Comparison of Financial Well-Being of Older Women: 1977 and 1989

Gong-Soog Hong,[1] Purdue University
Patricia M. Swanson,[2] Iowa State University

This study examined the changes in the household financial well-being of older women ages 55 and over by using data from the 1977 and 1989 Survey of Consumer Finances. Three financial measures, household income, emergency fund adequacy, and debt-to-income ratio, were used. The findings showed that older women in both 1989 and 1977 had adequate emergency funds but women in 1989 had a lower level of adequacy than women in 1977. Older women in 1989 had a lower debt-to-income ratio as compared to older women in 1977. Education, employment, age, marital status, homeownership, and race, were found to be significant contributing factors to the household financial status of older women. The effects vary depending on the financial measures examined.
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The elderly are increasingly being given attention by researchers, policy makers, educators, and the media. As a group, the elderly have experienced a higher level of financial well-being (Radner, 1987; Smeeding, 1990; U.S. Bureau of the Census, 1992), but the elderly are not a homogeneous group (Zitter, 1991; Schulz, 1992; Zhong, 1992). For example, the economic well-being of women is lower than that of men. Few studies, however, have focused solely on older women. Even fewer studies have examined the financial well-being of older women over time. Yet, women have a longer life expectancy and comprise a larger percentage of the elderly population.

The criteria used to measure financial well-being are important. Net worth and income provide valuable insights into the financial stability of a household but these measures of financial well-being do not suggest the ability of a household to meet a financial emergency nor do they provide a detailed financial analysis of assets and debts that comprise the net worth. Although other researchers have examined the emergency fund adequacy of households (Johnson & Widdows, 1985; Hanna, Chang, Fan & Bae, 1993) as well as proposed various financial ratios in analyzing a household's financial well-being (Griffith, 1985; Mason & Griffith, 1988; Prather, 1990), elderly women specifically have not been the focus of study in their research.

An in-depth understanding of the financial well-being of elderly women also necessitates an examination of the factors contributing to their well-being. Existing research has resulted in inconsistent conclusions or has focused on the elderly in general. Research on elderly women has examined factors contributing to their income or net worth rather than other indicators of financial well-being.

In conclusion, a need exists to study the large subgroup of elderly women as a group and in terms of other intervening factors. Also, it is important to utilize measures of economic well-being in addition to net worth or income to provide a more detailed examination of the financial status of older women. This study examines data from the 1977 and 1989 Surveys of Consumer Finances to compare the household financial well-being of women age 55 and over. Three financial measures (household income, emergency fund

[1] *Gong-Soog Hong, Assistant Professor, Consumer Sciences & Retailing, Purdue University, West Lafayette, IN 47906-1262. Phone: (317) 494-8302. FAX: (317) 494-0869.*

[2] *Patricia M. Swanson, Temporary Assistant Professor, Human Development & Family Studies, Iowa State University, Ames, IA 50011.*

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adequacy, and debt-to-income ratio) were utilized. This study further examines factors contributing to the household financial well-being of older women.

Related Literature

Measurement of Financial Well-Being

There is no single correct measure of economic well-being (Quinn, 1987). Money income is the most commonly used indicator (Chen, 1985; Radner, 1987; Ycas & Grad, 1987; Palmer, Smeeding & Jencks, 1988; Hurd, 1990; Grad, 1990; U.S. Bureau of the Census, 1992). The relative income of the elderly to non-elderly has increased over time due to improvements in the Social Security system, and private and government employee pensions. However, the median income of the elderly is still less than that of non-elderly. In 1984, the median income of the elderly was 65% of the money income of non-elderly (Radner, 1987).

Net worth is another indicator used to measure the financial status of an individual or household (Greenwood & Wolff, 1988; Radner, 1989; Hurd, 1990; U.S. Bureau of the Census, 1992). Relative to non-elderly, the elderly tend to have a higher level of wealth.

Other researchers have utilized a combined income-net worth measure (Murray, 1964; Weisbrod & Hansen, 1968; Taussig, 1973; Moon, 1977; Crystal & Shea, 1990; Radner, 1990; Sung, 1993). However, net worth or income alone do not suggest the ability of a household to readily meet a financial emergency nor do they provide a detailed financial analysis of assets and debts that comprise the net worth. Households could have identical net worth but the composition of their net worth could vary considerably. One household may have a higher percentage of their assets consisting of cash and cash equivalents (e.g., cash, savings account, E.E. savings bonds), another household may have a higher percentage of invested assets (e.g., stocks, bonds, mutual funds), and still a third household may have a majority of its assets consisting of use assets (e.g., personal residence, furnishings, autos). Likewise, two households may have identical assets but their net worth may vary because of differences in debt.

Financial planners and counselors recommend that a family has an adequate emergency fund to meet demands upon the household that arise internally (e.g., death, illness, divorce) and externally (e.g., economy). A rule of thumb is that households have three to five months after-tax income (Winger & Frasca, 1993) or three months of after-tax income (Pritchard, Potter & Howe, 1988) held in liquid form (i.e., cash and cash equivalents) for possible emergencies. Johnson and Widdows (1985), analyzing 1977 and 1983 Surveys of Consumer Finances, reported that most families had low levels of emergency funds and that families were less prepared in 1983 than in 1977. Differences were examined by stage of life cycle and income but not by sex of household head. Using 1990 Consumer Expenditure Survey, Hanna et al (1993) found about 80% of households did not have enough liquid assets to cover six months of spending. They also suggested that liquid assets holding is related to availability of household resources and accumulation of resources over the life cycle rather than need.

Griffith (1985) and Mason and Griffith (1988) proposed various financial ratios to use in analyzing a household's financial well-being. Using the 1983 Survey of Consumer Finances, Prather (1990) computed sixteen financial ratios suggested by Griffith (1985) to develop household norms. One commonly used ratio is the debt-to-income ratio that compares the amount spent on annual debt repayments, including mortgage, to gross income. A debt-to-income ratio of .30 or less indicates financial strength (Garman & Forgue, 1991). However, this ratio should decrease as an individual gets older.

Factors Contributing to Financial Well-Being of Elderly

An understanding of the financial well-being of the elderly necessitates an examination of the factors contributing to their financial status. For example, Griffith (1985) and Mason and Griffith (1988) stressed the importance of evaluating financial ratios in light of a client's situation, e.g., life cycle, family status, economic status, economic environment, and client objectives and preferences. Prather (1990) suggested that age and income ought to be considered when evaluating financial ratios of households.

Human Capital-Related Factors Educational attainment is an investment in human capital (Becker, 1975). It is positively related to income and net worth of the elderly. Even when controlling for other variables such as work history and socio-demographic factors, Solomon and Taubman (1973), Maxwell (1986), and

Logue (1991) concluded that education is an important indicator of retirement well-being. Wellen and Peck (1990) studied the effects of human capital factors on the financial well-being of older women. Education was found to be a significant indicator of income for older unmarried women but not for older married women.

Work-Related Factors Abbott (1977) and Maxwell (1986) indicated a positive association between the duration of longest job and economic well-being of the elderly. Sung (1993), however, concluded that the reason for the lower economic well-being of female-headed retired households is their lower level of income in their working years. Duration of longest job did not significantly influence income of longest job or economic well-being during retirement.

Withdrawal from labor force participation results in a decrease in money income. Thus, retirement has an impact on the financial well-being of individuals. Utilizing different data and measures of economic well-being, researchers have found lower economic well-being for retired elderly than employed elderly (Murray, 1964; Ross, Danzinger & Smiolensky, 1987; Burkhauser & Duncan, 1988; Grad, 1990; Zhong, 1992). Sung (1993) utilized an income-net worth measure adjusted for household size and composition and found no differences between retired elderly and younger employed households. Retired elderly households, however, were less well-off than non-retired elderly households.

Hayward, Grady, and McLaughlin (1988) evaluated changes in the retirement process of women between 1972 and 1980. They observed an increase in the volume of retirement and labor force participation of women. In addition, an increase in the number of working years of women was found. These changes parallel that found for men. These authors conclude that longitudinal, cohort specific data are needed to enhance our understanding of women's labor force participation.

Socio-Economic Factors Although home ownership is rather common among the elderly, it reflects financial and residential stability of the elderly. In a study examining predictors of financial difficulties for retired women workers, Logue (1991) found that home ownership reduced the likelihood of financial stress. Research focusing on the relationship between age and economic well-being of the elderly is inconsistent. Money income has been found to decrease with age. Some researchers, however, attribute the differences to educational level (Mirer, 1979).

Elderly married women are more financially secure than other groups of elderly women. Widowhood brings a decline in well-being (Smith & Zick, 1986; Burkhauser & Duncan, 1988; Holden, 1989; Morgan 1989; Zhong, 1992). Even when focusing on women who had worked at least ten years in the same job, Logue (1991) concluded that both the prevalence of low income and its predictors were statistically different for married and non-married retired women. These findings are important in that women over 65 are more likely to be widowed than married (Zitter, 1991).

Elderly whites tend to have higher economic well-being than non-white elderly. These differences have been attributed to differences in educational level (Abbott, 1977; Zhong, 1992; Sung, 1993). Other researchers (Garen, 1988) report lower wages for non-whites even when controlling for human capital. Logue (1991) found low income to be more likely for black women as compared to white retired women.

In summary, the financial status of elderly women has improved. However, further study of elderly women as a group over time is warranted as well as factors contributing to this improved well-being. Also, it is important to examine the economic vulnerability of elderly women utilizing alternative financial measures in addition to income or net worth. The current study will address these voids.

This study is unique in several ways. First, the focus is solely on women over age 55. Second, by using three measures of financial well-being a more comprehensive understanding of the financial status of elderly women is achieved. A third way in which the current study is unique is that financial ratios and contributing factors are compared over time.

Methods

Data and Sample

The data for the study are drawn from the 1977 and 1989 Surveys of Consumer Finances (SCF), which were sponsored by the Federal Reserve Board and other federal agencies. This is a national survey conducted by the Survey Research Center of the University of Michigan. The data were collected from personal interviews with a large number of randomly selected households in the U.S. The basic purpose of the SCF was to obtain information about the financial situation (i.e., asset and debt levels) and socio-demographic information of the households. The 1977 SCF had 3,655 and the 1989 SCF had 2,277 households selected by a standard multi-stage area-probability sampling technique.[a] In addition, the 1989 survey had a supplemental sample of 866 high income households drawn from federal income tax files (Kennickell & Shack-Marquez, 1992). These households are included in this study and the sample was weighted to have a representative sample of the U.S. population.

Since the primary objective of this study is to examine the changes in household financial well-being of older women, women age 55 and over were selected for the sample. The age 55 was chosen to define “older women” as this is the cut-off age used to define older persons in previous studies (Sum & Fogg, 1990; Walsh & Kolodinsky, 1992; Gendell & Siegel, 1992). The sample size for the study was 699 from the 1977 Survey of Consumer Finances and 846 from the 1989 survey who are age 55 and over.

Variables

Dependent Variables

Three financial measures were chosen as dependent variables: household income, emergency fund adequacy, and debt-to-income ratio. Household income is probably the most commonly used measure of financial well-being. It represents the purchasing power of households. In this study, it was measured by the annual household before-tax income. In both the 1977 and 1989 data, about 0.4% of women reported zero income.

As previously discussed, an adequate emergency fund helps families and households deal with a financial crisis and may be more important to financially vulnerable groups of the population such as older women. Financial planners recommend a reserve equivalent to three to five months after-tax income in liquid assets for emergency needs (Winger & Frasca, 1993). Information on after-tax income is, however, not available in the SCF. Therefore, emergency fund adequacy in this study was measured by dividing total liquid assets by two months before-tax income. A household having an emergency fund adequacy value of one would have liquid assets equal to two months before-tax income. Total liquid assets were calculated by summing the dollar value of checking, savings, and money market accounts. Income for two months was computed by dividing total household annual before-tax income by six. About 13% of women in 1977 and 7% in 1989 had zero value of emergency fund ratio meaning that they had no liquid assets.

Debt-to-income ratio was calculated by dividing total debt by total annual before-tax income. The level of total debt was computed by adding the dollar value owed for land, estate, home, consumer credit, durables, and repairs. A ratio of one, for example, would indicate the household's total debt is equivalent to their total annual before-tax income. Total income was measured by the total dollar value of household annual before- tax income. About 52% of women in 1977 and about 57% of women in 1989 had zero value of debt-to-income ratio.

Independent Variables

Three major factors were included: human capital, work-related, and socio-economic factors. Human capital and work-related factors were measured by educational attainment and employment status of women. Socio-economic characteristics included age, marital status, home-ownership, race, number of children under age 18, and whether the respondent resides on a farm or ranch.

Educational attainment was measured by the number of years of formal education completed. Employment status was a dichotomous variable, 1 if currently employed and 0 if not. Age was a continuous variable. Marital status was a dummy variable, coded as 1 if currently married and 0 if not. Home ownership variable was dichotomous, 1 if owned a home and 0 if not owned. Race was measured by a dummy variable coded as 1 if white and 0 otherwise. The number of children under 18 was a continuous variable and it cludes all children (i.e., biological, step, adopted). The residential area was measured by a dummy variable coded 1 if residing on a farm or ranch and 0 if not. Table 1 summarizes the measurement of all variables.

Table 1
Summary of Variables Used for Analysis: 1977 and 1989 Surveys of Consumer Finances

Variables	Measurements	1977	1989
Dependent Variables with Mean and Standard Deviation:			
Household Income[1]	annual before tax income	25,389 (23,582)	34,672 (172,337)
Emergency Fund Adequacy	liquid assets/ 2 months income	7.91 (16.32)	3.38 (8.54)
Debt-to-Income Ratio	total debt/ total income	2.78 (7.59)	0.21 (0.60)
Independent Variables:			
Categorical Variables with Frequency and Percentage			
Employment	= 1 if employed	197 (28.2)	222 (26.2)
	= 0 if not	502 (71.8)	624 (73.8)
Marital Status	= 1 if married	407 (58.2)	566 (66.9)
	= 0 if not	292 (41.8)	280 (33.1)
Homeownership	= 1 if owned	474 (67.8)	650 (76.8)
	= 0 if not	225 (32.2)	196 (23.2)
Race	= 1 if white	634 (90.7)	773 (86.6)
	= 0 if not	65 (9.3)	113 (13.4)
Farm	= 1 if reside on farm	120 (17.2)	41 (4.8)
	= 0 if not	579 (82.8)	805 (95.2)
Continuous Variables with Mean and Standard Deviation			
Age	# of years	65.78 (7.92)	68.82 (8.65)
Education	# of yrs completed	10.18 (3.57)	11.06 (3.54)
Children	# of children < 18	1.80 (0.73)	0.06 (0.42)

[1]Household income in 1989 dollars.

Analysis
To compare the financial well-being of older women, z statistics were computed to test whether significant changes in the average financial well-being of elderly women occurred between these two time periods.[b] In examining contributing factors to financial well-being of older women, ordinary least squares (OLS) was used for the model of household income. OLS is, however, not a desirable procedure for the models of emergency fund adequacy and debt-to-income ratio because of their distribution. About 8% of women in both surveys had zero value of liquid assets to two months before-tax income ratio. Thirty five percent of women in 1977 had zero value of total debt to income ratio whereas 55% of women in 1989 had. The use of a linear function such as OLS leads to biased and inconsistent estimates of the coefficients for the model with censored dependent variables (Judge, Griffiths, Hill, Lutkepohl & Lee, 1983). Therefore, the models of emergency fund adequacy and total debt-to-income ratio were estimated by the tobit procedure. These analyses were conducted for the 1977 and 1989 data separately. To examine the time period differences when other factors were controlled, the 1977 and 1989 data were pooled and the model was estimated with an added dummy variable for the year.

Results

Sample Characteristics
The mean years of education were 10.18 for the 1977 survey and 11.06 for the 1989 survey. A slight increase in the educational level of women should be noted. Less than 30% of older women were employed in both years. No significant change in the labor force participation of the older women was observed between these two time periods.

The mean ages were about 66 in 1977 and 69 in 1989. About 59% of the women were married in the 1977 survey, while 67% were married in the 1989 survey. More women in 1989 (76.8%) owned a home than those in 1977 (67.8%). About 87% of the sample were white in the 1989 survey whereas about 91% of the sample were white in the 1977 survey. The women in 1977 had more children with mean value of 1.80 than those with 0.07 in 1989. This reflects a decrease in the number of young children in older women's households over time. The number of women who lived on a farm or ranch in 1989 (4.8%) was much fewer compared to women in 1977 (17.2%).

Comparison of Financial Well-Being
The distributions of household income, emergency fund adequacy, and total debt-to-income ratio are shown in Table 2. Household income has decreased at all levels (25th, median, and 75th percentile) since 1977. The level of reserves for emergencies has declined. The median ratios were 2.56 and 1.00 in 1977 and 1989 respectively. This means half of the respondents had inadequate emergency funds in 1989. Total debt relative to total income has also declined over time. The zero value of median level of total debt to total income indicates half of older women had no debt in both years.

As shown in Table 3, there was no significant difference in household income of older women in 1989 as compared to 1977. On average, liquid asset holdings of older women in 1977 were 7.9 times greater than the recommended emergency fund (2 months before-tax income) whereas older women in the 1989 survey had liquid asset holdings of 3.4 times the recommended amount. This lesser but more than adequate level of liquidable asset holdings in 1989 may be attributed to older women feeling comfortable with investing in other less liquid investments (e.g., CDs, stocks, bonds, mutual funds).

Table 2
Distribution of Income, Emergency Fund Adequacy, and Debt-to-Income Ratio

	25th percentile		Median		75th percentile	
	1977	1989	1977	1989	1977	1989
Household income	9,207	7,850	16,881	14,640	33,250	26,000
Liquid assets/ 2 mon. income	0.45	0.26	2.56	1.00	7.65	3.50
Total debt/ Total income	0	0	0	0	0.90	0.25

Note: Household income in 1977 was adjusted to 1989 dollars but two financial ratios were calculated with actual dollars reported in both years.

Table 3
The Comparison of Financial Well-Being of Older Women

	Household Income[a]	Emergency Fund Adequacy[b]	Debt-to-Income Ratio[c]
1977	25389	7.91	2.78
1989	34672	3.38	0.21
z-Value	1.54	5.40***	7.35***

Note: *** a=0.001.
[a]household income in 1989 dollars; [b]liquid assets/2 month before-tax income; [c]total debt/total before-tax income.

Regarding the ratio of total debt to total income, the mean total debt level was much lower relative to the total income for older women in 1989 with the ratio of 0.21. This indicates that their total debt could be paid off by spending about one fifth of their annual income. This ratio for older women in 1977 was 2.78. Older women in 1977 had debt that was almost 3 times greater than their annual before-tax income. The level of total debt relative to total income was much higher for older women in 1977. These results imply that the financial well-being of older women has improved since 1977 when the ratio of total debt to total income is compared.

Contributing Factors to Financial Well-Being

Table 4 summarizes the results of OLS and tobit analysis that identified factors contributing to the household financial well-being of older women.[c] As expected, education was an important factor in explaining older women's household financial status. Women with a higher level of education had higher income in both the 1977 and 1988 surveys. The emergency fund adequacy of women with higher education tended to exceed that of less educated women. This finding is consistent with studies by Solomon and Taubman (1973), Maxwell (1986), Sung (1993), and Zhong (1992). Whereas, women with more years of formal education were likely to have a higher level of debt relative to income in the 1977 survey, this was not so in 1989. These results indicate that women with a higher level of education may have had more use assets (i.e., house, land, estate) and a higher level of debt payment relative to their income in 1977.

Employed older women tended to have higher income than non-employed older women in both surveys. This finding is not surprising since wages and salaries comprise a large part of household income. The magnitudes of the estimated coefficients are, however, different indicating that the effects of employment on household income is much stronger for the women in 1989 compared to those in 1977. This finding may reflect women's increased attachment to the labor market and the concurrent gain in women's earnings (Horrigan & Markey, 1990). Women with higher education had lower debt relative to their income in the 1989 survey.

Age is a significant factor in all three measures of financial well-being in 1989. The older the woman the higher the household income, the higher the emergency fund adequacy, and the lower the level of debt relative to income. It is interesting that age was positively related to income in 1989 and negatively related in 1977. As women aged, they also tended to have more cash available, and pay off their debts in 1989. This implies that older women in the 1989 survey may have had more liquid assets (e.g., cash, savings, checking, short term CDs) than investment assets (e.g., stocks, bonds, mutual funds). In 1977, older women had lower income and lower debt relative to their income as they aged. Age had no significant effect on the level of emergency funds. These findings indicate that the financial well-being of older women improved since 1977.

Married older women had higher income than non-married women. This finding may be attributed to the husband's income. Although widows were categorized as non-married in this study, the findings of this study are consistent with otherstudies that found widowhood to bring a decline in financial well-being (Burkhauser & Duncan, 1988; Holden, 1989; Morgan, 1989; Smith & Zick, 1986; Zhong, 1992). It is important for women to be aware of the potential impact widowhood may have on their financial well-being and the need to plan accordingly. No significant differences were found for the levels of emergency funds and total debt-to-income ratios.

Table 4
Factors Contributing to the Financial Well-Being of Older Women: OLS Regression and Tobit Analyses of Income, Liquid Assets to Income Ratio, and Total Debt/Income Ratio.

	Income		Liq. Assets/2 Mon. Bef. Tax Inc.		Total Debt/Total Inc.	
Variables	1977	1989	1977	1989	1977	1989
Human Capital Factors:						
Education	2.34***	6.03***	0.82***	0.48***	0.50**	0.01
	(0.24)	(1.88)	(0.24)	(0.08)	(0.18)	(0.02)
Work-Related Factors:						
Employment Status	8.02***	40.05**	-3.07	-0.53	0.87	-0.65***
	(1.98)	(15.62)	(2.07)	(0.64)	(1.49)	(0.23)
Socioeconomic Factors:						
Age	-0.29**	2.48**	0.23	0.16***	-0.34***	- 0.08***
	(0.13)	(0.78)	(0.13)	(0.03)	(0.10)	(0.02)
Marital Status	9.98***	24.84*	-1.29	0.38	-1.50	0.26
	(2.27)	(12.69)	(2.34)	(0.51)	(1.78)	(0.19)
Home Ownership	1.45	18.01	4.12*	1.97**	1.57	0.72**
	(1.97)	(13.02)	(2.09)	(0.58)	(1.58)	(0.23)
White	1.28	2.68	7.98*	3.27***	2.49	-0.58*
	(3.00)	(15.51)	(3.36)	(0.69)	(2.53)	(0.24)
# of Children < 18	3.47*	-2.30	0.92	-0.49	0.56	0.06
	(1.50)	(15.55)	(1.54)	(0.72)	(1.24)	(0.21)
Farm	-0.46	8.94	-0.62	-0.61	-0.93	-0.63
	(2.25)	(33.25)	(2.29)	(1.31)	(1.82)	(0.58)
Intercept	41.82***	-120.16	-23.53*	-16.20***	12.18	3.97***
	(11.99)	(96.07)	(11.02)	(2.67)	(8.42)	(1.06)
Adj-R^2	0.33	0.03				
Log-likelihood Ratio			-1637.16	-3177.40	-1030.40	-1264.18

*$p < .05$. **$p < .01$. *** $p < .001$.
[a]Numbers in parenthesis represent the standard errors.

Whereas homeownership did not signifiantly contribute to the level of household income in 1989, it did contribute to both the emergency fund adequacy and ratio of total debt to total income. Those who owned a home tended to have a higher level of emergency fund than those who did not. This finding suggests that older women are not undertaking mortgage debt at the expense of having inadequate cash reserves for emergencies. Homeowners also had a higher debt-to-income ratio in 1989. Mortgage debt that tended to be larger than other debt might have attributed to the high ratio.

White older women had a higher level of emergency fund adequacy than non-white older women in both years. They also had a lower level of debt relative to their income in 1989. These results support previous research (Abbott, 1977; Sung, 1993; Zhong, 1992) that indicates whites have a higher level of financial well-being than non-whites. The more children under 18, the higher the household income in the 1977 sample. Older women living with children under 18 tended to have higher income. It was not significant in the 1989 sample.

Summary and Discussion

This study examined household financial well-being of older women utilizing three financial measures (household income, emergency fund adequacy, and debt-to-income ratio). The financial status of older women in 1977 and 1989 was compared using data from the Survey of Consumer Finances. The mean household incomes of older women in 1977 and 1989 were not significantly different. However, the examination of income distribution shows that median income has declined over time. OLS results indicate that educated, currently employed, and married older women tended to have higher income in both 1977 and 1989. As older women in 1977 aged, their income tended to decrease while older women's income tended to increase as they got older in 1989.

The results of the comparison indicate that older women in 1989 tended to have low level, but adequate emergency funds as compared to older women in 1977 on average. One of the explanations for these findings may be that older women in 1989, after having adequate emergency funds, allocated their financial resources to investments with a higher potential return but more risk investments. Again, however, it is important to also focus on distribution of this measure of financial well-being. Over half of the respondents had an inadequate emergency fund in 1989.

When factors contributing to emergency fund adequacy were examined, educated, older, and white women who owned a home tended to have a higher level of emergency funds in the 1989 data. Age was, however, not significant in 1977 model. This may reflect that older or married women in 1989 may have preferred to maintain a control over their assets in order to have cash readily available.

The ratios of debt to income show, on average, that older women in 1977 tended to have higher levels of debt relative to their income than those of 1989. In other words, typical older women in 1989 were in better financial status when the debt-to-income ratio was compared. Further, the results of tobit analysis suggest that employed, older, non-married, and white women tended to have a lower level of debt relative to their income while homeowners had a higher debt-to-income ratio in 1989.

This study utilized two measures of financial well-being in addition to income. There is a need to continue defining and using alternative measures of financial well-being that reflect the complexity of financial management in today's world. This study also reinforces the need to consider the distributions of financial measures as well as the means when drawing conclusions about the financial well-being of individuals and households. This approach will provide researchers and practitioners with a clearer understanding of financial status.

Future research is needed to examine the financial portfolio structure of older women. In addition, remarriages among older individuals suggest the need to further study the ownership of assets (e.g., sole, joint). Attention also should be focused on the retirement planning of older women with emphasis given to pension assets and benefits, especially estate planning. Little is known about the estate planning strategies of older women. This is an important area of financial planning for married women who typically outlive their husbands as well as for single women.

Implications

There are several implications of this study for the financial counseling and planning profession. Because a woman age 55 may live an additional 25 or more years, there is a continued need for financial planners to work with this age group in maximizing their financial well-being. Once they have a sound financial base that includes an adequate emergency fund comprised of cash and cash-equivalent assets, older women might consider investment assets that are compatible with their tolerance toward risk.

Educational programs need to be developed to help women realize how their decision to participate in the labor market may affect their future financial well-being. In addition, there is a need to educate women, regardless of their marital status, of the importance of controlling debt.

Endnotes

a. *The 1989 SCF consisted of five imputed data sets because of multiple imputation employed to adjust non-response errors. Currently, the combining procedures of the results from five data sets are not clearly known. The first data set was used in this study.*

b. *To make household income of 1977 and 1989 comparable, household income in 1977 was adjusted to 1989 dollars using CPI of 1977 and 1989. In other words, the dollar value of 1977 household income is multiplied by the ratio of 1989 CPI (124.0) to 1977 CPI (60.6) (see U.S. Bureau of the Census, 1993).*

c. *When the both 1977 and 1989 data were pooled, the coeffieient of time period dummy variable in the household income model was not signifiant but it was significant at .001 in the emergency fund adequacy and debt-to-income ratio models. The estimated coefficients were -5.56 in the emergency fund adequacy model and -3.61 in the debt-to-income ratio model.*

References

Abbott, J. (1977). Socioeconomic characteristics of the elderly: Some black-white differences. *Social Security Bulletin, 40*(7) 16-42.

Becker, G. S. (1975). *Human capital* (2nd ed.). New York: Columbia University.

Burkhauser, R. V. & Duncan, G. J. (1988). Life events, public policy, and the economic vulnerability of children and the elderly. In J. L. Palmer, T. Smeeding, & B. Torrey (Eds.), *The Vulnerable* (pp. 55-88). Washington, DC: Urban Institute Press.

Chen, Y. P. (1985). Economic status of the aging. In R. H. Binstock & E. Shanas (Eds.), *Handbook of Aging and the Social Sciences* (pp. 641-665). New York: Van Nostrand Reinhold.

Crystal, S. & Shea, D. (1990). The economic well-being of the elderly. *Review of Income and Wealth, 36*, 227-247.

Garen, J. F. (1988). Wage growth and the black-white wage differential. *Quarterly Review of Economics and Business, 28*(3), 29-42.

Garman, E. T. (1993) & Forgue, R. E. (1991). *Personal finance*. Boston, MA: Houghton Mifflin.

Gendell, M. & Siegel, J. (1992). Trends in retirement age by sex, 1950-2005. *Monthly Labor Review, 115*(17), 22-29.

Grad, S. (1990). Income change at retirement. *Social Security Bulletin, 53*(1), 2-10.

Greenwood, D. T. & Wolff, E. N. (1988). Relative wealth holdings of children and the elderly in the United States, 1962-1983. In J. L. Palmer, T. Smeeding, & B. B. Torrey (Eds.), *The Vulnerable* (pp. 123-148). Washington, DC: Urban Institute Press.

Griffith, R. (1985). Personal financial statement analysis: A modest beginning. In G. Langrehr (Ed.), *Proceedings of the Third Annual Conference of the Association for Financial Counseling and Planning Education* (pp. 123-131).

Hanna, S., Chang, Y., Fan, X. & Bae, M. (1993). Emergency fund levels of households: Is household behavior rational? *The Proceedings of 39th American Council on Consumer Interests* (pp. 215-222).

Hayward, M. D., Grady, W. R. & McLaughlin, S. D. (1988). The retirement process among older women in the United States. *Research on Aging, 10*, 358-382.

Holden, K. C. (1989). Women's economic status in old age and widowhood. In M. Ozawa (Ed.), *Women's Life Cycle and Economic Insecurity* (pp. 143-169). New York: Praeger.

Horrigan, M. W. & Markey, J. P. (1990). Recent gains in women's earnings: Better pay or longer hours? *Monthly Labor Review, 113*(7), 11-17.

Hurd, M. D. (1990). Research on the elderly: Economic status, retirement, and consumption and saving. *Journal of Economic Literature, 28*, 565-637.

Johnson, D. P. & Widdows, R. (1985). Emergency fund levels of households. In K. Schnittgrund (Ed.), *Proceedings of the 31st Annual Conference of the American Council on Consumer Interests* (pp. 235-241).

Judge G., Griffiths, W., Hill, H., Lutkepohl, H. & Lee, T. (1983). *The theory and practice of econometrics*. New York: John Wiley and Sons.

Kennickell, A. & Shack-Marquez, J. (1992). Changes in family finances from 1983 to 1989: Evidence from the Survey of Consumer Finances. *Federal Reserve Bulletin, 78*, 1-18.

Logue, B. J. (1991). Women at risk: Predictors of financial stress for retired women workers. *Gerontologist, 31*, 657-665.

Mason, J. W. & Griffith, R. (1988). New ratios for analyzing and interpreting personal financial statements. *Journal of the Institute of Certified Planners*, Spring, 71-87.

Maxwell, N. L. (1986). The effect of human capital and labor market segments on retirement income: A policy analysis. *Social Science Quarterly, 67*, 53-68.

Mirer, T. W. (1979). The wealth-age relation among the aged. *American Economic Review, 69*, 435-443.

Moon, M. (1977). *The measurement of economic welfare: Its application to the aged poor*. New York: Academic Press.

Morgan, L. A. (1989). Economic well-being following marital termination. *Journal of Family Issues, 10*, 86-101.

Murray, J. (1964). Potential income from assets: Findings of the 1963 survey of the aged. *Social Security Bulletin, 27*(12), 3-11.

Palmer, J. L., Smeeding, T. & Jencks, C. (1988). The uses and limits of income comparisons. In J. L. Palmer & I. V. Sawhill (Eds.), *The Vulnerable* (pp. 9-27). Washington, DC: The Urban Institute Press.

Pritchard, R., Potter, G. & Howe, L. (1988). *Be your own financial advisor.* Englewood Cliffs, NJ: Prentice Hall.

Prather, C. G. (1990). The ratio technique applied to personal financial statements: Development of household norms. *Financial Counseling and Planning, 1*, 53-69.

Quinn, J. F. (1987, March). The economic status of the elderly: Beware of the mean. *Review of Income and Wealth*, 63-82.

Radner, D. B. (1990). Assessing the economic status of the aged and nonaged using alternative income-wealth measures. *Social Security Bulletin, 53*(3), 2-14.

Radner, D. B. (1989). The wealth of the aged and nonaged, 1984. In R. E. Lipsey & H. S. Tice (Eds.), *The Measurement of Saving, Investment, and Wealth*, Vol. 52 (pp. 645-684). Chicago, IL: University of Chicago Press.

Radner, D. B. (1987). Money incomes of aged and nonaged family units, 1967-84. *Social Security Bulletin*, *50*(8), 9-28.

Ross, C. M., Danziger, S. & Smiolensky, E. (1987). Interpreting changes in the economic status of the elderly, 1948-1979. *Contemporary Policy Issues, 5*, 98-112.

Schulz, J. H. (1992). *The economics of aging* (5th ed.). New York: Auburn House.

Smeeding, T. M. (1990). Economic status of the elderly (3rd ed.). In R. H. Binstock & L. K. George (Eds.), *Handbook of Aging and the Social Sciences* (pp. 362-381). San Diego, CA: Academic Press.

Smith, K. R. & Zick, C. D. (1986). The incidence of poverty among the recently widowed: Mediating factors in the life course. *Journal of Marriage and the Family, 48*, 619-630.

Solomon, L. C. & Taubman, P. S. (1973). *Does college matter?* New York: Academic Press.

Sum, A. & Fogg, W. (1990). Profile of the labor market for older workers. In P. Doeringer (Ed.), *Bridges to Retirement* (pp. 23-32). Ithaca, NY: ILR Press.

Sung, Y. (1993). *The economic well-being of retired households*. Unpublished doctoral dissertation, Purdue University.

Taussig, M. K. (1973). *Alternative measures of the distribution of economic welfare*. New Jersey: Princeton University.

U.S. Bureau of the Census. (1992). Income, poverty, and wealth in the United States: A chart book. *Current Population Report* (Series P-60, No. 179).

U.S. Bureau of the Census. (1993). *Statistical Abstract of the United States: 1993* (113th ed.). Washington, DC.

Walsh, R. & Kolodinsky, J. (1992). Prices, income, and the economic status of older, single women: Implications for health care and housing policies. *Forum for Social Economics, 22*(1), 48-59.

Weisbrod, B. A. & Hansen, W. L. (1968). An income-net worth approach to measuring economic welfare. *American Economic Review, 8*, 1315-1329.

Wellen, P. D. & Peck, C. J. (1990). Effects of human capital factors on income and net asset amounts of older women. *Home Economics Research Journal, 19*, 107-119.

Winger, B. & Frasca, R. (1993). *Personal finance: An integrated planning approach*. New York: MacMillan Publishing Co.

Ycas, M. A. & Grad, S. (1987). Income of retirement-aged persons in the United States. *Social Security Bulletin, 50*(7) 5-14.

Zhong, X. Y. (1992). *The diversity and changes of income and net worth of the elderly: 1967-1977-1983*. Unpublished master's thesis, Purdue University.

Zitter, M. (1991). Older population: Most diverse of all American age groups. *Healthcare Financial Management, 42*(12), 38-42.

