Raising Household Saving: Does Financial Education Work?

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This article highlights the prevalence and economic outcomes of financial illiteracy among American households, and reviews previous research that examines how improving financial literacy affects household saving. Analysis of the research literature suggests that previous financial literacy efforts have yielded mixed results. Evidence suggests that interventions provided for employees in the workplace have helped increase household saving, but estimates of the magnitude of the impact vary widely. For financial education initiatives targeted to other groups, the evidence is much more ambiguous, suggesting a need for more econometrically rigorous evaluations.

Introduction

In a recent consumer survey, 21 percent of respondents—including 38 percent of those with income below $25,000—reported that winning the lottery was "the most practical strategy for accumulating several hundred thousand dollars" for their own retirement. In addition, 16 percent thought that winning the lottery was the best retirement strategy for all Americans, not just themselves (CFA & FPA 2006). This is far from the only recent example of limited financial understanding among American households. From 401(k) portfolios overly invested in company stock to depleted retirement account portfolios, a growing number of compelling examples suggest that many individuals make ill-advised financial decisions about retirement.

The low level of financial literacy among American adults suggests that better financial literacy could encourage greater personal saving and improve financial and economic security in retirement (Lusardi 2008a, 2008b). Efforts to improve financial literacy are now supported by a wide array of organizations, including private employers; federal, state, and local government agencies; commercial banks; consumer groups; community service organizations; and religious organizations. As interest in financial literacy grows, however, policymakers and interested organizations must understand the relative strengths and weaknesses of prior efforts and the importance of robust evaluations of financial education programs.

This article evaluates previous efforts to raise household saving through financial literacy initiatives.[1] We define financial literacy as the ability to make informed judgments and effective decisions regarding the use and management of money and wealth, as well as the ability and discipline to implement intended or desired saving behavior.[2]

In the background section, we summarize evidence of the extent of financial illiteracy and its financial outcomes. A significant proportion of American adults—particularly those with limited schooling, with lower income, or who are aged in their 20s or near retirement—do not understand basic financial concepts. Those individuals are more prone to making

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This research was conducted as Center for Financial Literacy at Boston College research project no. 5001394, funded by a grant from the Social Security Administration (prime award no. 19-F-10001-1-01).

poor financial and saving choices than others, and may in effect subsidize those who understand personal finance better.

In the financial education initiatives section, we review research on the effects of traditional efforts to improve financial literacy on household saving. Findings are mixed and often are subject to a variety of potential econometric problems, notably the difficult task of disentangling the effects of a policy from the actions that a household would have taken in the policy's absence.[3] This is more than a narrow statistical concern; indeed, it is central to assessing the impact of financial literacy on saving. As one example, nonexperimental research often suggests that, among households at the lower end of the saving and wealth distribution, workplace financial education has helped raise retirement plan participation, contributions, and overall household saving. By contrast, in Duflo and Saez (2003), an experimental study resolves some of the key econometric problems of nonexperimental data and suggests smaller effects of workplace financial education on saving.

The final section offers concluding remarks.

Background

Numerous studies have documented that a significant proportion of Americans have limited financial knowledge (for example, Bernheim 1995 and 1998; Hilgert and Hogarth 2003). FINRA (2009) found that respondents correctly answered, on average, only three out of five questions on basic financial topics. Women, African Americans, Hispanics, less-educated individuals, and both the young (aged in their 20s) and the old (retirees and near-retirees) are consistently less likely to provide correct answers to questions about basic financial topics than members of other demographic groups (Agarwal and others 2009b; Lusardi and Mitchell 2006, 2008, 2009a, and 2009b; Lusardi, Mitchell, and Curto 2010).

Although the connection between financial illiteracy and financial mistakes may appear to be obvious, it is worth highlighting some of the abundant evidence relating the two. Studies employing differing measures and definitions of financial literacy have found that households or individuals who are less financially literate are also less likely to have a checking account, maintain an emergency fund, have a retirement plan, or hold stocks (Christelis, Jappelli, and Padula 2008; Hilgert and Hogarth 2003; van Rooij, Lusardi, and Alessie 2007). Such individuals are more likely to take payday loans, make only the minimum payment on a credit card balance, take on high-cost mortgages, have higher debt levels, and be delinquent on debt (Gerardi, Goette, and Meier 2010; Lusardi and Tufano 2008; Moore 2003; Stango and Zinman 2008). Minorities and those with less formal education—two of the groups identified by several studies noted above as having low levels of financial literacy—account for disproportionate shares of those who make three major financial mistakes: underparticipating in financial markets, inadequately diversifying their portfolios, and choosing mortgage contracts poorly (Campbell 2006). Individuals with fewer years of schooling often do not understand the terms of their mortgages, especially if the mortgages feature adjustable rates (Bucks and Pence 2006).

Just as low levels of financial literacy appear to lead households to poorer choices and financial outcomes, there is some evidence that financial planning—which is not exactly the opposite of financial illiteracy but implies the acquisition of at least some financial information—can lead households to better financial outcomes and more wealth accumulation. Recent evidence shows that only 42 percent of workers have *ever* calculated the level of resources necessary to live comfortably in retirement (EBRI 2011). Numerous studies have shown a positive correlation between planning and wealth accumulation (Lusardi 1999; Ameriks, Caplin, and Leahy 2003; Lusardi and Beeler 2006; Lusardi 2003).[4] The key question, of course, is whether the relationship between planning and wealth accumulation is causal. The primary challenge in determining this relationship is to account for the evidence that individuals with greater wealth are more likely to plan than are individuals with less wealth. The most credible evidence on this question is provided by Ameriks, Caplin, and Leahy (2003), who use specially constructed questions to generate a measure of a household's otherwise unobserved propensity to plan in general (for example, for vacations). The authors show that their measure is independent and significantly affects wealth accumulation.

Lusardi and Beeler (2006) take a different approach, positing that reverse causality—higher wealth affecting planning—does not occur. To test that hypothesis, they use changes in regional house prices to measure the effect of accumulated wealth on the propensity to plan. Changes in regional house prices serve as an appropriate measure of exogenous changes in wealth, because they are unlikely to affect unobserved planning preferences. However, households may view such changes as temporary and respond

differently (in terms of planning) to changes in other kinds of wealth—for example, an inheritance. Lusardi (2003) uses information on respondents' siblings as an instrumental variable for the degree of planning, and finds that planning significantly affects wealth. The validity of this approach, however, depends on whether the instrument is uncorrelated with tastes for saving and only influences saving through the planning variable.

Financial literacy affects not only individual welfare and saving behavior, but also the nature of products offered in financial markets. For example, less financially literate households may effectively subsidize financial products for more sophisticated investors. Woodward (2003) shows that college-educated borrowers (who are more likely to be financially literate) pay an average of $1,500 less in broker fees at mortgage origination than borrowers with only a high school education. Campbell (2006) speculates that this cross-subsidy may reduce the pace of innovation in financial products, because financially sophisticated households may prefer receiving the cross-subsidy to purchasing newer financial products.

The evidence from prior studies is also relevant to recent economic events. The finding that financial literacy is connected to behaviors associated with the causes of the housing crisis—such as high-cost mortgages, excessive debt, and debt delinquency—indicates that low levels of financial literacy may have contributed to the severity of the recent downturn. Also, concern over lower literacy among low-income individuals and minorities is heightened during an economic recession, as those households are more likely to experience unemployment and other economic hardships.

Financial Education Initiatives

In this section, we review evidence on the effects of financial literacy initiatives on household saving. Most of the programs we evaluate directly address saving or borrowing, but some are designed to influence behaviors that indirectly affect saving, such as minimizing credit card fees or balancing a checkbook. In order to break the substantial body of literature down into more easily interpretable components, we broadly categorize initiatives according to their targeted populations—workers, students, borrowers, and members of specific communities. We believe this categorization is useful for at least three reasons. First, it reflects a frequent policy concern—how to raise the financial literacy or affect saving outcomes within a particular group of individuals or households. Second, the focus of an intervention is generally consistent within each category and varies across the categories. For example, financial information provided by employers to workers typically focuses on retirement saving issues; high school classes typically address broad notions of financial literacy; and credit and mortgage counseling programs typically focus on borrowing behavior and bankruptcy issues. Third, such categorization is a natural outgrowth of the research literature, which has proceeded along similar paths.

However, there is nothing sacrosanct about this particular method of organizing the literature. Even interventions focused on a particular population can vary in delivery mechanisms (examples include one-on-one counseling and financial education seminars, among others), source of funding (public versus private), permanence of the literacy training program, and participant motivation (voluntary versus required). Thus, other ways of categorizing the literature would also yield interesting results, but we do not believe that different methods of organizing the literature review would lead to fundamentally different conclusions.

Sample selection (and the related issue of whether participation is voluntary or required) must be considered when interpreting research results. Rarely are participants randomly assigned; individuals typically receive financial education because of a circumstance (such as near-bankruptcy) or an underlying preference (such as valuing saving). As a result, it is often difficult to determine whether the effect observed in a study is due to the financial education provided or to the circumstance that led to being selected to participate. Although researchers have tried to address sample selection issues, these observations nevertheless suggest caution in interpreting some of the results and a particular focus on the complications that arise when financial education is not provided via random assignment.

Worker-Targeted Financial Education

As employers increasingly replace defined benefit retirement plans with defined contribution offerings, workers are more responsible for deciding contribution amounts, investment allocations, and withdrawal strategies. The worker's expanded role has heightened the need for workplace financial education. Employers have responded by providing such education in a variety of forms, including written materials, financial counseling, and seminars. By the mid-1990s, nearly

90 percent of large employers offered some form of financial education (Bernheim and Garrett 2003).

Using nonexperimental methods, some studies have found that workplace financial education can influence workers' saving behavior.[5] Bernheim and Garrett (2003) use data from a 1994 national telephone survey of 2,055 households with respondents aged 30–48, administered in conjunction with Merrill Lynch, to explore the effects of retirement seminars on household saving behavior. They find significant positive results among employees of firms that offer financial education, including higher 401(k) plan participation (by 12 percentage points), as well as higher contributions and account balances. Employees of the firms that offered seminars also reported significantly higher levels of overall saving. Importantly, higher saving was observed at both the median and the 25th percentile of the saving distribution.

The Bernheim and Garrett study raises several key econometric issues encountered in the nonexperimental research. First, the authors examine the effect of having an employer offer financial education, not the impact of actually participating in the program. This avoids the selection bias that arises if those who are personally motivated to save are also more likely to participate in financial education. Second, to the extent that firms with more and better benefits attract workers with longer-term horizons and more stable economic environments, the results will overstate the effects of the workplace seminars; in effect, the sample selection would occur at the hiring level rather than the participation level. Third, to the extent that firms offer workplace seminars on a remedial basis (that is, when retirement plan participation is for some reason unduly low at a particular firm at a particular time), the results will understate the net effects of workplace seminars. Fourth, the study shows the importance of examining the impact of financial education on different groups, rather than simply focusing on sample-wide effects.

Lusardi (2002) undertakes a similar analysis using data from the University of Michigan's Health and Retirement Study. She examines the effect of retirement seminar participation as opposed to seminar availability.[6] To help reduce the impact of the selection bias, she employs a wide range of explanatory variables including measures of households' preference for risk and propensity to discount the future. Like Bernheim and Garrett, Lusardi finds that participation in financial education classes raises total and financial wealth for savers at the 25th percentile of the saving distribution; however, she does not find the same result for the overall sample.

Muller (2002) analyzes Health and Retirement Study data to test the effects of financial education meetings on the rate of saving out of lump-sum pension distributions. Controlling for demographic, economic, and risk preference variables, she finds no significant effects. Muller does not estimate the effects for low-saving individuals, making her results difficult to compare with Lusardi's. Note that focusing on individuals who obtained financial education and those who received a lump-sum distribution may create sample selection biases.

Some analyses explore behavior at the firm level instead of surveying individual respondents. Because firm-level data do not contain information on employees' wealth outside of the pension or 401(k) plan, the results tend to focus more narrowly on retirement saving behavior. Bayer, Bernheim, and Scholz (2009) use benefit survey data for a cross-section of firms, and find that seminar-style financial education programs have a statistically and economically significant effect on retirement plan participation. Nonhighly compensated employees who worked for employers that offered frequent seminars participated at rates 11.5 percentage points higher than those whose employers offered no seminars. The frequency of seminars affected saving activity, too. By contrast, distributing written materials, such as newsletters or summary plan descriptions, had little effect, regardless of frequency.

In another firm-level study, Clark and d'Ambrosio (2003) conducted surveys 1 month before and immediately after a 1-hour retirement saving seminar, and again several months later.[7] The seminar was found to significantly affect workers' stated retirement goals, but behavior had changed only modestly several months after the seminar. These intriguing findings suggest that education itself may not be enough to change behavior, and that an additional device, perhaps automatic enrollment, would usefully supplement education efforts. However, the reliability of the results is not clear, in that the follow-up survey's response rate was far lower than those for the first two surveys.

With data for multiple years on employee participation rates and benefit offerings, Bayer, Bernheim, and Scholz (2009) show that employer-based financial education programs tend to be "remedial" in nature; that is, they tend to be offered in specific response to situations of relatively low employee retirement plan

participation. Some firms may do so to meet nondiscrimination rules regarding the provision of pension benefits. Regardless of the motivation, the result implies that all of the findings described above might understate the true effect of financial education (see also Clark and Schieber 1998).

Although the nonexperimental literature has found some significant effects of financial education on various dimensions of saving behavior, one experimental study suggests caution in interpreting those results. Using data from a university that invites all its employees to an annual information fair about its employer-sponsored retirement plan, Duflo and Saez (2003) sent letters to randomly selected employees in randomly selected departments offering $20 compensation for attending the fair. The payment significantly impacted attendance—28 percent of employees receiving the offer attended, compared with only 5 percent of workers in departments where no one received the offer. However, the overall impact on retirement plan participation was small—after 11 months, participation rates among those who received the offer were less than 1.5 percentage points higher than for the group not offered compensation (about one-tenth the difference found by Bernheim and Garrett 2003). Thus, Duflo and Saez find that even a large increase in participation in an employer-provided retirement fair had only a small impact on actual retirement plan participation.[8] Nevertheless, the impact was positive, and the authors conclude that the retirement plan contributions and savings generated by the experiment significantly exceed the cost of inducing participation.

Taking the studies of worker-targeted financial education together, there appears to be a substantial range of estimates across a variety of techniques. However, because the distribution of outcomes is virtually all positive, attention focuses not on the presence of any impacts, but on their magnitude.

Student-Targeted Financial Education

According to the Jump$tart Coalition for Personal Finance Literacy (2011), 20 states currently require the incorporation of financial education into another subject's high school curriculum,[9] and 4 other states require students to take at least one course independently devoted to financial education.[10] States' financial literacy curricula typically focus partly on saving and partly on topics related to saving, such as minimizing financial fees and managing credit card debt.

Bernheim, Garrett, and Maki (2001) investigate whether the state financial education requirements affect individual behavior later in life. The authors analyzed a specially commissioned wealth survey of individuals aged 30 to 49 that included data on the state and the years in which they attended high school. Matching those data with the historical record of when states adopted financial education requirements enabled the authors to determine whether each individual was subject to a financial or consumer education mandate in high school. The authors find that respondents who attended high school in states mandating financial education reported saving rates (as a share of income) 1.5 percentage points higher than those who did not. The authors also find that the magnitude of this effect increases with the number of years the mandate had been in place at the time the respondent was in high school.

Cole and Shastry (2008) examine the same issue using Census Bureau public use data. Using the specification used by Bernheim, Garrett, and Maki in their 2001 study, Cole and Shastry obtain similar results. However, Cole and Shastry also build upon the 2001 study's estimation strategy by including state-level fixed effects for birth-year cohorts and analyzing a substantially larger data set. Their augmented model finds that financial literacy mandates do not significantly affect saving behavior, suggesting that the earlier study's estimates may have been influenced by factors related to particular state or birth-year characteristics, rather than the financial literacy courses.

Several other studies explore the effects of high-school mandated financial education classes. Those studies examine the impact of financial literacy education not on saving behavior itself, but on behavior that may be related to higher saving, such as maintaining a checkbook, balancing a budget, and so on. The studies have produced mixed and inconclusive results.[11]

Borrower-Targeted Financial Education

Much of the financial education and financial literacy training takes the form of credit and mortgage counseling, perhaps because taking out a loan or trying to avoid bankruptcy provides "teachable" moments for households that are particularly eager to improve financial literacy. Credit and mortgage counseling is not meant to increase saving directly, but to better educate potential borrowers on the characteristics of loans they are considering (prepurchase counseling) and to assist existing borrowers with making payments on loans already undertaken (postpurchase counseling). Credit counselors may also advise consumers on bankruptcy proceedings. Mortgage and

prepurchase counseling for homeowners have become more prevalent since the recent housing market crash began and attention turned toward the role of uneducated homebuyers.

Research evaluating the efficacy of mortgage and credit counseling often suffers from the selection bias challenges discussed earlier. Individuals receiving credit counseling are generally in severe debt and motivated to avoid bankruptcy. Likewise, those seeking mortgage counseling are probably less financially literate and are thus considered less creditworthy than other homebuyers. Characteristics such as these make it difficult to construct a control group from which to compare the effect of the policy, because it is difficult to estimate precisely how participants would act in the absence of counseling.[12]

The most compelling study in this area is Agarwal and others (2009a), which takes advantage of legislation mandating counseling and third-party review of mortgage contracts in certain Chicago-area zip codes but not in others. The differences in mortgage regulation allow the creation of exogenous treatment and control groups based on geographic area, effectively limiting the selection bias discussed earlier. The authors note two possible sources of change in mortgage choice and default rates: direct information attributed to mortgage counseling and increased oversight of mortgage loan contracts. They find substantial evidence that the increased oversight affected the quality and quantity of mortgage lending, but little evidence that the counseling substantially affected borrower default rates.

Other analyses in this area face a variety of econometric issues that impede credible inference. For example, Mallach (2001) reviews the research on credit counseling, providing critical analysis of the 11 major mortgage-counseling studies published prior to his review.[13] Mallach questions the internal validity of the research, noting that "the outcome of the studies, taken as a whole, is highly ambiguous" and that "serious limitations with respect to the design and conduct of the studies severely compromise the value of such findings that can be derived from the research."[14]

Targeted-Community Financial Education

These initiatives target a local population through a community-based program. Sherraden and Boshara (2008) examine Individual Development Account (IDA) programs, which combine financial education with matched saving opportunities for low-income workers. The authors find that exposing participants to between 1 and 10 hours of financial education increased average IDA deposits by $1.16 per month for each hour. Clancy, Grinstein-Weiss, and Schreiner (2001) report similar results.

These results should be interpreted with caution. First, Sherraden and Boshara provide no analysis of whether the added contributions are net additions to saving. Second, there is no control group in the study, and IDA participants are typically highly motivated savers (Mills and others 2008). Third, it is not clear why some participants engaged in more hours of financial education than others. If the reason is correlated with tastes or desires for saving, the financial education variable is endogenous. Fourth, because IDAs offer a suite of benefits (financial education in addition to matched funds for particular uses such as homeownership), it is difficult to separate the relative contributions of financial education from the matching incentives.[15]

Mills and others (2008) examine the impact of IDA eligibility on household net worth using longitudinal results from a randomized experiment in Tulsa, Oklahoma, for 1998–2003. Extensive sensitivity tests of the IDA program's net impact on overall household wealth—and thus the extent to which the contributions on the whole represented net additions to saving—proved inconclusive. This was in part because there were few significant effects on subsidized categories of assets. Moreover, the underlying variation in net worth across sample members was enormous relative to the size of IDA contributions, making significant effects difficult to detect.

Conclusion

Low levels of financial literacy are prevalent among adults, particularly among disadvantaged groups, and are associated with poor financial choices that can lead to economic insecurity. Increased financial literacy could help individuals understand their saving situations better, save more, and attain higher economic status and more economic security. Widespread financial literacy might also provide broad social and economic gains as vulnerable households make better financial decisions, and possibly increase capital stock as saving rates increase.

For all of those reasons, the effect of financial education on household saving is an important topic. We draw several principal conclusions from the analysis of previous work. First, workplace financial education seminars positively affect household saving, although the magnitude of the impact varies widely across

evaluation studies. The effect of high school financial education curricula on household saving is less clear; the more sophisticated econometric studies suggest no significant effect. Second, serious and credible tests of the impacts of financial literacy on saving have not been performed in the areas of credit- and mortgage-based counseling or community-targeted programs. Third, many of the studies suffer from biases relating to sample selection, high attrition rates, and other econometric issues that preclude reliable inference.

Given these findings, one clear direction for future research would be to undertake more robust evaluation methodologies that rigorously separate the opportunity to receive financial education and improve financial literacy from observable and unobservable household characteristics. In particular, studies adopting an experimental design can help isolate the specific effects of financial literacy interventions and mitigate many of the biases that cloud interpretation of proliteracy policies.

Notes

Acknowledgments: The authors thank Alicia Munnell and Steve Sass for helpful discussions and Ilana Fischer for research assistance.

[1] Among earlier literature reviews, Braunstein and Welch (2002) focus on financial literacy from the consumer perspective; Martin (2007) provides a broad overview of financial literacy research; Hathaway and Khatiwada (2008) present a limited review of the effectiveness of prior financial education initiatives; and Knoll (2010) provides an extensive review of retirement saving in the context of behavioral economics.

[2] We mean to provide a plausible working definition of financial literacy for this article, not to redefine or somehow narrow the topic. Other commonly used definitions of financial literacy focus on similar themes, and would likely generate comparable conclusions.

[3] In econometrics, "bias" describes a condition under which repeated sampling will not produce an average estimate that is equal to the true value of a particular parameter. Omitted variables and problems with sample selection and simultaneity can lead to bias (Stock and Watson 2003), as can other causes. In the context of financial literacy, a significant bias is the omission of a worker's taste for saving (which is often unknown and unobservable). More motivated savers tend to be more likely to participate in financial education efforts. Experimental research, which randomly assigns a policy intervention to a treatment group, can alleviate this econometric bias.

[4] Hastings and Mitchell (2011) obtain similar results for Chilean households.

[5] Olsen and Whitman (2007) provide an extensive review of research concerning the efficacy of retirement plan design and workplace financial education.

[6] The study employs ordinary least squares analysis, rather than panel data analysis, to derive estimates. Thus, participation in a retirement saving seminar is essentially treated as a simultaneous observation with the stock of saving, rather than observing the stock of saving before and after participation in the seminar.

[7] This experiment is also central to Clark and others (2004, 2006).

[8] In their 2002 study, Duflo and Saez examine effects of peer and social networking in this experiment.

[9] For example, Tennessee requires "that the program of instruction for the public high schools on the essentials of the free enterprise system include elements of personal finance and financial literacy that, as a minimum, would include instruction on earning an income, money management, spending and credit, and saving and investing."

[10] For example, Virginia curriculum requirements state that "objectives for economics education and financial literacy at the middle and high school levels shall include, but not be limited to, personal living and finances; personal and business money management skills; opening an account in a financial institution and judging the quality of a financial institution's services; balancing a checkbook; completing a loan application; the implications of an inheritance; the basics of personal insurance policies; consumer rights and responsibilities; dealing with salesmen and merchants; debt management; managing retail and credit card debt; state and federal tax computation; local tax assessments; computation of interest rates by various mechanisms; understanding simple contracts; and learning how to contest an incorrect bill."

[11] Mandell (2009) and Mandell and Klein (2009) generally find no relation between high school financial education and financial literacy scores and related behavior. Gutter, Copur, and Garrison (2009) and Danes (2005) generally find positive effects, but the studies are marred by statistical concerns including low response rates, which might bias the results. Maki (2004) is probably the most methodologically sound study in this category. He uses data from the same survey as Bernheim, Garrett, and Maki (2001) to show that financially educated high school students are more likely as adults to correctly answer questions about the returns of stocks relative to those of bonds, and about the structure of their pension plans.

[12] Mortgage and credit counseling evaluations typically focus on programs offered by nonprofit or public agencies, although for-profit credit counselors do operate in the United States. For-profit credit counseling became more prevalent in the 1980s and 1990s but diminished in the past decade with more stringent regulation of such counselors.

[13] Quercia and Wachter (1996) provide an earlier and less critical review of homeownership counseling studies.

[14] Other work in this area produces mixed results and does not effectively address selection bias. Elliehausen, Lundquist, and Staten (2003) find that one-on-one credit counseling significantly raises creditworthiness and reduces debt and delinquency rates, with larger effects for individuals with lower initial credit scores. Hirad and Zorn (2001) find a significant effect of receiving any counseling on mortgage delinquency, with the most effective form being individual counseling, followed by classroom counseling (the effects of home study and telephone counseling are not statistically significant). Quercia and Spader (2008) find that prepurchase counseling does not reduce the rate of default. Ding, Quercia, and Ratcliffe (2008) find that postpurchase counseling during a spell of delinquency helps reduce late payments.

[15] Other studies of community-based initiatives have measured the programs' impacts on financial literacy rather than on saving. Anderson, Scott, and Zhan (2002, 2004) evaluate the effects of financial education provided through the Financial Links for Low-Income People (FLLIP) program. Through nonprofit community-based agencies, FLLIP provided 12 hours of financial education to individuals with income below 200 percent of the poverty line, then compared results of pre- and post-training tests. Follow-up test scores were somewhat higher, but only one-third of the original sample took the follow-up tests, so sample selection issues are again paramount.

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