J. MICHAEL COLLINS AND COLLIN M. O'ROURKE

Financial Education and Counseling—Still Holding Promise

This article reviews the evaluation literature on financial education and counseling for adults in order to synthesize implications for research and practice. Most evaluations report positive impacts, but the findings are often small when compared with valid comparison groups. Many evaluations use self-reported measures, measure outcomes over short time periods and cannot rule out selection bias due to nonrandomized designs, all of which may bias results. Although future research and practice in this field hold promise, more attention to theory-based evaluations and further investment in randomized field experiments may be fruitful.

The rationale underlying most financial education and counseling programs is that consumers systematically lack financial information and that they will make "better" financial choices given exposure to added information. This rationale assumes that certain information failures and constraints result in inefficient outcomes and that, given fuller information, consumers will make different financial choices. Of course, consumers face more than informational barriers when they make financial decisions. For instance, consumers may lack self-control or exhibit other behavioral biases that education and counseling may not enable them to overcome. However, all else equal, financial education and counseling hold the promise of improving financial knowledge and facilitating behavior change.

This article reviews and synthesizes forty-one evaluations of financial education and counseling programs in order to shape future areas of inquiry among researchers and inform new approaches among practitioners. The goal was to ascertain what, if any, effects on knowledge and behavior can be derived from past evaluations. This review offers insights for individuals and organizations in this field as well as provides cautions for researchers designing and implementing evaluations. The

J. Michael Collins (jmcollins@wisc.edu) is an Assistant Professor and Faculty Director of the Center for Financial Security and Collin M. O'Rourke (cmorourke@wisc.edu) is a Research Analyst, both in the Department of Consumer Science at the University of Wisconsin-Madison. This paper was generously supported by the Annie E. Casey Foundation.

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four sections of this article: (1) provide an overview of existing articles that review the evaluation literature in the financial education and counseling fields; (2) describe the research methodology used in this review; (3) categorize the evaluations into six major topical areas; and (4) highlight the implications of the synthesized findings for financial educators as well as for researchers.

It is important to note that the distinctions between financial education and counseling are often unclear. Financial counseling generally refers to one-on-one advice or consulting. Financial education typically refers to programs that provide financial information. However, counseling may incorporate educational topics and materials, and participants in financial education programs may have specific issues or personal questions that the educator or their peers address. Keeping in mind that counseling and education overlap in practice, this review defers to the terms the authors of each evaluation used to refer to specific programs.

PRIOR LITERATURE

Multiple articles include careful literature reviews of financial education and counseling evaluations, but none provides a comprehensive assessment of the evaluation literature. Furthermore, none have categorized and synthesized prior studies to the degree this article attempts. However, several literature reviews served as a foundation for this review. One of the most comprehensive literature reviews is Hogarth's (2006) review of twenty-three published and unpublished studies. Hogarth was cautiously optimistic about financial education's impacts. Similarly, Martin's (2007) Federal Reserve working paper concluded that evidence of financial education's benefits is promising but far from definitive.

Other researchers were less optimistic about the benefits of financial education and counseling and have been critical of the state of the evaluation literature. Hathaway and Khatiwada (2008) suggested that rigorous evaluation is lacking and that there is little evidence that financial education and counseling affect behavior. Caskey (2006) found that five studies commonly cited as evidence of the benefits of financial education and counseling suffered from serious flaws. Finally, Willis' (2008a, 2008b) law reviews provided some of the most critical reviews of the evaluation literature. She asserted that the evidence of financial education's effectiveness was weak and that researchers are biased toward making marginal impacts appear more robust than warranted. In part, the goal of Willis' work was to advocate for overt regulation of

consumer financial markets. Nevertheless, her critiques remain instructive for individuals outside of the legal field.

Other studies have highlighted methodological issues pertaining to the evaluation of financial education and counseling programs. Meier and Sprenger (2007) show that future-oriented people are the most likely to agree to attend financial education. Since future-oriented individuals are already more likely to manage their personal finances better, the authors conclude that selection into financial education contributes to an overestimation of positive impacts. To deal with selection bias, statistical strategies can be attempted using selection models (e.g., predicting participation based on other data), exposure models (based on the amount of services obtained), matching models (selecting comparison subjects using observed data) and instrumental variable models. Aside from the issue of identifying a valid comparison group, another methodological concern is the use of self-reported data. Agnew and Szykman (2005) found that people tend to overestimate their financial knowledge relative to their actual knowledge. Their findings suggest that caution is warranted when measuring self-reported financial knowledge, especially for individuals without a college education. Collins et al. (2008) showed that self-reported behaviors related to tax refunds and debt deviated significantly from administrative data.

METHOD

This analysis was based on a review of forty-one evaluations of financial education and counseling programs that serve adult populations. McCormick (2009) offers reasons why financial education programs for adults should be considered separately from school-based programs. The studies included in this review were restricted to evaluations that focused on specific educational or counseling strategies rather than retirement savings products or alterations in administrative processes.

This review was a qualitative systematic literature review, which is a research process outlined by Green, Johnson and Adams (2006). The review was systematic because it followed a strict research methodology, and it was qualitative because it did not attempt to statistically combine results across studies. We sought evaluations that measured financial education and counseling's impacts on financial knowledge and/or behavior. Studies in this review described the financial education or counseling program being evaluated, included outcome measures related to financial knowledge and/or behavior and described the research methodology. Both published and unpublished studies that met these criteria were

TABLE 1
Method, Program and Outcome Codes

	Code in Table 2
Method	
Descriptive (no comparison)	DES
Quasi-experiment	QE
Randomized field experiment	R
Program description	
General financial education programs (outside workplace)	GFE
Bankruptcy programs	BK
Credit repair programs	CR
Prepurchase homeownership counseling	HC
Postpurchase mortgage counseling	MC
Workplace-based financial education	WP
Measure	
Self-reported behavior	SR Beh
Behavior from administrative sources	Beh
Financial knowledge	Know
Credit performance	Credit
Loan performance	Loan

included. For each study we recorded a description of the program as well as the research methodology, theoretical framework (if any), sample size, outcome measures, program impacts and follow-up period. Findings were summarized by calculating the largest statistically significant marginal effects over a baseline (when provided by the authors). We also noted any unique characteristics that are informative for the financial education and counseling fields. The research methodologies, program descriptions and outcome measures are listed in Table 1, along with the codes used to classify the studies in Table 2.

REVIEW OF FINANCIAL EDUCATION AND COUNSELING'S IMPACTS

Each of the forty-one evaluations was classified into one of six categories: (1) general financial education programs delivered outside of the workplace; (2) bankruptcy programs; (3) credit repair programs; (4) prepurchase homeownership counseling; (5) postpurchase mortgage counseling; and (6) workplace-based programs. Within each category, each evaluation is discussed in terms of the type of outcome measures it analyzed (knowledge, behavior or both) and whether the outcomes were positive or negative. More detailed information about each study,

TABLE 2
Summary of Study Methods, Sample Size, Program Type and Outcome Measure(s)

Study No.	Reference	Method	Sample Size	Program Description	Outcome Measure(s)
1	Varcoe and Wright (1991)	DES	190	GFE	SR Beh
2	Shelton and Hill (1995)	DES	35	GFE	SR Beh
3	DeVaney et al. (1996)	DES	196	GFE	SR Beh
4	Kim, Bagwell and Garman (1998)	DES	104	WP	SR Beh
5	Garman et al. (1999)	DES	100	WP	SR Beh
6	Braucher (2001)	QE	7,746	BK	Beh
7	Clancy, Grinstein-Weiss and Schreiner (2001)	QE	2,378	GFE	Beh
8	Clark and d'Ambrosio (2002)	DES	270	WP	SR Beh, Know
9	Hirad and Zorn (2002)	QE	39,318	HC	Loan
10	Bernheim and Garrett (2003)	QE	2,055	WP	SR Beh
11	Duflo and Saez (2003)	R	6,200	WP	Beh
12	Lyons and Scherpf (2004)	DES	226	GFE	SR Beh, Know
13	Birkenmaier and Tyuse (2005)	DES	203	CR	Credit
14	Gartner and Todd (2005)	R	6,417/3,170	CR	Credit
15	Hartarska and Gonzalez-Vega (2005)	QE	919	HC	Loan
16	Hira and Loibl (2005)	QE	1,486	WP	Know
17	Wiener et al. (2005)	QE	423	BK	SR Beh, Know
18	Hartarska and Gonzalez-Vega (2006)	QE	233	HC	Loan
19	Lyons, Chang and Scherpf (2006)	DES	161	GFE	SR Beh
20	Zhan, Anderson and Scott (2006)	DES	163	GFE	Know
21	Collins (2007)	QE	299	MC	Loan
22	Elliehausen, Lundquist and Staten (2007)	QE	73,880	CR	Credit
23	FDIC (2007)	DES	631	GFE	SR Beh
24	Kim (2007)	DES	36	WP	SR Beh, Know
25	Koenig (2007)	DES	17	GFE	Know
26	Sanders, Weaver and Schnabel (2007)	QE	67	GFE	Know
27	Bayer, Bernheim and Scholz (2008)	QE	1,178	WP	Beh
28	Ding, Quercia and Ratcliffe (2008)	QE	2,975	MC	Loan
29	Haynes-Bordas, Kiss and Yilmazer (2008)	DES	160	GFE	SR Beh
30	Holland, Goodman and Stich (2008)	DES	16	WP	SR Beh
31	Lyons, White and Howard (2008)	DES	4,310/2,713	BK	SR Beh, Know
32	Quercia and Cowan (2008)	QE	4,274	MC	Loan
33	Quercia and Spader (2008)	QE	2,688	HC	Loan
34	Servon and Kaestner (2008)	R	243	GFE	SR Beh, Know
35	Agarwal et al. (2009a)	QE	1,200	HC	Loan
36	Agarwal et al. (2009b)	QE	359 treated	HC	Loan
37	Barron and Staten (2009)	QE	38,000	CR	Credit
38	Bell, Gorin and Hogarth (2009)	DES/QE	386	GFE	SR Beh
39	Carswell (2009)	DES	405	HC	SR Beh
40	Collins (2009)	R	127	GFE	SR Beh, Know
41	Spader et al. (2009)	QE	171	GFE	SR Beh, Know

including its research methodology, is included in Table 2. Table 3 highlights representative findings from each evaluation.

General Financial Education

Fifteen of the forty-one evaluations analyzed general financial education programs outside of the workplace. These programs were typically taught in a classroom or seminar format, though one evaluation analyzed financial education delivered in a one-on-one setting. This was a highly heterogeneous group of evaluations, but most focused on basic budgeting, bank use and credit management. Three general financial education studies evaluated financial knowledge gains alone (Studies 20, 25 and 26 in Table 2), eight evaluated changes in financial behavior alone (Studies 1, 2, 3, 7, 19, 23, 29 and 38) and four evaluated changes in both financial knowledge and behavior (Studies 12, 34, 40 and 41). Together, five of the seven studies that analyzed financial knowledge found improvements, as did ten of the twelve studies that examined financial behavior. Authors of the studies about changes in financial knowledge often noted that while knowledge gains are promising, the ultimate goal of financial education is behavior change. In terms of behavior change, the studies that measured self-reported behaviors, in particular, suggested financial education has positive and large impacts.

One noteworthy evaluation within this category was conducted by Bell, Gorin and Hogarth (2009), who used both a pre–post test and a quasi-experimental matching design to analyze a financial education program for soldiers at an Army post. Participants completed a baseline survey about their self-reported financial behaviors, and participants and a comparison group who did not participate in the program completed follow-up surveys up to 3 years after the program. The pre–post test comparisons indicated several behavior changes that the quasi-experimental analysis failed to confirm. This discrepancy provides further evidence of positive selection bias—that is, the most motivated participants engaged in the program. This article also highlights the bias created by nonresponse to follow-up surveys.

Bankruptcy Programs

Three evaluations examined bankruptcy education, including two published before the passage of the 2005 Bankruptcy Abuse Prevention and Consumer Protection Act. One study measured changes in financial behavior alone (Study 6) and two measured changes in financial

TABLE 3
Summary of Study Results

Study No.	Representative Finding(s)
1	Less frequent financial problems and lower average weekly food expenditures.
2	50% increase in proportion of participants who totaled the value of the things they owned "All of the time."
3	55% of respondents developed or revised a spending plan.
4	85% of respondents claimed they would put money into savings and investments other than their 401(k) retirement plan.
5	75% of respondents agreed that they made better financial decisions after the program.
6	Inconclusive results.
7	Each additional hour of financial education increased average monthly net deposits by $1 and deposit frequency by two percentage points. Effects leveled off after 12 hours.
8	Over 80% of respondents reported an increased understanding of the need for retirement savings.
9	Borrowers who received counseling were 19% less likely to become 90 days delinquent. When selection was controlled, only classroom-based counseling was effective.
10	Participation in 401(k) plans was 12 percentage points higher if the respondent's employer offered financial education (9 points for the spouse) (18% marginal effect).
11	Retirement plan enrollment rate increased by 1.25% points after 11 months.
12	90% agreed the program increased their financial knowledge and ability to manage their finances.
13	Nonsignificant change in credit scores.
14	Take-up too low for analysis.
15	Mixed results, with a slight increase in prepayment and decrease in default.
16	Employees reported a better understanding of planning for their financial future and retirement, investing and managing credit.
17	Financial knowledge test scores increased by 5.5%. Proportion of debtors who reported paying all bills in the past month increased by 89% from 37% to 70%.
18	Counseled borrowers' default rate was 39% the default rate of noncounseled borrowers.
19	85% of participants reported improved financial management practices. All five anticipated financial behaviors improved.
20	Composite financial knowledge scores increased by 37%.
21	Each additional hour of counseling reduced the probability of foreclosure by 3.5%.
22	Mean Emperica score among counseled borrowers in the lowest credit score quintile increased to a level just 0.63% higher than noncounseled borrowers.
23	6% increase in proportion with a checking account; 45% increase in proportion who normally paid credit card bills in full.
24	Statistically significant improvements in self-assessed financial knowledge and fourteen of sixteen self-reported financial behaviors.
25	Financial knowledge test scores increased by 12% from 66% to 75%.
26	Treatment group's average financial curriculum score increased by 4.6%, with a negligible increase for the comparison group.
27	Participation in and contributions to voluntary savings plans significantly higher for employees with access to workplace retirement seminars.
28	Odds of curing were 50% higher for borrowers who received counseling, relative to foreclosure.
29	68% of participants who owed restitution paid their debts within a month after earning the program's certificate.

(Continued)

TABLE 3
(Continued)

Study No.	Representative Finding(s)
30	Participants' confidence in their ability to find $1,000 for an emergency improved by 55% from the baseline.
31	Nonsignificant effects on financial behavior. Average knowledge score increased by 6.5% in the education group and 15% in the counseling group.
32	For each additional hour spent with the program, odds of client avoiding foreclosure increased by 10%. Homeowners who received budget/credit counseling twice as likely to avoid foreclosure.
33	Counseling had nonsignificant effects on default. Prepayment increased from approximately 53% to 56%.
34	Nonsignificant effects.
35	Default decreased by 30%, though effects chiefly attributed to lenders' screening actions rather than to counseling.
36	Substantially lower ex-post default rates, attributed to the type of mortgage contract extended to participants, skills gained during prepurchase counseling and postpurchase counseling.
37	Counseling delivered via the telephone or Internet generated outcomes no worse than face-to-face delivery.
38	Improvements in behavior in bivariate pre–post analysis but nonsignificant results in multivariate analysis.
39	85.5% of respondents agreed their mortgage took top priority over other bills.
40	25% improvement in financial knowledge, $450 in additional savings, 48% improvement in self-reported financial behavior.
41	Nonsignificant effects on financial literacy. Treatment group had statistically significant gains on two behavior variables.

knowledge and behavior (Studies 17 and 31). In addition to debtor education, Lyons, White and Howard (2008) analyzed prebankruptcy counseling. Overall, one of the three studies established positive behavior changes, and improvements in financial knowledge were established in both of the studies that analyzed knowledge gains. Lyons, White and Howard's (2008) evaluation was noteworthy for its explicit discussion of a theoretical framework.

Credit Repair Programs

Four studies evaluated programs aimed at improving individuals' credit management in a nonbankruptcy context (Studies 13, 14, 22 and 37). Two of the four studies reported positive impacts. However, the positive findings established in these studies were relatively small in magnitude. For example, despite a large set of credit bureau data, a relatively lengthy follow-up period and a well-designed selection model, Elliehausen, Lundquist and Staten (2007) found small effects.

For instance, credit scores increased by only three-fifths of 1% more than the comparison group among counseled borrowers in the lowest credit score quintile.

Prepurchase Homeownership Counseling

Seven evaluations assessed prepurchase homeownership counseling, which is designed to assist low- and moderate-income families to become successful mortgage borrowers. Although six evaluations measured loan outcomes (Studies 9, 15, 18, 33, 35 and 36), one evaluation measured self-reported behaviors (Study 39). The seven studies assessed a variety of delivery methods: face-to-face counseling (three studies), a combination of classroom and one-on-one services (one) and counseling delivered via four channels (two). One study did not model the form of counseling delivery. Each evaluation found improvements after the counseling programs. Since six of the seven studies measured loan outcomes, Carswell's (2009) evaluation of the impact of prepurchase counseling on self-reported behavior is noteworthy. Carswell's study tracked 1,720 mortgage borrowers who had participated in nonprofit-based programs over a 5-year period. Although the analysis yielded few statistically significant findings, the study highlighted the need to measure changes in behavior over time rather than solely analyzing loan outcomes.

Postpurchase Mortgage Counseling

Three studies evaluated postpurchase mortgage counseling's impact on loan outcomes (Studies 21, 28 and 32). Postpurchase mortgage counseling is delivered in response to borrowers' inability to stay current on their mortgages. Each of these studies concluded that postpurchase counseling improved mortgage loan outcomes. Collins's (2007) statistical approach is somewhat unique because it uses the number of marketing materials mailed to promote counseling in each zip code as an instrument for the take-up of counseling. This instrument proved correlated with the number of hours in counseling but uncorrelated with individual foreclosures. This approach allowed Collins to estimate the effect of each additional hour of counseling on the probability of foreclosure.

Workplace-Based Financial Education Programs

Nine evaluations assessed workplace-based financial education programs. Six studies measured financial behavior alone (Studies 4, 5, 10, 11,

27 and 30), one measured financial knowledge alone (Study 16) and two measured both financial knowledge and behavior (Studies 8 and 24). Positive outcomes were suggested by all nine evaluations. The study by Duflo and Saez (2003) was notable for using a randomized experimental design and for incorporating the role of social norms and networks into the study of financial behavior.

DISCUSSION

The literature holds promise for financial education and counseling as a strategy for consumers in a variety of financial contexts. Nevertheless, the evaluation literature is far from conclusive and is prone to a number of methodological problems and biases. This section discusses four major methodological issues: selection bias, measurement issues, longitudinal designs and a general lack of theory. It concludes with implications for practitioners concerning the mode and format of program delivery, how selection effects might influence program design and implementation and the potential for complementary approaches to the provision of financial information and advice.

The most serious methodological issue is the problem of selection bias. Seventeen of the forty-one evaluations used “descriptive” designs and did not compare program participants to a comparison group. Consistent with Meier and Sprenger’s (2007) findings, the effects estimated in the descriptive studies tended to be significantly greater than the findings in the quasi-experiments. Likewise, the impact estimates from the quasi-experiments tended to be significantly greater than those from the randomized field experiments. Although the forty-one studies were not directly comparable, the differences in marginal effect sizes across research methodologies raise concerns that selection processes are at least partially responsible for the outcomes. These differences also suggest that the most motivated consumers enroll in programs and that they may be the most likely to demonstrate improvements regardless of the intervention.

A second methodological issue is related to outcome measurements. Evaluations generally rely on two sources of outcome measures: self-reported or administrative data. Although data collection methods vary, twenty of the thirty-seven studies that examined behavioral outcomes relied on self-reported measures. Reliance on self-reports raises concerns about response bias as well as the possibility that service providers might guide respondents to desirable survey answers. Both would upwardly bias results. Future research could adopt Agnew and Szykman’s (2005)

approach and validate how accurate self-reports are compared with actual behavior. Another possibility is examining the reliability of self-reported measures over time through longitudinal studies.

Although self-reported data have limitations, it is unclear whether administrative data collected for purposes other than a program's evaluation are necessarily more reliable or valid. There are lower rates of nonresponse attrition for administrative data, but administrative data may not capture the outcomes of primary interest in many financial education and counseling evaluations. For instance, all but one housing counseling study focuses on loan default due to the availability of loan repayment data, despite the fact that other measures may be more meaningful (Carswell 2009). Moreover, administrative data may include high levels of cross-sectional variance. For example, bank account balances may be higher at the beginning of the month than at the end. Across a larger number of clients and a longer time period, these data will move toward a central tendency, but with small sample sizes the data may be more erratic and may yield skewed results. Greater attention to measurement issues and the use of more standardized measures are important considerations for future evaluations.

A third methodological issue is related to the use of cross-sectional, two-period and multiperiod designs. Of the thirty-one nonhomeownership counseling studies, twelve used one-period cross-sectional designs, fifteen used two-period (pre–post) models and four used multiperiod longitudinal panel designs with three or more periods. Cross-sectional studies can be informative, but the measurement of causal impacts may be difficult. The length of the follow-up period for multiple period designs is important. Short follow-up periods may capture immediate program effects but not lasting impacts. In contrast, longer follow-up periods may capture more permanent outcomes but can also exacerbate the problem of attrition bias. To the extent more distressed clients are less likely to respond at follow-up, attrition may also contribute to a positive bias.

A fourth methodological concern has implications for research as well as program design. Only eleven studies in this review discussed an explicit theory or framework of change. Most studies relied on a "black box" model such that information or counseling was the input, and the expected outcome was a measurable effect on knowledge and/or behavior. Most studies included a large number of outcomes and found significant results for only a subset. This generalized approach may fail to incorporate other influences on the outcome measures beyond the intervention. Using multiple measures also raises the possibility that some of the outcomes will be statistically significant due to random chance alone.

Of course, one reason studies fail to cite a specific theory is that the financial education and counseling fields lack a prevailing theoretical framework. Schuchardt et al. (2007) provided a useful review of the theories currently found in the literature. Several evaluations do cite theories of behavior change, however, including Fishbein and Ajzen's theory of reasoned action (1975), Ajzen's theory of planned behavior (1991) or Prochaska, DiClemente and Norcross's (1992) five-stage transtheoretical model. Examining the evaluation literature emphasizes the need for both practitioners and researchers to better understand the theoretical underpinnings of their work. Although existing theoretical models have limitations, an explicit theory of change brings precision to both program development and the measurement of program impacts.

This review leads to implications for practitioners concerning how programs are delivered. The literature does not support the common assumption that face-to-face delivery methods are more effective than other delivery modes. Five of the seven studies that examined programs delivered by telephone found positive results for telephone-based services. It may be that financial education and counseling services are optimized when they meet each client's unique needs over time, rather than when they are delivered in a standardized format for a predetermined duration. A related issue is the context in which financial education is delivered. Many studies reference various life events that may be viable "teachable moments." Although timing issues may be important in determining how programs should be delivered, none of the studies incorporated variations in the timing of education or counseling delivery.

Another issue relevant for practitioners is related to selection bias. In evaluation research we worry that selection by clients is an unobserved and omitted variable that biases results. For practitioners, however, the fact that clients select into certain programs can be advantageous. The direct and indirect evidence suggests that programs systematically attract people with specific risk and motivation profiles into particular modes and durations of education and counseling. By reviewing the characteristics of clients who enroll in each type of service, perhaps even using modified forms of time preference measures, programs may better match services to clients. Although some practitioners may prefer to work with highly motivated clients, mandated clients present unique opportunities. Clients mandated to participate will display a range of motivation levels, including clients who otherwise would be hard or even impossible to reach.

There are several examples in the literature of instances in which financial education is a component of a larger program. Financial information

serves as a complement to these programs and conceptually enhances the effectiveness of the primary intervention involved. Alternatively, there may be some types of programs that could complement financial education and thereby enhance consumers' ability to act on newly gained information. For instance, to the extent that a lack of self-control prevents people from changing their behavior, having an ongoing financial coach who helps the client set and monitor goals may be more effective than financial education alone. Further exploration and development of complements to financial education and counseling may help participants overcome the limits of solely providing financial information and advice.

It is quite clear that better studies are needed to refine how financial education and counseling strategies are designed and implemented. Although efforts to improve the capacity of education programs to measure outcomes are laudable, programmatic capacity building is a separate issue. Just as high school educators may benefit from sound course assessment tools, so too can many financial educators. However, few educational advocates expect high school teachers or even schools to conduct extensive evaluations of the longitudinal impact of their teaching on students' behavior. That work is left to large-scale, highly resourced research. Perhaps the only solution will be the continued growth in experimental field studies, although these methods are admittedly challenging to implement without significant support from public and private funders. The efforts of the US Financial Literacy Education Commission, the formation of the Social Security Administration's Financial Literacy Research Consortium and the recent report on the National Foreclosure Mitigation Counseling program (Mayer et al. 2009) are all positive developments that suggest a growing focus on larger and better resourced evaluations.

The overall evidence of the effects of financial education and counseling efforts is promising but still emerging. Future research can incorporate insights from prior studies, especially the many methodological issues discussed in this review. Programs are often nonstandardized and deliver services to highly heterogeneous populations, making evaluation challenging in the absence of sufficiently rich programmatic data. Clients select into services, and only a subset of clients can be reliably tracked over time.

However, the problems in past research should not impede future efforts. From the literature, there are some insights into the need to test a variety of delivery modes across a range of populations and contexts. It is possible that current counseling models are delivered in such crisis moments that they fail to impact behavior significantly.

Likewise, education models may be too shallow and lack opportunities for practice and follow-up. New models will likely emerge after further experimentation with novel combinations of delivery modes and the incorporation of complementary services. Research on financial education and counseling over the life course may reveal new approaches for improving consumers' financial capacity.

REFERENCES

Agarwal, Sumit, Gene Amromin, Itzhak Ben-David, Souphala Chomsisengphet, and Douglas D. Evanoff. 2009a. Do Financial Counseling Mandates Improve Mortgage Choice and Performance? Evidence from a Legislative Experiment. Working Paper No. 2009-04, Federal Deposit Insurance Corporation Center for Financial Research.

———. 2009b. Learning to Cope: Voluntary Financial Education Programs and Loan Performance during a Housing Crisis. Charles A. Dice Center Working Paper No. 2009-23.

Agnew, Julie and Lisa R. Szykman. (2005). Asset Allocation and Information Overload: The Influence of Information Display, Asset Choice and Investor Experience. *Journal of Behavioral Finance*, 6 (2): 57–70.

Ajzen, Icek. 1991. The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50 (2): 179–211.

Barron, John M. and Michael E. Staten. 2009. Is Technology-Enhanced Credit Counseling as Effective as In-Person Delivery? Presented at the Networks Financial Institute at Indiana State University Conference: Improving Financial Literacy and Reshaping Financial Behavior, May 14–15, 2009. http://www.networksfinancialinstitute.org/News/Documents /Staten.pdf.

Bayer, Patrick J., B. Douglas Bernheim, and John Karl Scholz. 2008. The Effects of Financial Education in the Workplace: Evidence from a Survey of Employers. *Economic Inquiry*, 47 (4): 605–624.

Bell, Catherine, Daniel Gorin, and Jeanne M. Hogarth. 2009. Does Financial Education Affect Soldiers' Financial Behaviors? Presented at the 2009 Federal Reserve System Community Affairs Research Conference, April 16–17, 2009.

Bernheim, B. Douglas and Daniel M. Garrett. 2003. The Effects of Financial Education in the Workplace: Evidence from a Survey of Households. *Journal of Public Economics*, 87 (7–8): 1487–1519.

Birkenmaier, Julie and Sabrina W. Tyuse. 2005. Does Homeownership Education and Counseling (HEC) Help Credit Scores? *Journal of Social Service Research*, 32 (2): 81–103.

Braucher, Jean. 2001. An Empirical Study of Debtor Education in Bankruptcy: Impact on Chapter 13 Completion Not Shown. *The American Bankruptcy Institute Law Review*, 9: 557–592.

Carswell, Andrew T. 2009. Does Housing Counseling Change Consumer Financial Behaviors? Evidence from Philadelphia. *Journal of Family and Economic Issues*, 30 (4): 339–356.

Caskey, John P. 2006. Can Personal Financial Management Education Promote Asset Accumulation by the Poor? Networks Financial Institute Policy Brief 2006-PB-06 (March).

Clancy, Margaret, Michal Grinstein-Weiss, and Mark Schreiner. 2001. Financial Education and Savings Outcomes in Individual Development Accounts. Working Paper No. 01-2, St. Louis, MO: Center for Social Development, Washington University.

Clark, Robert L. and Madeleine B. d'Ambrosio. 2002. Financial Education and Retirement Savings. TIAA-CREF Institute Working Paper No. 4-070102-A.

Collins, J. Michael. 2007. Exploring the Design of Financial Counseling for Mortgage Borrowers in Default. *Journal of Family and Economic Issues*, 28 (2): 207–225.

———. 2009. The Impacts of Mandatory Financial Education: Field Study. http://papers.ssrn.com.

Collins, J. Michael, Rochelle N. Gorey, Maximilian D. Schmeiser, Christi A. Baker, and Diana Ziegler. 2008. *Asset Building Indicators Measures: Analysis and Recommendations.* Baltimore, MD: Annie E. Casey Foundation.

DeVaney, Sharon A., Elizabeth E. Gorham, Janet C. Bechman, and Virginia A. Haldeman. 1996. Cash Flow Management and Credit Use: Effect of a Financial Information Program. *Financial Counseling and Planning*, 7: 71–80.

Ding, Lei, Roberto G. Quercia, and Janneke Ratcliffe. 2008. Post-purchase Counseling and Default Resolutions among Low- and Moderate-Income Borrowers. *Journal of Real Estate Research*, 30 (3): 315–344.

Duflo, Esther and Emmanuel Saez 2003. The Role of Information and Social Interactions in Retirement Plan Decisions: Evidence from a Randomized Experiment. *Quarterly Journal of Economics*, 118 (3): 815–842.

Elliehausen, Gregory, E. Christopher Lundquist, and Michael E.Staten. 2007. The Impact of Credit Counseling on Subsequent Borrower Behavior. *Journal of Consumer Affairs*, 41 (Summer): 1–28.

Federal Deposit Insurance Corporation (FDIC). 2007. A Longitudinal Evaluation of the Intermediate-term Impact of the *Money Smart* Financial Education Curriculum upon Consumers' Behavior and Confidence. http://www.fdic.gov/consumers/consumer/moneysmart/ pubs/ms070424.pdf.

Fishbein, Martin and Icek Ajzen. 1975. *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research.* Reading, MA: Addison-Wesley Publishing Co.

Garman, E. Thomas, Jinhee Kim, Constance Y. Kratzer, Bruce H. Brunson, and So-hyun Joo 1999. Workplace Financial Education Improves Personal Financial Wellness. *Financial Counseling and Planning*, 10 (1): 79–88.

Gartner, Kimberly and Richard M. Todd 2005. *Effectiveness of Online "Early Intervention" Financial Education for Credit Cardholders*. Washington, DC: Federal Reserve System Community Affairs Research Conference (April).

Green, Bart N., Claire D. Johnson, and Alan Adams. 2006. Writing Narrative Literature Reviews for Peer-Reviewed Journals: Secrets of the Trade. *Journal of Chiropractic Medicine*, 5 (3): 103–117.

Hartarska, Valentina and Claudio Gonzalez-Vega. 2005. Credit Counseling and Mortgage Termination by Low-Income Households. *Journal of Real Estate Finance and Economics*, 30 (3): 227–243.

———. 2006. Evidence on the Effect of Credit Counseling on Mortgage Loan Default by Low-income Households. *Journal of Housing Economics*, 15 (1): 63–79.

Hathaway, Ian and Sameer Khatiwada. 2008. *Do Financial Education Programs Work?* Federal Reserve Bank of Cleveland Working Paper No. 08-03 (April).

Haynes-Bordas, Rebecca, D.E. Kiss, and Tansel Yilmazer 2008. Effectiveness of Financial Education on Financial Management Behavior and Account Usage: Evidence from a 'Second Chance' Program. *Journal of Family and Economic Issues*, 29 (3): 362–390.

Hira, Tahira K. and Cazilia Loibl. 2005. Understanding the Impact of Employer-Provided Financial Education on Workplace Satisfaction. *Journal of Consumer Affairs*, 39 (Summer): 173–194.

Hirad, Abdighani and Peter Zorn. 2002. A Little Knowledge Is a Good Thing: Empirical Evidence of the Effectiveness of Pre-Purchase Homeownership Counseling. In *Low-Income Homeownership: Examining the Unexamined Goal*, edited by Nicolas Retsinas and Eric Belsky (146–174). Cambridge, MA; Washington, DC: Joint Center for Housing Studies; Brookings Institution Press.

Hogarth, Jeanne M. 2006. Financial Education and Economic Development. Presented at the G8 International Conference on Improving Financial Literacy, November 29, 2006, Moscow, Russian Federation. http://www.oecd.org/dataoecd/20/50/37742200.pdf.

Holland, Joseph H., Doug Goodman, and Bethany Stich. 2008. Defined Contribution Plans Emerging in the Public Sector: The Manifestation of Defined Contributions and the Effects of Workplace Financial Education. *Review of Public Personnel Administration*, 28 (4): 367–384.

Kim, Jinhee. 2007. Workplace Financial Education Program: Does It Have an Impact on Employees' Personal Finances? *Journal of Family and Consumer Sciences*, 99 (1): 43–47.

Kim, Jinhee, Dorothy C. Bagwell, and E. Thomas Garman. 1998. Evaluation of Workplace Personal Financial Education. *Personal Finances and Worker Productivity*, 2 (1): 187–192.

Koenig, Lori A. 2007. Financial Literacy Curriculum: The Effect on Offender Money Management Skills. *Journal of Correctional Education*, 58 (1): 43–56.

Lyons, Angela C. and Erik Scherpf 2004. Moving from Unbanked to Banked: Evidence from the Money Smart program. *Financial Services Review*, 13 (3): 215–231.

Lyons, Angela C., Yunhee Chang, and Erik M. Scherpf 2006. Translating Financial Education into Behavior Change for Low-Income Populations. *Financial Counseling and Planning*, 17 (2): 27–45.

Lyons, Angela C., Tommye White, and Shawn Howard 2008. *The Effect of Bankruptcy Counseling and Education on Debtors' Financial Well-being: Evidence from the Front Lines.* Houston, TX: Money Management International. http://creditcounseling.org/HelpfulResources/ArticleLibrary.asp?ArticleID=56.

Martin, Matthew. 2007. A Literature Review on the Effectiveness of Financial Education. Federal Reserve Bank of Richmond Working Paper No. 07-03 (June).

Mayer, Neil, Peter A. Tatian, Kenneth Temkin, and Charles A. Calhoun. 2009. National Foreclosure Mitigation Counseling Program Evaluation. *Preliminary Analysis of Program Effects*, Washington, DC: The Urban Institute.

McCormick, Martha H. 2009. The Effectiveness of Youth Financial Education: A Review of the Literature. *Journal of Financial Counseling and Planning*, 20 (1): 70–83.

Meier, Stephan and Charles Sprenger. 2007. Selection into Financial Literacy Programs: Evidence from a Field Study. Federal Reserve Bank of Boston Discussion Paper No. 07-5 (November).

Prochaska, James, Carlo DiClemente, and John Norcross. 1992. In Search of How People Change. *American Psychologist*, 47 (9): 1102–1114.

Quercia, Roberto and Spencer M. Cowan 2008. The Impacts of Community-based Foreclosure Prevention Programs. *Housing Studies*, 23 (3): 461–483.

Quercia, Roberto and Jonathan Spader 2008. Does Homeownership Counseling Affect the Prepayment and Default Behavior of Affordable Mortgage Borrowers? *Journal of Policy Analysis and Management*, 27 (2): 304–325.

Sanders, Cynthia K., Terri L. Weaver, and Meg Schnabel 2007. Economic Education for Battered Women: An Evaluation of Outcomes. *Affilia*, 22 (3): 240–254.

Schuchardt, Jane, Dorothy C. Bagwell, William C. Bailey, Sharon A. DeVaney, John E. Grable, Irene E. Leech, Jean M. Lown, Deanna L. Sharpe, and Jing J. Xiao. 2007. Personal Finance: An Interdisciplinary Profession. *Financial Counseling and Planning*, 18 (1): 61–69.

Servon, Lisa J. and Robert Kaestner. 2008. Consumer Financial Literacy and the Impact of Online Banking on the Financial Behavior of Lower-Income Bank Customers. *Journal of Consumer Affairs*, 42 (Summer): 271–305.

Shelton, Gladys G. and Octavia L. Hill. 1995. First-time Homebuyers Programs as an Impetus for Change in Budget Behavior. *Financial Counseling and Planning*, 6: 83–91.

Spader, Jonathan, Janneke Ratcliffe, Peter Skillern, and Jorge Montoya 2009. The Bold and the Bankable: How the Nuestro Barrio Soap Opera Effectively Delivers Financial Education to Latino Immigrants. *Journal of Consumer Affairs*, 43 (Spring): 56–79.

Varcoe, Karen P. and Joan Wright 1991. Financial Education Can Change Behavior. *Advancing the Consumer Interest*, 3 (2): 14–19.

Wiener, Richard L., Corinne Baron-Donovan, Karen Gross, and Susan Block-Lieb 2005. Debtor Education, Financial Literacy, and Pending Bankruptcy Legislation. *Behavioral Sciences & the Law*, 23 (3): 347–366.

Willis, Lauren E. 2008a. Against Consumer Financial Literacy Education. *Iowa Law Review*, 94 (1): 12.

———. 2008b. Evidence and Ideology in Assessing the Effectiveness of Financial Literacy Education. University of Pennsylvania Law School, Public Law Research Paper No. 08-08 (Feb).

Zhan, Min, Steven G. Anderson, and Jeff Scott. 2006. Financial Knowledge of the Low-Income Population: Effects of a Financial Education Program. *Journal of Sociology & Social Welfare*, 33 (1): 53–74.