among parents' of lower-grade children at baseline. Psychological burdens were reduced and level

of knowledge of "REPRINTS" volunteers was increased among parents' of all grades. In terms of parents' emotional image scale of older adults in general, no significant difference was found among the grades of school children and number of surveys for all the subscales of 'socialization', 'activity', and 'cheerfulness'.  
CONCLUSION: The level of knowledge and a number of items of evaluation of "REPRINTS" volunteers were significantly increased among parents of both lower-grade and middle-grade children during the 2-year intervention. This study indicates that the "REPRINTS" program can contribute to establishing trust and reliance between generations of older adults and parents of school children with the children as mediators.