

Financial Fitness Assessment: Differences by Age, Gender, and State of Residence

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Periodic financial check-ups are as important as annual physicals in assessing current behavior, diagnosing problems before they become worse, and identifying uncovered risk exposures. This article describes data collected via Rutgers Cooperative Extension's online *Financial Fitness Quiz* from January to June 2002 and contrasts the results to responses to the same survey conducted a year earlier. The quiz is available online at: www.rce.rutgers.edu/money/ffquiz.

The purpose of the study was to compare the mean quiz scores of 2001 and 2002 respondents to determine whether their financial behaviors got better, worse, or remained the same and to compare their scores (both overall and for individual items) by age, gender, and state of residence. Descriptive statistics are presented for the sample of online quiz respondents. Information on whether there were significant differences in the mean values of the quiz responses by respondents' age, gender, and state also was included. The article concludes with implications for consumer educators.

Methodology

The *Financial Fitness Quiz* consisted of 20 items to which respondents were asked to select the response that best described their current financial management practices. Nineteen of the items had Likert-type response items: 5 = always, 4 = usually, 3 = sometimes, 2 = seldom, and 1 = never. For the remaining item, "I have a current will," respondents were asked to respond with "5" for "yes" and "1" for "no" (O'Neill, Beaugard, and Wisneski, 2001/2002). Total scores were calculated for each respondent by summing the scores for the first 19 items. Total scores could range

from 19 to 95, with higher scores indicating greater performance of recommended financial practices.

Upon completion of the quiz, respondents received general information about their level of financial fitness based on their overall scores. Respondents also received specific suggestions for improvement based on their responses to the individual items. The *Financial Fitness Quiz* had two purposes: to provide users with instant feedback on their levels of financial fitness and to generate data to support empirical research about participants' financial behaviors.

Findings

Financial Fitness Quiz data were obtained online from 469 respondents during the first half of 2002. The sample included individuals who were referred to the Web site by Extension educators and other financial professionals and those who visited the site on their own. The data included respondents' answers to each question, their total scores, average scores for each question, average scores for the entire quiz, and information about respondents' age, gender, and state of residence.

The mean age of the respondents was 35.5 years, with the distribution of age in years as follows: under 24: 122 (26.0%); 25-34: 127 (27.1%); 35-44: 100 (21.3%); and 45-76: 120 (25.6%). Of the 469 respondents who took the quiz, 306 (65.2%) were female and 163 (34.8%) were male. The average quiz score for the sample was 64.98, down slightly from 67.34 in 2001, and the modal (most frequently occurring) range was a score between 61 and 70. Frequencies and percentages for the quiz scores are listed below in Table 1.

Responses to each statement were analyzed to determine the strengths and weaknesses of respondents' financial behaviors. The average scores for each of the 20 statements ranged from a high of 4.82 to a low of 2.01, with the exception of one item, "I have a current will." This item had response choices of yes/no and measured a categorical variable. Therefore, no mean scores could

be computed for this item. The scores are reported, in descending order, in Table 2. The average scores for the 173 respondents in 2001 also are shown in Table 2, with the 2001 score ranks in parentheses. Demographic data were not collected in 2001.

Table 1
Frequencies and Percentages of Financial Fitness Quiz Scores

Range of Quiz Scores ¹	Number of Responses (n)	Percentage of Responses (%)
21 to 30	3	0.6
31 to 40	26	5.5
41 to 50	75	16.0
51 to 60	87	18.5
61 to 70	95	20.3
71 to 80	87	18.6
81 to 90	73	15.6
91 to 95	23	4.9

¹ Range of scores possible was 95 (highest) to 19 (lowest).

Demographic Differences

Statistical tests were conducted to determine if there were differences in mean quiz scores by respondents' age, gender, or state of residence. When an individual item (measured at the ordinal level) served as the dependent variable, the Kruskal-Wallis test was used to test for differences among groups. When the total score (measured at the interval level) served as the dependent variable, ANOVA was used. The Waller-Duncan K-ratio t test was used to examine group differences following the ANOVA. Findings are presented in Tables 3 and 4.

Table 2
Average Scores for the Financial Fitness Quiz Statements

Financial Behavior	Score ¹ 2002	Score 2001 (Rank)
1. I have a bank checking account (or credit union share draft account) to pay bills.	4.82	4.72 (1)
2. I have enough money each month to pay my rent/mortgage and other household expenses.	4.54	4.55 (2)
3. I comparison shop for major purchases by checking at least three sources.	4.02	3.76 (5)
4. I have insurance to cover "big" unexpected expenses, such as a hospital bill or disability.	3.94	4.10 (3)
5. I keep organized financial records and can find important documents easily.	3.84	3.76 (4)
6. I have enough money to pay for an emergency, such as a large car repair.	3.55	3.64 (6)
7. I avoid impulse purchases and don't use shopping as a form of recreation.	3.50	3.56 (8)
8. Less than 20% of monthly take-home pay goes to credit cards, student loans, and car payments.	3.41	3.35 (12)
9. I pay credit card bills in full to avoid interest charges.	3.38	3.25 (13)
10. I save regularly for long-term financial goals, such as education for my children, a house, of retirement.	3.31	3.46 (10)

table continues

Financial Behavior	Score ¹ 2002	Score 2001 (Rank)
11. I have a personal investment account for retirement (other than an employee pension).	3.05	3.58 (7)
12. I know my federal marginal tax bracket.	3.01	3.40 (11)
13. I have money spread across more than one type of investment (e.g., stocks, bonds, mutual funds).	2.99	3.53 (9)
14. I increase my savings when I receive a salary increase.	2.94	3.15 (14)
15. The after-tax yield of my savings and investments is greater than the rate of inflation.	2.78	3.10 (15)
16. I have a written plan (budget) for spending and/or saving my money.	2.69	2.59 (18)
17. I have at least three months' expenses set aside in a readily accessible account (e.g., money market mutual fund).	2.58	2.81 (16)
18. I calculate my net worth (assets minus debts) annually.	2.49	2.68 (17)
19. I have written financial goals with a date and dollar cost.	2.12	2.24 (19)

¹ Range of item scores possible was 5 (highest) to 1 (lowest).

There were differences by age for total mean scores. The mean scores for the four age groups were as follows: under 25: 56; 25-34: 63; 35-44: 66; and 45-76:76. The oldest group scored

Table 3
ANOVA Results of Total Scores by Age, Gender, and State

Variable	Total Score	F-value
Age		37.09*
under 25	56 a	
25-34	63 b	
35-44	66 b	
45 or older	76 c	
Gender		28.19*
Female	62 a	
Male	70 b	
State		18.73*
Utah	57 a	
New Jersey	71 b	
New York	58 a	
Other states	68 b	

Note: means with the same letter are not significantly different from one another.

* $p < .0001$

significantly higher than all others, while the youngest group scored lower than any of the other groups See Table 3).

Age differences were found for 16 of the 19 quiz questions (see Table 4). Age differences were not found for those who reported having written financial goals, those who had a written budget, and those who comparison shopped for major purchases. For most items, older respondents reported performing recommended practices more frequently than did younger ones. For example, for the question "I calculate my net worth annually," the mean score for the youngest group (under 25) was 1.92, while the mean score was 2.35 for the younger group (25-34), 2.51 for the older group (35-44), and 3.20 for the oldest group (45-76).

Males had a higher total mean score (70) than did females (62), and the difference was statistically significant (see Table 3). There also were gender differences for 15 of the individual quiz

Table 4
Kruskal-Wallis Results of Items by Age, Gender, and State

Item	Age	Gender	State
1. I have a bank checking account (or credit union share draft account) to pay bills.	16.7***		14.9**
2. I have enough money each month to pay my rent/mortgage and other household expenses.	16.5***	16.0**	29.6***
3. I comparison shop for major purchases by checking at least three sources.		4.8*	
4. I have insurance to cover "big" unexpected expenses, such as a hospital bill or disability.	49.1***		22.5***
5. I keep organized financial records and can find important documents easily.	10.1**		10.6*
6. I have enough money to pay for an emergency, such as a large car repair.	43.9***	25.4***	33.4***
7. I avoid impulse purchases and don't use shopping as a form of recreation.	17.5***	6.0**	
8. Less than 20% of monthly take-home pay goes to credit cards, student loans, and car pmts.	16.8***	4.3**	10.6**
9. I pay credit card bills in full to avoid interest charges.	17.1***	7.2**	20.9***
10. I save regularly for long-term financial goals, such as education, a house, or retirement.	44.8**	10.7***	39.7***

table continues

Item	Age	Gender	State
11. I have a personal investment account for retirement (other than an employee pension).	85.2***	26.8***	61.1***
12. I know my federal marginal tax bracket.	91.3***	25.2***	68.4***
13. I have money spread across more than one type of investment (e.g., stocks, bonds, mutual funds).	103.5***	20.0***	60.0***
14. I increase my savings when I receive a salary increase.	21.9***	14.1***	
15. The after-tax yield of my savings and investments is greater than the rate of inflation.	47.6***	21.4***	31.6***
16. I have a written plan (budget) for spending and/or saving my money.			
17. I have at least three months' expenses set aside in a readily accessible account (e.g., money market mutual fund).	59.7***	14.2***	38.2***
18. I calculate my net worth (assets minus debts) annually.	50.0***	23.2***	37.0***
19. I have written financial goals with a date and dollar cost.		6.4***	

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

items. Gender differences were not found for the items related to having a bank checking account, a written budget, organized

financial records, or insurance to cover big unexpected expenses. For items where gender differences were present, males reported performing recommended financial practices more frequently than did females. For example, for the question "I have a personal investment account for retirement," the mean score for males was 3.64, but 2.74 for females (see Table 4).

Of the 469 respondents, 19.2% were from Utah; 14.3% from New Jersey; 11.7% from New York; and 54.8% from other states. The total mean scores for the state categories, in descending order, were New Jersey (71), other states (68), New York (58), and Utah (57). Total mean scores for respondents in New Jersey and other states were significantly higher than for respondents in New York and Utah (see Table 3).

There were significant differences by state in responses to 16 of the 19 quiz questions. Differences across states were not found for the questions related to having written financial goals, having a written spending plan, increasing savings when receiving a salary increase, comparison shopping for major purchases, and avoiding impulse purchases (see Table 4).

Discussion and Implications

Results of this study indicate that considerable work is needed by financial educators to improve the financial management practices of many Americans. This study is limited in generalizability, however, as the sample was a non-random sample consisting of Internet-savvy consumers who were interested enough in personal finance to seek out the *Financial Fitness Quiz* Web site and complete the 20-question survey. It also includes respondents' self-reported perceptions of their financial behavior, which may differ from an analysis performed by an objective financial advisor. Nevertheless, the findings are instructive to consumer educators. Below are eight implications:

- The strengths and weaknesses of respondents' financial practices remained fairly constant in ranking between data collected during the first six months of 2001 and again in 2002. The five

most and the five least frequently performed financial practices in 2002 were similar to those reported in 2001. The least frequently reported behavioral practices in both years were having a current will and having written financial goals. The most frequently reported practices were having a bank checking account and having enough money to pay household expenses. The latter findings were similar to those of Hogarth and Hilgert (2002), who found that 89% of over 1,000 respondents to the Federal Reserve Board's Survey of Consumers had a checking account. Results indicate there is a continuing need to teach the "how to" of basic financial concepts, such as developing a written spending plan and net worth statement.

- There were no significant demographic differences in the frequency of performance of several financial behaviors. For example, there was no difference by age or state of residence in comparison shopping for major purchases, having written financial goals, or having a written plan (budget) for spending money (there also was no difference by gender for this item). However, for overall financial fitness scores, there were significant differences by age, gender, and state of residence. The findings suggest that there is a need to address specific challenges for financial management practices for different types of audiences.
- There was some improvement in 2002 in average scores for financial behaviors related to two credit questions: paying less than 20% of net pay toward credit cards, student loans, and car payments, and paying credit card bills in full. No statistical test of differences between the two data sets was performed, however. Additional research is necessary to monitor continued improvements in quiz scores related to credit management behaviors. Recent data indicate that the average U. S. household owes more than it earns each year, after taxes (Hilsenrath, Higgins, and Simon, 2002).
- Conversely, there was some slippage in ranking between 2001 and 2002 in average scores for two financial behaviors related to investing: having a personal investment account for retirement

and having money spread across more than one type of investment. Perhaps, as a reaction to the 2000-2002 stock market downturn, online quiz respondents were investing less frequently in IRAs or employer savings plans and/or placing their assets in fewer asset classes. Again, continued research will be necessary to track responses to investment-related quiz questions.

- Interestingly, basic financial practices (developing a spending plan, setting specific financial goals, calculating net worth, accumulating emergency savings, and drafting a will) were performed least frequently by respondents. This suggests a need to teach “how to” information (i.e., don’t assume that people know how to set financial goals) and to address barriers to implementation of specific financial behaviors (e.g., lack of a will because individuals cannot decide who to name as a guardian for their children).
- On average, survey respondents were young adults with decades of compound interest ahead of them. With time on their side, one or more of the recommended saving/investing behaviors listed on the quiz could greatly enhance their future financial well being.
- Although the average score on the *Financial Fitness Quiz* was a failing grade, use of appropriate financial behaviors did improve slightly with age. This may be a result of increased exposure to financial information, learning via life experiences, and/or greater interest in improved financial behavior as one nears retirement. Continued study of the relationship between age and financial fitness is needed to better interpret this finding.
- Males averaged a slightly higher average total score on the *Financial Fitness Quiz* than did females. Reasons could include higher average incomes for males, greater financial management knowledge and/or experience, or other factors. Another possibility is that, because a convenience sample was used, responses may be biased because of self-selection. Perhaps male respondents were more confident in their self-assessment of financial behaviors than were females.

- The *Financial Fitness Quiz* will continue to be used as both a self-assessment tool for online quiz respondents and as a source of data to study the adoption of recommended financial behaviors. In future studies, demographic differences by income, marital status, and ethnicity will be explored.

References

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