

**Workplace financial education participation and retirement savings  
by employees and their spouses**

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**Abstract**

*This study surveyed 300 employees of a chemical company producer in the southeast who were or were not participants in one or more employer-provided financial education workshops. Specifically, the research examined employee retirement savings and employees' spouses' retirement savings. While the household income, household size, and education of workshop participants and non-participants were not significantly different, the findings suggest that attending financial education workshops is positively related to both the employees' and their spouses' contributions to retirement plans. Employers also are encouraged to offer financial education to all employees as well as their spouses and significant others, in part because this is likely to benefit females who often do not work or work for companies with less retirement benefits.*

**Introduction**

The question of whether Americans are saving enough for their retirement has been an important issue during the past decade and continues to gain public concern. Studies indicate that many millions of workers may not have sufficient resources to maintain their financial independence during their retirement (Gist, Wu, & Verman, 2004; Gokhale, Kotlikoff, & Sabelhous, 1996; Hanna & Garman, 2003; Yuh, Montalto & Hanna, 1998). The retirement savings crisis is occurring during times of major societal trends toward lower household savings

(Bosworth, Burtless, & Sabelhaus, 1991; Federal Housing Finance Board, 2004) and higher household debt (Peach & Steindel, 2000).

Further straining people's retirement savings are the rising costs of health care (Appleby, 2004) in combination with the growing movement to eliminate health care benefits for both workers and retirees in favor of so-called "consumer-driven health care." This means more Americans are and will be paying more for their own health care costs, and such expenditures place further pressure on the retirement plans of millions. In 2003, 46.3 million Americans, or 15.2% of the population, did not have health insurance (Dooren, 2004). Many with health insurance also have had difficulty paying rising out-of-pocket costs as employers have shifted more co-pays and deductible expenses to workers (Fuhrmans, 2004). Furthermore, some workers report that they reduced retirement savings contributions because of growing medical costs (Helman & Paladino, 2004).

The likelihood of financial insolvency of Social Security trust funds, changing retirement plans (from defined benefit to defined contribution plans) at many private employers, and a fluctuating stock market is shifting both the risk and the burden of saving for retirement from one's employer and society in general to the individual (Joo & Grable, 2000). The number of individuals participating in defined contribution (DC) retirement plans grew from 30.6 million in 1984 to 50.3 million in 1998, while the number of participants in defined-benefit (DB) retirement plans decreased from 30.2 million to 23.0 million during the same period (Turner, Muller, & Verma, 2003). Growing numbers of people are now responsible for their own retirement savings, and this can be seriously problematic for those who lack the information on investing and retirement planning. Financial savvy is needed in order to navigate the complexities of the financial world (Bosworth, 2004).

According to the 2004 Retirement Confidence Survey (RCS), a majority of workers are not aware of the income needed to fund a comfortable retirement or have given much thought to key retirement issues, and many have highly optimistic expectations about retirement and retirement income that leads them to be complacent about saving money (Helman & Paladino, 2004). Only 42 percent of workers and/or their spouses have calculated how much they will need to save for a comfortable retirement (Helman & Paladino, 2004). For the workers who have contemplated their retirement future, the deficiency in education can create feelings of unease and stress in their lives (American Express Retirement Services, 2004).

Women face greater economic challenges in retirement than men because they generally earn lower incomes during their working years and they spend fewer years in the paid workforce (Attanaso & Hoynes, 2000). Women also are less likely to have a pension, less likely to participate in a 401(k) plan when offered, and have much smaller retirement saving than men (National Economic Council Interagency Working Group on Social Security, 1998).

Many mid- and large-size employers offer retirement plan information and education to employees in conjunction with their defined contribution retirement plan, very often a 401(k) plan. Financial education is becoming a mainstream benefit (Quinn, 2000), and employers offer it because they wish to realize the protections of Section 404(c) of the Employee Retirement Income Security Act (ERISA). This law specifically requires them to educate employees about their investment selections. The 2004 RCS showed that one-third of the workers (34%) received retirement educational materials or seminars from an employer or work-related retirement plan provider in the past 12 months (Helman & Paladino, 2004). Other experts estimate that about 40% of U.S. employees have received financial education (Arnone, 2002).

Previous research that tracked intentions to change or actual changes in retirement planning found that workplace financial education often improves attitudes and behaviors among individuals toward retirement planning. (Bernheim & Garrett, 1996; Bernheim & Garrett, 2003; Clark & d'Ambrosio, 2003; Garman, Kim, Kratzer, Brunson, & Joo, 1999; Taylor-Carter, Cook, & Weinberg, 1997). There is limited research about any differences in monthly retirement savings, if any, between those who attended workplace financial education and those who did not controlling for the effects of other individual characteristics. Even though employers often provide retirement planning education to employees and their spouses (Ernst & Young LLP Human Capital Practice, 2004), little is known about the effects of workplace financial education on the retirement savings of employees' spouses.

The first purpose of this study is to examine any difference in employees' monthly retirement savings between those who attended workplace financial education workshops and those who did not controlling for the effects of other individual characteristics. The second question is to examine any difference in the monthly retirement savings of spouses between employees who attended workplace financial education workshops and those who did not controlling for the effects of other individual characteristics.

### **Literature Review**

Financial education seminars and workshops, which have been steadily increasing since the 1980's, are mechanisms by which employees can obtain the facts and data they need in order to make informed and smart economic decisions for their financial futures (Bernheim & Garrett, 2003). A number of studies have looked at the effect that workplace financial programs have had on retirement plans and savings as they relate to attitudes, intentions, and changes in actual behaviors regarding retirement (Kim, Bagwell, & Garman, 1998; Bayer, Bernheim, and Scholz

1996; Clark and d'Ambrosio, 2003; Fletcher, Beebout, & Mendenhall, 1997; Hershey, Walsh, Brougham, Carter, & Farrel, 1998; Russell, 1997; Taylor-Carter et al., 1997).

Studies have suggested that financial education improves participants' financial attitudes and intentions to change behaviors. Hershey, Walsh, Brougham, Carter, and Farrell (1998) discovered that financial workshops were effective in increasing the knowledge and improving the retirement planning of retirees. Research has also suggested that participants report a variety of intentions to make positive changes to their personal financial management after a financial seminar or workshop, including a desire to increase savings, to start contributing to a retirement plan, and to pay down credit card balances (Fletcher, Beebout, & Mendenhall 1997; Kim, Bagwell, & Garman, 1998; Russell, 1997; Taylor-Carter et al., 1997). Clark and d'Ambrosio (2003) found that while financial education had an effect on respondents' desire to alter retirement goals and/or retirement savings behavior, there was a substantial disconnect between the stated intent to change saving behaviors and the actual actions taken three months later. Of the 41% who said they would implement a supplemental retirement plan after participating in the seminar, 63% had not done so after a period of three months (Clark & d'Ambrosio, 2003).

Studies also have investigated employees and employers to determine any effects of workplace financial education on retirement planning behaviors. Bayer, Bernheim, and Scholz (1996) suggested that workers employed by companies that offered financial education programs had higher participation rates in and contribution rates to 401(k) plans compared to companies without workplace financial education. They found that seminars were the most effective type of communication (Bayer et al., 1996). In a recent survey of human resources and employee benefit professionals from large employers in the United States, 31.9% reported that there was an increase in participation rates in excess of 5% and 29.7% reported that contribution as percentage

of pay in excess of 5% increased by providing traditional group seminars on retirement planning (Ernst & Young LLP Human Capital Practice, 2004). Garman et al. (1999) found that workers who engaged in a workplace financial education class valued the information that they received and personally attributed positive changes in their financial behaviors including making better financial decisions and becoming more diversified and aggressive in the managing of their assets. They compared those who attended workplace financial education workshops and those who did not. But retirement savings were not included in the data analysis.

Other studies have focused on the effects of workplace financial education on employees' retirement related savings. Bernheim and Garrett (2003) investigated cross-sectional relationships between the availability of financial education provided by employers and household savings. They found that employer-based financial education increased saving in general as well as savings for retirement. However, they used the availability of workplace financial education to employees instead of actual participation in the programs, and the financial education in the workplace included a variety of methods such as seminars, professional assistance, or informative materials provided to assist employees with retirement planning. Lusardi (2002) suggested that attending retirement seminars is a potentially important vehicle to influence the accumulation of both private and pension wealth using the data from the Health and Retirement Study.

A study that examined the impacts of workplace financial education seminars by gender found that women were much more likely to alter their retirement goals and saving behavior (Clark, d'Ambrosio, McDermed, & Sawant, 2003). Many financial education workshops provided in workplaces are often offered to both employees and their spouses (Ernst & Young

LLP Human Capital Practice, 2004). However little is known about employees' spouses' retirement saving as a result of workplace financial education.

### **Procedures**

The data were collected with a mail survey questionnaire in 1998. A substantial number of the survey questions were used in previous research (Bagwell, 2000; Joo, 1999; Porter, 1990) as well as in proprietary studies of Virginia Tech's National Institute for Personal Finance Employee Education, where validity and reliability issues and variable identification issues were addressed. The first questionnaire was mailed to the home addresses of all 300 employees at one selected site of a southeastern chemical company. Ten days after the first survey was mailed, a follow-up postcard was mailed to all workers. Three weeks after the first mailing, a letter and a replacement questionnaire were mailed to them. All the surveys were returned to the researchers, not the employer, to ensure confidentiality. Responses from both the participants and the non-participants in the educational programs were encouraged in order to be able to compare the two groups. The response rate was 60% with 178 usable surveys returned. Of these, 100 respondents (56%) had attended the financial education workshops, and 78 (44%) did not participate. Four different types of workshops were provided to employees:

1) *Money Basics*, a 6-hour course that focused on comprehensive financial planning topics.

2) *Retiring Easy*, a 3-hour pre-retirement workshop geared to those who are 5-15 years away from retirement.

3) *Magic of 401(k)*, a 2-hour course that taught employees how to use their retirement plans to effectively meet retirement income needs.

4) *Planning Plus*, a one-on-one consultation with a financial planner at the employer's site available to those who had previously attended a company-sponsored workshop. Of the 100 that participated in the workplace financial education workshops, 57 attended one workshop, 32 attended two, three attended three workshops, and five individuals attended all four of the workshops. Three individuals did not indicate which workshop was attended. Money Basics© was the workshop most attended (75.3%). The second most popular workshop was Retiring Easy© (39.2%). Despite the various workshop titles, the education provider's materials all strongly emphasize the basics of financial education.

Data analysis was conducted using SPSS program. To assess whether any differences existed in retirement savings and independent variables between participants and non-participants, t-test and chi-square were conducted. Ordinary Least Square regression analysis was conducted to examine the relationships between workplace financial education and retirement savings. The survey questions were adapted from previous studies (Joo, 1998; Kim, 1998).

*Independent variables* Age, gender, education, household annual income, household size, financial stressors, health, and workplace financial education were included as independent variables. Age was a continuous variable while gender was a dummy variable (female=1, male=0). Education was a continuous variable, equal to 1 if had less than high school, equal to 2 if high school graduate, equal to 3 if finished trade/vocational training, equal to 4 if associate's degree, equal to 5 for some college, equal to 6 for bachelor's degree, and equal to 7 if with graduate degree. Household income was measured as a continuous variable (less than \$20,000=1; 20,001-\$30,000=2; \$30,001-\$40,000=3; \$40,001-\$50,000=4; \$50,001-\$60,000=5; \$60,000-\$70,001=6; More than \$70,000=7). Household size was a continuous variable.

A financial stressor variable was created by summing the number of stressors participants experienced during the past year. The financial stressor measures came from previous research (Joo, 1998). Stressors are “a life event or occurrence in or impacting upon the family unit that produces change in the family social system (McCubbin & Patterson, 1983, p. 88). A total of 20 events such as personal stressors, family events, and financial stress circumstances were included. Selected examples are “my income decreased,” “I had an investment and/or business loss,” “I had serious medical bills,” and “I had a legal problem.” Respondents were asked to check all the events that occurred to them in the previous year. A financial stressor index was created by summing the number of the checked stressor events. Respondents were asked what their health status is compared other people at their age on a Likert-type scale with 1 (worse than others) and 5 (better than others). Workplace financial education was a dummy variable indicating whether they participated in any of the workplace financial education workshops (yes= 1, no=0).

*Dependent Variables* Two variables, employee’s monthly contribution toward workplace retirement savings and investments and spousal contribution to retirement savings and investments were dependent variables. Employee’s monthly contributions to workplace retirement savings and investment and spouse/partner’s monthly contribution to retirement savings and investments were measured as a continuous variable, equal to 0 for \$0, equal to 1 for \$1-\$100, equal to 2 for \$101-\$200, equal to 3 for \$201-\$300, equal to 4 for \$301-\$400, equal to 5 for \$401-\$500, equal to 6 for \$501-\$600, equal to 7 for \$601-\$700, equal to 8 for \$701-\$800, equal to 9 for \$801-\$900, equal to 10 for \$901-\$1,000, and equal to 11 for Above \$1,000.

## Demographic Characteristics

The results of the demographic characteristics of the respondents are shown in Table 1. Of the 178 workers who responded to the survey, 163 (91.6%) were men and 15 (8.4%) were female. Data from the participating company show that a total of 311 employees are located at the site: 25 females (8.0%) and 286 males (92.0%), numbers that are very similar the percentages of respondents.

Data in Table 1 compares workshop participants with non-participants and provides the totals for both groups. Worker age ranged from 23 years to 67 years of age and the average was 41.9 years. The levels of education of the workers ranged from attending some high school to receiving graduate degrees. About one quarter (26.4% [combining categories]) have a high school degree or less, and three-quarters (74.6% [combining categories]) have education beyond the high school degree. The largest number of respondents had a 4-year college degree (29.8%), while another 28.7% had some college experience.

Household income ranged from less than \$20,000 to more than \$70,000. Combining categories shows that 86.6% reported an income of \$50,000 or greater; 47.8% report an income over \$70,000. Household size of the workers ranged from one to seven persons. About 10 percent live alone and another 27.5% live in a two-person household. Combining categories, 48.9% lived in a three- or four-person household. The remaining 13.5% (combining categories) lived in a household with five or more members. Most workers (62.1%), when asked to self-report on their health as compared to other people their age, reported their health to be average or higher. The average was 3.89. Workers were primarily White (91.0%), with Blacks, Native Americans, and other minority groups comprising the remaining 9.0% (not shown in Table). Most of the workers were married (75.7%), remarried (7.9%), or had a significant other (2.8%),

such as a spouse or partner (not shown in table). These numbers total 153 (86.4%). The remaining workers (13.6%) were single. The average number of financial stressor events for the past year was 1.38 out of 20 events.

Workshop participants and non-participants were similar in educational background, household income, household size, and number of financial stressors. The workshop participants differed from non-participants in gender (more females were participants), age (more older employees were participants), and health (better health reported by participants). The workshop participants also differed than non-participants in the amount of monthly contribution made to the employer's 401(k) retirement plan (more for participants) and the spouse's contribution to his/her retirement plan (more for participant's spouses).

Data not shown in the table reveals that while four out of five workshop participants and non-participants were married or had a significant other, the numbers for each group differed only slightly (88.4% for participants and 82.3% for non-participants). Also, no ethnicity differences were apparent between those who participated and those who did not. Chi-square and t-test analysis showed no differences in age, gender, and health between workshop participants and non-participants. However, workers who are male, older, and report better health were more likely to attend the workplace financial education workshops than others.

Table 1.  
Demographic Characteristics of Respondents

Variables	Total n (%)	Participants n (%)	Non-participants n (%)	T-test n (%)
Gender				
Male	163 (91.6%)	87 (87.0%)	76 (97.4%)	6.184 * (Chi-square)
Female	15 (8.4%)	13 (13.0%)	2 (2.6%)	
Average Age      M (SD)	41.91 (10.04)	44.50 (10.00)	38.77 (9.21)	-3.886***
Education				
Some High School	1 (0.6%)	1 (1.0%)	0 (0.0%)	-1.072
High School Degree	46 (25.8%)	23 (23.0%)	23 (29.5%)	
Trade/Vocation	13 (7.3%)	6 (6.0%)	7 (9.0%)	
Associate Degree	10 (5.6%)	6 (6.0%)	4 (5.1%)	
Some College	51 (28.7%)	28 (28.0%)	23 (29.5%)	
4-Year College Degree	53 (29.8%)	35 (35.0%)	18 (23.1%)	
Graduate Degree	4 (2.2%)	1 (1.0)	3 (3.8%)	
M (SD)	4.34 (1.65)	4.46 (1.63)	4.19 (1.68)	
Household Income				
\$20,000 or less	1(0.6%)	1 (1.0%)	0 (0.0%)	-1.476
\$20,001-\$30,000	2 (1.1%)	0 (0.0%)	2 (2.6%)	
\$30,001-\$40,000	10 (5.6%)	5 (5.1%)	5 (6.4%)	
\$40,001-\$50,000	10 (5.6%)	6 (6.1%)	4 (5.1%)	
\$50,001-\$60,000	36 (20.3%)	15 (15.2%)	21 (26.9%)	
\$60,001-\$70,000	33 (18.5%)	20 (20.2%)	13 (16.7%)	
Over \$70,000	85 (47.8%)	52 (52.5%)	33 (42.3%)	
M (SD)	5.92 (1.32)	6.05 (1.28)	5.76 (1.35)	
Household Size				
1	18 (10.1%)	13 (13.0%)	5 (6.4%)	1.447
2	40 (27.5%)	28 (28.0%)	21 (26.9%)	
3	42 (23.6%)	25 (25.0%)	17 (21.8%)	
4	45 (25.3%)	21 (21.0%)	24 (30.8%)	
5 and more	24 (13.5%)	13 (13.0%)	11 (14.2%)	
M (SD)	3.08 (1.30)	2.96 (1.30)	3.24 (1.28)	
Health                      M (SD)	3.89 (.953)	3.70 (1.02)	4.05 (.86)	
Financial Stressors      M (SD)	1.38 (1.60)	1.27 (1.51)	1.52 (1.70)	1.009
Monthly contribution to 401(k)	4.81 (2.56)			4.84***
\$0		5 (5.2)	12 (16.2)	
\$1-\$100		8 (8.3)	6 (8.1)	
\$101-\$200		7 (7.3)	12 (16.2)	
\$201-\$300		11 (11.5)	14 (18.9)	
\$301-\$400		23 (24.0)	22 (29.7)	
\$401-\$500		13 (13.5)	3 (4.1)	
\$501-\$600		14 (14.6)	2 (2.7)	
\$601-\$700		5 (5.2)	2 (2.7)	
\$701-\$800		1 (1.0)	1 (1.4)	
\$801-\$900		0 (0.0)	0 (0.0)	
\$901-\$1000		0 (0.0)	0 (0.0)	
Above \$1,000		9 (9.4)	0 (0.0)	
M (SD)		5.56 (2.77)	3.82 (1.85)	

Table 1.  
Demographic Characteristics of Respondents (cont.)

Variables	Total n (%)	Participants n (%)	Non-participants n (%)	T-test n (%)
Spouse' monthly contribution to 401(k)				3.59***
\$0		36(48.0)	46 (71.9)	
\$1-\$100		9 (12.0)	8 (12.5)	
\$101-\$200		3 (4.0)	5 (7.8)	
\$201-\$300	2.47 (2.59)	11 (14.7)	3 (4.7)	
\$301-\$400		2 (2.7)	1 (1.6)	
\$401-\$500		5 (6.7)	0 (0.0)	
\$501-\$600		1 (1.3)	0 (0.0)	
\$601-\$700		3 (4.0)	0 (0.0)	
\$701-\$800		0 (0.0)	1 (1.6)	
\$801-\$900		1 (1.3)	0 (0.0)	
\$901-\$1000		0 (0.0)	1 (1.6)	
Above \$1,000		4 (4.0)	0 (0.0)	
M (SD)		3.14 (3.03)	1.68 (1.66)	

\*p < .05, \*\*p < .01, \*\*\*p < .001

### Findings

Table 2 shows regression results on factors related to monthly contributions to retirement plan through workplace. Gender, household annual income, health, and participation in workplace financial education were found to be significant predictors. Those who were male, with higher household income, and had better health were contributing more toward their retirement savings and investments. Workplace financial education was a significant factor of retirement saving. Controlling other factors, those who participated in the financial education workshop were contributing more money than those who did not. This result is similar to previous research that found participation in workplace financial education led to increases in participation and contribution rates to 401 (k) plans (Bayer, Bernheim, & Scholz, 1996; Ernst & Young LLP Human Capital Practice, 2004). However, age, education, financial stressors, or family size were not found significant, and this may provide more credibility to the argument that workplace financial education is an important issue for researchers to examine. The characteristics of being young, possessing an advanced degree, having larger family size, and

experiencing stressful life events did not affect an individual's saving for his or her future. Obtaining accurate and useful financial information so that smart choices can be made regarding what to do with accumulated income may be the best route to take to increase retirement plan contributions, and this may help to explain why financial education was found in this study to be a significant aspect of retirement contribution.

Table 3 shows the regression results on factors associated with spouse or partner's monthly contribution toward retirement savings and investments. For spouse/partner's monthly contribution to retirement savings and investments, only married or living with significant others were included in the regression analysis. Gender, annual income, and workplace financial education were significant factors. Female employee participants reported that their spouses (males) are contributing more toward retirement than male employees who participated in the workshops. Those who with higher household income and attended the workplace financial education workshops reported that their spouses are contributing more toward retirement savings and investments. This finding appears to be similar to the report issued by The National Economic Council Interagency Working Group on Social Security (1998) that stated that women were less likely to have a pension, less likely to participate in a 401(k) plan when offered, and had much smaller savings than men. This also coincides with the data from Table 2 suggesting that males tend to contribute more toward their retirement savings and investments. As with the previous regression table, age, education, family size, and financial stressors were not found to be significant.

One of the differences between the two regression tables is that health was not found to be a significant factor associated with increases in a spouse or partner's monthly contribution toward retirement savings, whereas for the other dependent variable, contribution to retirement

plan and investment through employer, health was significantly related to how much was contributed to a retirement account. Health may be a significant factor to making contributions toward retirement perhaps because of the increased availability of funds for people who are healthy and do not make extensive payments for medical treatment. With regards to both tables, being male, possessing higher levels of income, and gaining knowledge and information from a workplace financial education workshop were associated with greater monetary contributions to retirement accounts.

Table 2

Regression results of monthly income contribution to 401(k) plan (n=158)

Characteristics	b	Beta	T	Sig.
Constant	-1.618		-1.265	
Age	.027	.111	1.353	
Gender	-1.741	-.193	-2.663	**
Education	.064	.042	.564	
Annual Household Income	.451	.240	2.975	**
Household size	-.139	-.072	-.991	
Health	.536	.208	2.881	**
Financial Stressors	.027	.016	.223	
Participation in Workplace Financial Education Workshop	1.294	.260	3.421	***

F= 7.179\*\*\*, Adjusted R Square = .238

\*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

Table 3.

Regression results of Spouse Monthly Contribution to Retirement Savings (n=130)

Characteristics	b	Beta	T	Sig.
Constant	-.028		-.019	
Age	-.015	-.059	-.614	
Gender	2.766	.311	3.682	***
Education	-.007	-.004	-.053	
Annual Household Income	.411	.212	2.212	*
Household size	-.093	-.048	-.587	
Health	.053	.021	.255	
Financial Stressors	.012	.007	.087	
Participation in Workshop	.943	.191	2.189	*

F= 4.572\*\*\*, Adjusted R Square = .180

\*p &lt; .05, \*\*p &lt; .01, \*\*\*p &lt; .001

## Discussion

The present study suggests that attending workplace financial education workshops is related to both the employees' and their spouses' contributions to retirement plans. Despite the cross sectional nature of the data, the results show that employees who attended employer-

provided financial education workshops contribute more to their 401(k) plan every month than those who did not, even when controlling for the effects of individual characteristics. There could be a number of possible reasons for why some people make higher contributions than others to retirement accounts (such as higher incomes and perhaps larger salary increases than others), this study found no differences between workshop participants and non-participants in household income, household size, and education although participants were older than non-participants. Additionally, controlling for the effects of the individuals characteristics such as age, gender, education, annual household income, household size, health, and financial stressors, participation in workshop was a significant factor of voluntary retirement contribution. Thus, this suggests that participation in financial education workshops might be related to higher retirement account contributions although it is not possible to assume any causal relationship between workplace financial education and retirement contribution.

There are some limitations to this study. Because this study was conducted with workers of a southeastern chemical production company, it is not representative of all employees in the United States. Since there were no pre-and post-data collections, it also is not possible to compare changes in retirement plan contributions before and after the workshops. However, previous studies used availability of workplace financial education or attending workplace financial education to determine any impacts of the education on retirement plans without pre-and post-design, although the education offered varied somewhat (Bernheim & Garrett, 2003; Lusardi, 2003). Participants in the current study were predominantly male and white (reflecting the employer's population of employees), which further limits the generalizability of the findings. Another limitation is that the current study did not investigate any differences in the impacts of workplace financial education by types or numbers of workshops. Although there were four

different workshops provided for employees, respondents who answered that they attended any one of the workshops were all categorized as participants. Also, there might be a selection bias. Those who attended workplace financial education workshop might be more interested in financial management and have a better preparation for retirement than those who did not from the beginning.

The rapid growth of financial education in the workplace provides opportunities to study the effects of the education on employees' retirement planning. This study showed that those who were male, healthier, had higher household incomes, and attended financial education workshops than others did in fact contribute more to their retirement plan controlling for the effects of other individual characteristics. Workplace financial education affected the amount of contribution to the retirement plan, which is consistent with previous studies (Bernheim and Garrett, 2003; Clark et al., 2003). The present study suggests that workplace financial education could be an effective strategy to stimulate workers' retirement savings.

The finding about gender differences in retirement saving is consistent with the previous finding (National Economic Council Interagency Working Group on Social Security, 1998). Health is also an important factor in retirement saving. More and more employees are concerned about their ability to afford health insurance and out-of-pocket medical expenses due to increasing health care costs and premiums (Helman & Paladino, 2004) and the shifting of such costs from employers to employees. The 2004 Health Confidence Survey found that one-quarter of those experiencing cost increases say they have reduced retirement savings contributions because of growing medical bills (Helman & Paladino, 2004).

Although there have been a number of studies about the effects of workplace financial education, there is little known about the effects of spouses' retirement saving. The current study

found that participation in workplace financial education might affect one's spouse's retirement savings well as the employee participant's contributions to an employer-sponsored retirement plan. Those who were females, with higher household income, and who attended workplace financial education workshops contributed more to their monthly retirement savings than others, although the number of females was small in the data analysis. The finding is not surprising because their spouses, males with higher household incomes, contribute more toward their retirement saving plan in general. It is possible that they might have had higher salaries and an access to workplace financial education. Importantly, attending workplace financial education could increase spouses' retirement savings, even after controlling for age, gender, education, household income, household size, health, and financial stressors.

### **Recommendations**

Employers are encouraged to offer financial education to all employees as well as their spouses and significant others, because this is likely to benefit females who often do not work or work for companies with less retirement benefits. Employers need to encourage female workers to save more for their retirement, too. Female workers have significantly lower contributions to their retirement plans than male workers. Single women receive on average only 34% of the single men's average pension, and married women receive only 25% of men's pension wealth (National Economic Council Interagency working group on Social Security, 1998). Women will have greater economic challenges in retirement because they live longer than men, regardless of whether or not they become widowed or divorced. It is recommended that future studies of spousal- and gender- related retirement contributions utilize a pre-and post-design with comparison control groups. Such a study might provide stronger evidence about the effects of

workplace financial education. Another suggestion is to include spouses as participants in the workshops and collect evaluative survey information from them as well. Future research could also examine differences in the impacts of workplace financial education by delivery method, and recent findings show that financial advice might be more effective than traditional classroom type education (Ernst & Young LLP Human Capital Practice, 2004; Kim & Garman, 2003).

American workers might benefit if there were a clearer government policy on workplace financial education beyond the 404(c) requirement. Participation in financial education workshops is typically a voluntary effort, just like the choice to contribute to a retirement plan, and some employers offer financial education workshops during working hours while others do not. There are no established standards for learning or for expected financial behavioral outcomes.

While there is an on-going discussion about Social Security privatization, millions of individuals who are now in charge of their own retirement planning currently lack expertise to save or even manage their retirement savings. Even individuals in a voluntary system should be given many more educational opportunities to learn about financial management and practice good financial behaviors. Policymakers might consider creating new tax incentives to both employers and employees regarding workplace financial education and advice. The Economic Growth and Tax Relief Reconciliation Act of 2001 made employer-provided retirement planning advice a “de minimis fringe” benefit for employees so long as such services are available on substantially the same terms to all employees. Qualified retirement planning services are defined as any retirement planning advice or information that an employer who maintains a qualified retirement plan provides to an employee or the employee’s spouse. This exclusion could motivate more employers to provide retirement planning services to their employees.

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