Experience Corps: Design of an Intergenerational Program to Boost Social Capital and Promote the Health of an Aging Society

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ABSTRACT Population aging portends a crisis of resources and values. Desired solutions could include intergenerational strategies to harness the untapped potential of older adults to address societal needs and to generate health improvements for older adults. Despite the desire of many older adults to remain socially engaged and productive, the creation of productive roles has lagged. This report describes the conceptual framework and major design features of a new model of health promotion for older adults called Experience Corps®. Experience Corps operates at, and leads to benefits, across multiple levels, including individuals, schools, and the larger community. At the individual level, we propose a model based on Erikson's concept of generativity to explain how and why Experience Corps works. At the level of schools, we propose a parallel model based on social capital. Experience Corps is a volunteer service program designed to improve the lives of urban children and to yield health improvement for older persons. It illustrates how population aging creates new opportunities to address difficult social problems. This article explores how the linkage of concepts at multiple levels motivates a potentially cost-effective, feasible, and high-impact program.

KEYWORDS Health promotion, Social engagements, Aging, Social capital, Volunteering, Healthy aging.

INTRODUCTION

The impending retirement of the baby boom generation (beginning in 2011) has engendered considerable pessimism about the impact of population aging. How will nations afford the social and monetary costs of a rapidly growing older population? This pessimism is not groundless given the much-anticipated challenges that will be brought about by geometric growth in the size of the "elderly" population. These changes will require new policies to address significant shortfalls in housing, health care, long-term care, and the money to pay for each. Increased demands on formal and informal services, both public and private, are expected.

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These challenges have led researchers and policymakers to focus on the critical need to prevent and delay age-related disease and disability. Delaying the onset of disease and disability will, theoretically, lead to the "compression of morbidity," resulting in progressively smaller portions of the lifespan lived in a state of illness and dependency. However, at the present time, efficacious and cost-effective strategies to delay (or prevent) disability are rare. Research on effective approaches to health promotion for older persons is in its infancy. A few models have been shown to work in selected groups, but cost-effective programs that might work on a large scale are scarce. This article describes a model of health promotion for older adults designed to address these societal needs.

One third of the human lifespan shortly will be spent postretirement; this period has been called the "third age." Success in life extension has given rise to the challenges described above. However, living longer can also be framed in terms of new societal opportunities. As the proportion of older adults increases, their capacities represent the nation's "only increasing natural resource." The potential value of this resource is amplified by historically unprecedented skills, resources, and education held by the baby boom generation. Older adults have the potential to remain highly productive and do already contribute substantially in activities that have value outside traditional paid employment (such as child care, volunteering, and domestic labor). Anny older adults wish to remain productive and to "give back" to society.

A 2002 national survey by Hart Research Associates found that 59% of older Americans say that retirement is "a time to be active and involved, to start new activities and to set new goals." The survey found that half of older retirees expressed a desire to stay active and productive. However, opportunities to do so are limited at the present time. Moreover, the increase in the population aged 65 years and older offers a growing, and as yet untapped, source of human and, by extension, social capital.

The purpose of this article is to describe a new program, Experience Corps®, that our group has developed over the past 10 years⁴,9 and that harnesses the human and social capital of older adults to create a win–win opportunity for society. This program establishes new, productive roles for older adults in public elementary schools; these roles are explicitly designed to boost the social capital available through the mobilization of a critical mass of seniors. This article (1) describes the scientific basis for this health promotion intervention, (2) explains how we simultaneously harness the social capital of an aging society and seek to "compress" its morbidity, (3) describes the core design features of Experience Corps, and (4) provides details about the operational aspects of the program that support generativity and social capital. We begin by describing and linking two empirically based conceptual models to hypothesized mechanisms for program impact for both seniors and schools.

TWO CONCEPTUAL MODELS UNDERLYING EXPERIENCE CORPS

The Experience Corps was designed in 1993–1995 by Dr. Linda Fried and Marc Freedman (President, Civic Ventures Inc.) as a model for senior service drawing on best volunteer program practices and scientific evidence for effective health promotion for older adults. ^{4,9} In essence, the program involves the recruitment, training, and deployment of a critical mass of older adults who volunteer their time and experience in underserved elementary schools to improve the lives and academic achievements of children. The intervention is hypothesized to operate at three nested levels: individuals, schools, and the broader community. This multilevel structure is depicted in Fig. 1.

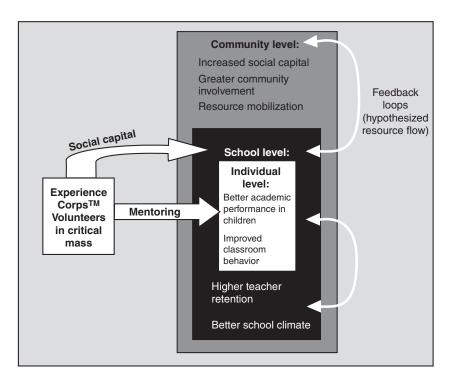


FIGURE 1. Nesting of multilevel interventions in Experience Corps.

In this article, we focus on the conceptual foundations of the program at two levels (individual seniors and schools). The article by Rebok et al. 10 contains a complementary model that explores the effect of the program on children and is not repeated here. We briefly discuss how Experience Corps participation is hypothesized to lead to both health benefits in older adults and a better teaching environment in schools by explicating two layers of this multilevel framework.

Generativity: a Theoretical Guidepost at the Individual Level

Erik Erikson defined generativity as the expansion of care beyond oneself, toward others, and transferring knowledge and wisdom to younger generations. ^{11,12} He saw the challenge of generativity to be the predominant developmental challenge of late life. Erikson's work implies that harnessing the untapped desire for generativity in an aging population could lead to benefits for society and older adults. The potential benefits of this strategy would be limited only by the extent that generative roles were created and available. This goal coincides with observations that the baby boom cohort desires to remain productively engaged in retirement. ^{13–16} However, the creation of opportunities for generativity in an aging society will require the development of new programs and policy.

Although few studies of generativity and its effects on health exist, a number of qualitative studies suggested that generativity is a cornerstone of successful aging. 11,12,17,18 It is premature to conclude that the construct validity of generativity has been well established, but given the limitations of current instruments, empirical studies have demonstrated significant correlations between generativity and late-life satisfaction and happiness. Older workers list a desire for generative involvement as a reason for continued labor force participation. Health exist, a number of qualitative studies accordingly and successful aging.

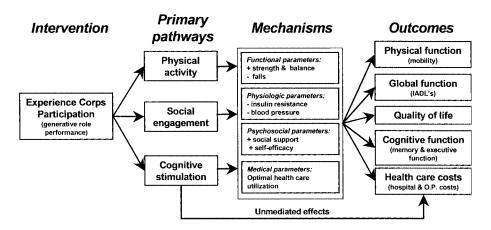


FIGURE 2. Causal model showing pathway through which Experience Corps participation has an impact on health in older adults.

been characterized by an expectation of disengagement from socially valued roles after retirement.²² Demos²³ showed that the modern emphasis on retirement as social disengagement is historically atypical, and that continued generative involvement has been the rule throughout Western history.

At the individual level, generativity is the cornerstone of our theoretical model underlying the design of Experience Corps. We hypothesized that creating new roles that foster generativity in schools would lead to positive health consequences through three parallel pathways involving increased *physical activity*, *social engagement*, and *cognitive stimulation* (see Fig. 2). These pathways correspond to separate, but interacting, channels of causal influence, each of which has been supported by evidence from observational and interventional research (reviewed in articles by Fried et al.²⁴ and Rebok et al.¹⁰).

As depicted in Fig. 2, increased activity should have a positive impact on a number of behavioral and biomedical mechanisms further downstream. Participation is expected to result in both direct and indirect benefits. Indirect effects result from improvements in physical functioning (strength, balance, falls), physiologic parameters (insulin resistance, blood pressure), psychosocial factors (depressive and anxiety, social support and self-efficacy), and cognitive mechanisms (increasing cognitive reserve and brain changes). Short-term changes in several of these mechanisms have been observed in the pilot randomized trial in Baltimore, Maryland (see Fried et al.²⁴).

Social Capital: Theoretical Guidepost at the Community Level

The concept of social capital originated in sociology and political science to explain community differences in effectiveness of collective political action. Although social capital is defined and measured many ways, several core elements have been articulated.²⁵ First, social capital is a property of groups (neighborhoods, communities, cities), not individuals. Second, social capital implies resources that are public goods, meaning that they accrue to all those who live in the community and not just to individuals with special access. Third, social capital allows for effective collective action through patterns of preexisting social relationships characterized by mutual trust, a willingness to provide aid and support, and norms of reciprocity and mutual interdependence.

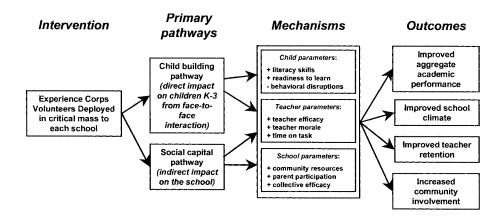


FIGURE 3. Causal model for the impact of Experience Corps on school-level outcomes.

Interest in the concept of social capital in public health has been stimulated by work by public policy scholars^{26,27} and epidemiologists.^{28,29} Observational evidence is accumulating showing that social capital may influence several health outcomes, particularly in urban settings (mortality,³⁰ violence,^{31,32} and self-rated health³³). However, this concept has been controversial and has attracted spirited criticism.^{34,35} The extent to which the concept can inform interventions remains an open question. With strong study design, a program such as Experience Corps will help to move beyond debates limited by observational data to better address this question.

Social capital is the guiding theoretical concept at the school level. A left-to-right causal sequence is hypothesized and depicted in Fig. 3. The deployment of a critical mass of older adults in carefully designed roles is hypothesized to lead to improvements in four primary outcomes: (1) aggregate academic achievement (standardized assessments), (2) overall school climate, (3) teacher retention, and (4) community/parental involvement in schools. These outcomes, in turn, are produced, we anticipate, by changes along two pathways.

First, the *child-building pathway* is the direct impact that volunteers have on children that results from face-to-face mentoring, tutoring, role modeling, behavior management, and skill coaching. Equally important, participants are hypothesized to have an impact on the entire school indirectly (the *social capital pathway*). As an organized group with the capacity to activate, mobilize, and change norms and resources in and around the school, the impact of individuals is multiplied. The program was designed to have an impact on the entire school through three elements: (1) critical mass, (2) school-level roles performed outside classrooms, and (3) adult volunteers who become conduits to the resources and concerns of the broader community. By deploying volunteers in critical mass, each becomes an agent of social capital. Our experience in Baltimore has provided initial support for both direct and indirect effects (see articles by Fried et al.²⁴ and Rebok et al.¹⁰).

ESSENTIAL PROGRAM ELEMENTS OF EXPERIENCE CORPS-BALTIMORE

Phase 1 of the development of Experience Corps was undertaken in five cities by separate teams working only loosely together. The program has expanded and is currently operating in 18 cities in a network coordinated through Civic Ventures. Although variations exist, the essential program elements are increasingly consistent.

This article describes our experience over the past 5 years as one of those teams and is specific to the Baltimore program.

In Baltimore, the design process involved modifying "best practices" among established senior volunteer programs (including other Experience Corps sites) to maximize benefits for schools and older adults. We assembled a multidisciplinary team with expertise related to children (for example Rebok, McGill, Ialongo, and Wasik), older adults (Fried, Rebok, Hill, Carlson, Glass, and Frick), and communities (McGill, Glass, Hill). Building on the theoretical considerations above, we designed a program based on the following nine core elements:

1. Generative, high-impact roles chosen by principals of the schools to meet school needs. The core roles (detailed in the article by Rebok et al.)¹⁰ were designed to address the highest priority needs identified by the schools. The first roles addressed reading and behavior management. These remain the core missions. Roles include in-class and out-of-class literacy support, school-based roles to support behavior management, violence prevention, community outreach, and library support. Each role is designed to reinforce the theme of generativity, service to younger persons grounded in life experience.

Experience Corps roles were designed to augment the effectiveness of paid staff and not to replace teachers or librarians. Otherwise, the presence of the program would place downward pressure on teacher salaries and would generate opposition from school professionals. In a policy climate in which voluntarism can justify retrenchment of school funding, Experience Corps has been crafted to ensure that volunteers play only adjuvant roles. The field coordinator carefully monitors the situation in the school to avoid volunteers taking on duties that would replace teachers or librarians. Our program has received high praise from teachers, who report being able to spend more time on task in classes where volunteers are present.

- 2. A consistent and substantial commitment of time. Volunteers are required to provide a minimum of 15 hours per week of service for at least one (optimally two) school year. This places greater demands on seniors than most volunteer opportunities. However, a high level of commitment is essential to allow relationships to develop and to provide the consistency that children require. An added advantage is that the high "dose" that volunteers receive optimizes the health promotion benefit. As the program has evolved, we created an associate member role (3–10 hours a week) for those who had served 1 year and whose ability to serve full time changed.
- 3. Critical mass to maximize social capital. The success of Experience Corps depends on the availability of a critical mass of volunteers in each school. Critical mass can be defined as the minimum number of volunteers needed to have a schoolwide effect. To have an impact on the entire school, not just a classroom, a group of sufficient size must be deployed and coordinated. Critical mass creates synergies of influence across and between classrooms so that the school climate, and ultimately the larger community, benefits. The impact of volunteers is amplified when no student or teacher is beyond the reach of the program's influence. This also ensures that volunteers are less likely to feel isolated and unsupported.
- 4. *Team approach*. Volunteers are also trained and deployed in teams of 7–10, with multiple teams in each school. As a team, volunteers provide support and reinforcement for each other in ways that help to offset the ambiguous role of the volunteer in the school. We use team-building exercises in training to stimulate group cohesion. In contrast to programs that create solitary roles, Experience Corps can have a broad influence on school climate.

5. Training and infrastructure support. Many volunteers have not been in school for decades. To lower barriers to participation, training is needed. The training and ongoing coordination of volunteers is an essential part of the program.³⁶ Most urban elementary schools lack the personnel or resources to train and oversee a program of this scope. An essential component of the program is the provision of a core infrastructure to support the volunteers in the school.

- 6. Reimbursement for expenses. Experience Corps participants are given a small "incentive reimbursement" (about \$200 per month). This eliminates barriers to participation by offsetting volunteer expenses, including transportation, meals, and supplies. However, this is a volunteer service program; therefore, this is not compensation, but a resource that allows volunteering without cost. It also plays a symbolic role by recognizing the contribution of seniors.
- 7. Program flexibility and evolution. Although the program is based on core roles (e.g., literacy support), it is designed to evolve by creating opportunities for skill growth and leadership development. Substantial input from volunteers and end users (schools and communities) is essential for long-term sustainability. The ability to adapt to the changing pressures of urban school systems, many of which have few reserve staff, has been a key design feature.
- 8. Diversity of roles. To ensure broad national applicability, Experience Corps is designed to provide opportunities for adults of all backgrounds, skills levels, and both genders. It is neither a professional program nor a skill-restricted program. All cognitively competent older adults are assumed to have life experience and skills to contribute. To meet the needs of a diverse volunteer population, roles must be diverse to match volunteer interests and skills. By offering a menu of roles, program adherence rises—as do the health and personal benefits of participation.
- 9. Community representation. To be effective agents of social change, volunteers bring a personal investment in the welfare of the community and school. They are typically assigned to schools near their home. Our advisory board is comprised of representatives from community organizations, volunteers, and the local school. Social network connections among Experience Corps members create new avenues for resource mobilization. A mix of volunteers from inside and outside the neighborhood maximizes the extent to which volunteers function as conduits of social capital, funneling resources from beyond the walls of the school.

Experience Corps volunteers are predominantly African American (96%) and high school educated or less (82%) and have incomes of less than \$15,000 (69%). Participants entered the program with varying levels of health and functional status. Experience Corps volunteers reported 2.5 chronic conditions, and most (62%) reported some difficulty climbing stairs (see Fried et al.²⁴ for details). In addition, 60% of the volunteers in Baltimore had not volunteered in the year prior to recruitment. This demonstrates that a program designed to appeal broadly to nontraditional volunteers can effectively attract and retain a broad spectrum of older adults.

LESSONS FROM THE IMPLEMENTATION OF EXPERIENCE CORPS IN BALTIMORE

Experience Corps is a coordinated series of multilevel interventions undertaken by three primary actors working in collaboration: (1) an agent (the Experience Corps program initiators/coordinators); (2) a school, a set of schools, or an entire school system; and (3) a group of volunteers recruited by the agent to bring human and social capital into the school setting. The agent may be a coordinating organization (university or a community nonprofit organization) or a government body.

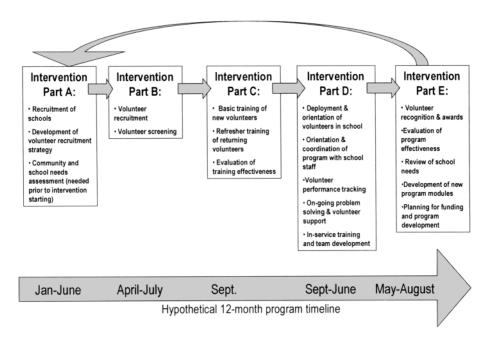


FIGURE 4. Overview of the Experience Corps model from the perspective of the coordinating agent.

The following discussion focuses on the interventions undertaken by the agent or lead agency in charge of oversight and coordination. The five main functions of the agent are depicted in Fig. 4 (intervention parts A–E). Best practices for the coordinating agent for intervention parts A, D, and E are described below (for recruitment and screening [part B] and training [part C], see Fried et al.²⁴ and Rebok et al.¹⁰). This discussion focuses on procedures that maximize programwide effects related to generativity and social capital.

Intervention Part A: Recruitment of Schools

After a community needs assessment and fund-raising, the first step in the program itself is the recruitment of schools. Close collaboration with individual schools and the broader school system is essential for success. Many urban school systems are cautious of well-meaning volunteer efforts that may be temporary. Volunteer programs are both highly valued and subject to close scrutiny in the environment of short funding and performance-based testing. In the Baltimore program, our key partner has been a community organization with a history of effective partnerships with schools; this has provided the foundation for working relationships with schools. Efforts should be made to enlist the aid and support of librarians, curriculum directors, and teacher trainers. Experience Corps is designed to be compatible with many reading curricula. A general and adaptive approach avoids the perception of conflict with existing curricula.

During the recruitment process, some school administrators may harbor negative stereotypes about the capacity of older adults to function effectively in school (e.g., that seniors are too frail or insufficiently committed). For this reason, a graduated ramp-up toward critical mass is often effective. Experience has taught us that principals quickly come to recognize the value-added contribution of seniors, but that respecting their concerns is important.

In general, two volunteers serve in each classroom in grades K–3 with a willing teacher. Additional volunteers are assigned to schoolwide roles (library support or attendance monitoring). A written contract specifies details of where volunteers will be housed and how many will be deployed. Social capital formation is only possible when volunteers have the ability to interact with each other in groups as well as with the broader school community.

Intervention Part D: Deployment and Ongoing Coordination and Support

The objectives of intervention part D are to ensure that (1) a critical mass of volunteers is maintained in each school; (2) volunteers are working with children in targeted grades; (3) expected levels of participation are maintained; and (4) appropriate work toward the improvement of the academic and behavioral performance of children is in accordance with the program objectives; (5) problems are addressed; and (6) additional training is provided as needed.

After seniors complete basic 2-week training, they are assigned to a participating school in teams by the study coordinator according to needs identified by the principal. The volunteer coordinator quickly establishes procedures for volunteer sign-in, tracking service hours, and monitoring performance. The agent orients the school staff to Experience Corps and provides an orientation to the school for new volunteers.

By the end of the initial program year, the goal is to achieve critical mass in each school. If the number of volunteers is below critical mass, individuals may prove to be effective in one or two classrooms, but overall improvements in school climate are less likely. However, introducing volunteers too quickly can create implementation problems if the school is not able to absorb them smoothly. This can result in diminished program acceptability and low volunteer morale. Implementing critical mass often occurs in multiple stages by adding groups of 10 to 15. In Baltimore, we developed a formula for estimating critical mass during the initial 2 years of the program; it accounts for differences in school size. The formula is

Critical mass for school
$$j = 1.75 \text{ N}_j + 5$$

where N_i is the number of classrooms in school j in grades K–3.

This estimate should be adjusted after consultation with the school's principal. We recommend an absolute minimum of 15 seniors per school. Critical mass for the average school is between 25 and 30 in Baltimore, although some principals request as many as 60. There may be an upper threshold, although we lack sufficient experience to estimate it currently. Regardless of the initial target, the careful stepwise addition of teams of 7–10 volunteers has proven to be optimal. The choice of 1.75 volunteers per classroom reflects our previous experience showing that not all classrooms can accommodate two volunteers.

Intervention Part E: Evaluation and Program Refinement

Intervention part E involves systematic assessment of program impact and satisfaction using methods and materials feasible and most relevant to program managers and funders. We distinguish between these evaluation and program refinement efforts carried out by the agent and the scientific activities, unrelated to the intervention, intended to test the efficacy of the program more broadly. Those scientific procedures (including a randomized clinical trial) are described by Fried et al., Frick et al., and Rebok et al. The discussion here is limited to those features of the evaluation process that would be retained once the definitive scientific study had demonstrated its effectiveness.

Program evaluation involves pre- and post-training volunteer knowledge and satisfaction surveys. We also regularly survey teachers and principals each year to monitor satisfaction and identify problems. An integral aspect of program evaluation and refinement is ongoing dialogue between the agent and the community. Dialogue with parents, neighborhood associations, and school boards is part of developing social capital. Representatives of the agent should meet twice a year with these actors. The end-of-the year debriefing with the principal has proven to be the most valuable source of feedback. It is often through discussions with members of the community advisory board or principals that ideas turn into new program modules that can be refined, developed, and added in future years.

CONCLUSION

The need for interventions that address complex social problems simultaneously at the individual, organizational, and community levels has been increasingly recognized. Some large-scale health promotion efforts have yielded disappointing results, in part because of a lack of attention to interconnections between social context and individual behavior. Numerous clinical trials have demonstrated that health promotion interventions that target individual behavior have less-than-expected impact on health outcomes, perhaps because the broader social context was not taken into account. ^{38,39} Despite calls for development of next-generation multilevel interventions, few models have been realized, let alone tested.

Experience Corps is just such a broad-based, multilevel social model of health promotion that has the potential to provide a large segment of the older population with opportunities for generative social involvement. It is grounded in two levels of theory based on generativity (individual level) and social capital (a contextual variable). The theoretical elements presented above, in turn, motivate intervention at two levels: older adults (individuals) and schools (organizations). We hope that this will serve as a model for how multilevel interventions can be designed and implemented and how theory can be integrated across levels of analysis. The program's core elements, described above, reflect our intention to designed a program to harness the generative potential of individuals and to aggregate that potential so that increased social capital accrues to public elementary schools. Our approaches include high-intensity volunteering (15 or more hours per week), organization of participants in teams, placement of an overall critical mass in each school, and the training of older adults in diverse roles selected and designed for high impact on important, unmet needs of the next generation.

As reported elsewhere in this issue, the program appears to be having a positive impact on the schools (see Rebok et al. 10). Evidence that it is meeting the generativity needs of volunteers is supported by high program retention rates, with 80% of volunteers returning each year (see Fried et al. 24). Short-term evidence of increased social capital is reported by Rebok et al. 10 in improvements in teacher efficacy and school climate in the schools randomized to receive Experience Corps. This programmatic design may be useful for others who seek to create organizations and institutions that are effective incubators of the generative goals of older adults in our aging society.

The need for health promotion strategies to address population aging is growing more urgent. The challenges are heightened by the epidemic of obesity and high rates of persistent inactivity, with consequences that will soon appear in older populations in coming decades. Although some successes have been seen in highly structured

exercise programs and laboratory-based cognitive training, two consistent limitations have been encountered: (1) Existing programs attract (and are tested exclusively in) a selective, high-functioning, and small subset of the older population; and (2) intensive interventions have high costs and high rates of nonadherence that limit their potential impact at the population level. Experience Corps seeks to offer one model that would attract a diverse population of nontraditional volunteers who are eager to give back to society. This program appears to have the potential to provide a large segment of the older population with opportunities for generative social involvement, with improved health and functioning as an additional benefit (Rebok et al.¹⁰ and Fried et al.²⁴). Future research will be needed to answer questions about the long-term impact of Experience Corps on individuals, schools, and communities; what is needed to bring the program to a larger scale for greater impact; and how the program can be permanently installed and sustained.

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REFERENCES

- 1. Fries JF. Aging, natural death, and the compression of morbidity. N Engl J Med. 1980;303:130–135.
- 2. Cornman JM. Questions for societies with "third age" populations. The Extension-of-Life Working Group, the Gerontological Society of America. *Acad Med.* 1997;72:856–862.
- 3. Freedman M. Prime Time: How the Baby Boomers Will Revolutionize Retirement and Transform America. New York: Public Affairs; 1999.
- 4. Fried LP, Freedman M, Endres TE, Wasik B. Building communities that promote successful aging. West J Med. 1997;167:216–219.
- 5. Herzog AR, Morgan JN. Age and gender differences in the value of productive activities: four different approaches. *Res Aging*. 1992;14:169–198.
- 6. Herzog AR, Kahn RL, Morgan JN, Jackson JS, Antonucci TC. Age differences in productive activities. *J Gerontol Soc Sci.* 1989;44:S129–S138.
- 7. Glass TA, Seeman TE, Herzog AR, Kahn R, Berkman LF. Change in productive activity in late adulthood: MacArthur Studies of Successful Aging. *J Gerontol Soc Sci.* 1995;50B:S65–S76.
- 8. Fried LP. Health status and related care-seeking behavior of older women. In: Falik M, Scott Collins K, eds. *The Commonwealth Fund Survey*. Baltimore, MD: The Johns Hopkins University Press; 1996:175–204.
- 9. Freedman M, Fried L. Launching Experience Corps: Findings From a 2-Year Pilot Project Mobilizing Older Americans to Help Inner-City Elementary Schools. Oakland, CA: Civic Ventures; January 1999.
- 10. Rebok GW, Carlson M, Glass TA, et al. Effect of Experience Corps Baltimore participation on young children, teachers, and schools: Results from a randomized pilot trial. *J Urban Health*. 2004;81:79–93.
- 11. Erikson EH. The Life Cycle Completed: a Review. New York: WW Norton; 1982.
- 12. Erikson EH, ed. Adulthood. New York: WW Norton; 1978.
- 13. McNaught W, Barth MC, Henderson PH. Older Americans: willing and able to work. In: Munnell AH, ed. Conference proceedings, Second Annual Conference of the National Academy of Social Insurance, January 24–25, 1990. Washington, DC: Kendall/Hunt; 1991.

- 14. Gardyn R. Retirement redefined. Am Demographics. 2000;22:52-57.
- 15. Scheibel J. Recruiting the over-the-hill gang for national service. Soc Policy. 1996;27:30–35.
- 16. Powers M. Out to pasture? No way! Hum Ecol Forum. 1996;24:12-16.
- 17. Fisher BJ. Successful aging, life satisfaction, and generativity in later life. *Int J Aging Hum Dev.* 1995;41:239–250.
- 18. Antonovsky A, Sagy S. Confronting developmental tasks in the retirement transition. *Gerontologist*. 1990;30:362–368.
- 19. McAdams DP, St Aubin ED, Logan RL. Generativity among young, midlife, and older adults. *Psychol Aging*. 1993;8:221–230.
- Sheldon KM, Kasser T. Getting older, getting better? Personal strivings and psychological maturity across the life span. Dev Psychol. 2001;37:491–501.
- 21. Mor-Barak ME. The meaning of work for older adults seeking employment: the generativity factor. *Int J Aging Hum Dev.* 1995;41:325–344.
- 22. Cumming E. Engagement with an old theory. Int J Aging Hum Dev. 1975;6:187-191.
- 23. Demos J. Old age in early New England. Am J Sociol. 1978;84(suppl):S248–S287.
- 24. Fried LP, Carlson M, Freedman M, et al. A social model for health promotion for an aging population: initial evidence on the Experience Corps model. *J Urban Health*. 2004;81:64–78.
- 25. Kawachi I, Berkman L. Social cohesion, social capital, and health. In Berkman LF, Kawachi I, eds. Social Epidemiology. New York: Oxford University Press; 2000: 174–190.
- 26. Hemenway D, Kennedy BP, Kawachi I, Putnam RD. Firearm prevalence and social capital. *Ann Epidemiol.* 2001;11:484–490.
- 27. Putnam RD. Bowling Alone: The Collapse and Revival of American Community. New York: Simon and Schuster; 2000.
- 28. Kawachi I. Social capital and community effects on population and individual health. *Ann N Y Acad Sci.* 1999;896:120–130.
- 29. Kawachi I, Kennedy BP. Health and social cohesion: why care about income inequality? *Br Med J.* 1997;314:1037–1040.
- 30. Kawachi I, Kennedy BP, Lochner K, Prothrow-Stith D. Social capital, income inequality, and mortality. *Am J Public Health*. 1997;87:1491–1498.
- 31. Kennedy BP, Kawachi I, Prothrow-Stith D, Lochner K, Gupta V. Social capital, income inequality, and firearm violent crime. Soc Sci Med. 1998;47:7–17.
- 32. Sampson RJ, Raudenbush SW, Earls F. Neighborhoods and violent crime: a multilevel study of collective efficacy. *Science*. 1997;277:918–924.
- 33. Kawachi I, Kennedy BP, Glass R. Social capital and self-rated health: a contextual analysis. *Am J Public Health*. 1999;89:1187–1193.
- 34. Lynch J, Due P, Muntaner C, Smith GD. Social capital—is it a good investment strategy for public health? *J Epidemiol Community Health*. 2000;54:404–408.
- 35. Muntaner C, Lynch J, Smith GD. Social capital, disorganized communities, and the third way: understanding the retreat from structural inequalities in epidemiology and public health. *Int J Health Serv.* 2001;31:213–237.
- 36. Wasik BA. Using volunteers as reading tutors: guidelines for effective practices. *Reading Teacher*. 2001;51:562–570.
- 37. Frick KD, Carlson M, Glass TA, et al. Modeled cost-effectiveness of the Experience Corps based on the pilot randomized trial in Baltimore. *J Urban Health*. 2004;81:106–117.
- 38. Syme SL. Psychosocial interventions to improve successful aging. *Ann Intern Med*. 2003;139(5 pt 2):400–402.
- 39. Glass TA. Psychosocial interventions. In: Berkman LF, Kawachi I, eds. *Social Epidemiology*. New York: Oxford University Press; 2000:267–305.