What makes older adults vulnerable to exploitation or abuse?

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Abstract

A review of the literature suggests elder vulnerability is a combination of three factors: health status, cognitive ability, and social support. Elder vulnerability variables were identified and applied to data from the 2000 Health and Retirement Study. Multivariate regression analyses of the data revealed that the most vulnerable elderly are older, less educated, ethnic minorities, and often living in rural areas. Intervention programs should focus on these vulnerable older populations to improve their quality of life.

Keywords: elder vulnerability, health, cognitive ability, social network

Introduction

The United States is experiencing significant growth in the older population. Approximately 13 percent of the total U.S. population is 65 years of age or older (U.S. Department of Health and Human Services 2005). The older population is expected to reach 20 percent of the U.S. population within three decades. The rapid growth of the older population raises a concern for older consumers' well-being since they are often at a disadvantage. It has been known that the older population is a vulnerable group, more susceptible to unscrupulous business practices than younger groups (Suzeanne, Pitts, and LaTour 1993). Senators Breaux and Hatch (Ohio Attorney

General 2003) defined the vulnerable elders as those who are unable to protect themselves from abuse, exploitation, or neglect by others.

Given that vulnerability, older adults are often at a disadvantage with respect to economic activities. Understanding the factors related to their vulnerability becomes an important issue. The purpose of this study is twofold: First, to define elder vulnerability by identifying factors associated with their vulnerability through a literature review, and second, to make operational and apply elder vulnerability factors to a data set to ascertain whether the elder vulnerability factors discriminate between age groups and other demographic characteristics. Results may contribute to improving older adults' quality of life.

Problems associated with elder vulnerability

The older population is the most often targeted group for fraud. A con artist stated, "It is an article of faith in this business to go after the old folks" (AARP 2002). Lee and Geistfeld (1999) reported that older persons' loneliness increases their vulnerability to fraudulent business practices. Lee and Geistfeld noted that one reason older consumers were more receptive to telemarketers was that they were in greater need of social interactions than the young. Lee and Soberon-Ferrer (1997) noted that a lack of market knowledge among the elderly contributes to a high level of susceptibility to deception and fraud. Older consumers were found to be less knowledgeable than younger consumers about the consequences of missing payments on home equity loans. Many of the older consumers were ignorant of the risk of losing ownership if payments were missed. In addition, a much higher proportion of older consumers than younger consumers could not identify anyone whom they could ask for help with consumer problems.

Some research has focused on the disadvantaged elderly in the financial market. Choi, Kulick, and Mayer (1999) reported that the elderly vulnerable to financial exploitation tended to be in their late 70s and cognitively impaired. The authors observed that a lack of financial management skill increases vulnerability to financial exploitation among older adults. Braunstein and Welch (2002) pointed out the importance of financial knowledge in a broad range of financial activities, from purchasing products to financing retirement. Braunstein and Welch noted that a lack of financial knowledge makes individuals vulnerable to financial crises because of their ineffective financial management. Braunstein and Welch suggested that financial literacy is one of the most critical issues in contemporary financial markets because of technological changes and market innovation, personal finance changes, and increased consumer responsibilities.

Although older adults are vulnerable to fraudulent market practices, they are less likely to recognize that they have been victims. Older adults are less likely to report abuse even if they have recognized that it occurred, since they have greater psychological costs of complaining.

Older adults tend to be afraid of being considered incompetent or not intelligent by reporting their victimization (Lee and Soberon-Ferrer 1997).

Factors contributing to elder consumer vulnerability

Health status. Lyon, Kinney, and Colquhoun (2002) suggested that older people are "vulnerable decision-makers" in a rapidly changing environment because of limited physical mobility and difficulties when searching for information. Physical changes in old age reduce the ability to conduct activities of daily living and maintain independence. Physical limitations of the elderly significantly restrict or change their functions and opportunities in the market place (Moschis 1994).

Sight also changes with age. More than 21 percent of people 65 years of age and older have some degree of visual impairment. Decreases in acuity, accommodation, and dark adaptation are common among the elderly (Hoff and Mobbs 2001). People with visual problems may also display diminished functional capabilities in other areas (Baker, Stephens, and Hill 2001). Hearing loss is another common physical problem among the elderly. A recent study found that approximately 46 percent of older adults experience some hearing loss, ranging from moderate to severe with sensory nerve impairment. Hearing imbalance among older adults can cause confusion and disorientation (Pirkl 1995).

In addition to physical limitations, many older adults suffer from depression. Studies found that about 30 percent of older adults struggle with depression (Birrer and Vemuri 2004, Raj 2004). The failure to adjust to later life may cause older people to experience depression (Chimich and Nekolaichuck 2004). Despite high incidence, elderly depression is often underrated and undertreated. Only about 10 percent of older patients with depression are given medication (Birrer and Vemuri 2004, Raj 2004).

Cognitive ability. Older adults often experience decreased information processing and problem-solving skills due to declining memory capacity, reasoning/evaluation skills, and cognitive flexibility (Moschis 1994, Zwahr and Park 1999). This leads to poor decision-making and judgment ability among older adults (Sanfey and Hastie 2000).

Burton and Andrews (1996) reported that older consumers were less able to respond appropriately to product information. Older consumers displayed small differences in nutrition attitude and purchase likelihood for low versus high nutrition products. Older adults also perceived labels as difficult to understand. Foley (2001) reported that older adults are less likely than younger consumers to find that advertisements clearly indicate the intended use of advertised products.

AARP (2000) examined older people's decision-making competency with respect to a health plan decision. AARP noted that a large proportion of older adults lacked skills needed to use comparative information. They could not accurately use the information to make choices among several health plan options. AARP also found that those 80 years old or older made errors four times more often than those aged 65 to 69. Hochhauser (1999) observed that older adults have difficulties interpreting HMO report cards. Older adults tended to be uncertain about the accuracy of indicators and rankings provided by health plans or health care professionals.

Social network. Kang and Ridgway (1996) reported that older adults tend to be more vulnerable than the young because they are less socially integrated and more likely to be under stress. "Social isolation" commonly occurs among older adults as a consequence of poor health, retirement, and loss of a spouse and friends. Matt and Dean (1993) noted that social isolation among older adults becomes more pronounced with advancing years. Matt and Dean reported that the 70 years of age or older group had a lower level of friend support than the group aged 50 to 69, due to increasing mortality with age.

Gentry and Goodwin (1996) found that grievers did not play an active role in decision-making. The bereaved tend to be confronted with new consumer roles. However, the pain of grief often leads the grievers to physical and mental malfunctioning. In addition, lowered self-efficacy and financial difficulty hinder the widowed from adapting to a new consumer role.

Gentry and Goodwin also reported that those who lack social networks tended to rely on retailers or service providers as a source of social support. This increased the risk of being abused through deceptive market practices. Moschis (1994) stated that social isolation increases susceptibility because those who are isolated do not have a way to validate consumer information.

Methods

Data. The application uses data from the 2000 Health and Retirement Study (HRS). The HRS is a national panel study conducted by the Institute for Social Research at the University of Michigan and sponsored by the National Institute on Aging. The HRS and the Assets and Health Dynamics Among the Oldest Old study (AHEAD) were merged into a single data collection process and instrument, starting with the fourth wave of the HRS and the third wave of the AHEAD in 1998. Total 6,273 respondents 65 years of age or older were included in this study.

Variables. Health status was measured using functional problems, chronic disease, vision, hearing, and depression variables. Functional problems were assessed using the following activities: (1) walking one block; (2) sitting for two hours; (3) getting up from a chair after sitting for long periods; (4) climbing several flights of stairs; (5) stooping, kneeling, or crouching; (6) reaching arms above shoulder level; (7) pulling or pushing large objects; (8) lifting or carrying

weights over ten pounds; and (9) picking up a dime. The functional problems score ranged from 0 to 9. Chronic diseases were reflected through the following: high blood pressure, diabetes, cancer, heart problem, and stroke. Respondents with any of these diseases were coded as 1, and others were coded as 0. Vision and hearing scores were self-rated using a 5-point and 6-point scale, respectively. Depression score was assessed using the Center for Epidemiological Studies Depression Scale. This scale consists of 9 items: Much of the time during the past week, (1) you felt depressed, (2) you felt that everything you did was an effort, (3) your sleep was restless, (4) you were happy, (5) you felt lonely, (6) you enjoyed life, (7) you felt sad, (8) you could not get going, and (9) you had a lot of energy. The Depression score ranged from 0 to 9.

Older adults' cognitive difficulty reflects decreased memory capacity (Moschis 1994, Sanfey and Hastie 2000) and reasoning skills (Zwahr and Park 1999). Krause (1996) measured cognitive ability using recall of words, backward counting, and basic calculation skill. This study uses memory and computation ability to capture cognitive ability. HRS measured memory by asking the respondents to recall words read to them as many as possible. The score ranged from 0 to 10. A subtraction question was used to assess respondents' computation ability. The question asked was "What is 100 - 7?" The correct answer was coded as 1, and the wrong answer was coded as 0.

This study uses presence of a spouse or a partner to capture respondents' social network. Loss of a spouse or partner leads to the loss of an important social resource with whom to interact. Those without a spouse/partner were a reference group coded as 0. Number of children nearby was another measure of social network. Presence of children nearby may decrease loneliness and provide assistance related to market activities with older respondents.

Sample characteristics. Table 1 describes the characteristics of the respondents in the study. The mean age of the respondents was 74.7 and the female respondents were about 78 percent of the sample. The majority of the respondents were White (81percent). About 46 percent of the respondents had a spouse and more than 29 percent of the respondents had less than high school education. Approximately 45 percent of the respondents had children living within 10 miles. Average household income was $36,560.

Table 1. Sample characteristics
[Table 1 Summary: Sample characteristics.]

Characteristic		Percent
Gender	Male	21.5
	Female	78.5

Education	High school diploma	70.7
	Less than high school	29.3
Race	White	81.2
	Black	11.4
	Hispanic	5.7
	Other	1.7
Spouse/partner	Yes	46.1
Children living near	Yes	44.6
Age		74.7
Household income	Mean	$36,560
	Median	$24,032

Analysis

Descriptive analysis of vulnerability. The nature of vulnerability was explored and compared within the older population. The age groups divided were 65–74, 75–84, and 85 years of age or older. The t-test and $\chi2$ –test were used to compare the age groups for each vulnerability dimension.

With respect to health status (Table 2), functional problems were the smallest for the youngest group and the largest for the oldest group (p<.000). Vision and hearing scores were the smallest for the youngest group and the largest for the oldest group (p<.000). Depression score was smallest for the youngest group and largest for the oldest group (p<.000). The largest proportion of the oldest group and the smallest proportion of the youngest group had at least one disease (p<.000).

Cognitive ability includes computational skill and memory. The largest proportion of the oldest group gave an incorrect answer to the computation question (p<.000). Approximately 13.6 percent of the oldest group provided an incorrect answer, whereas approximately 13.2 percent of the youngest group did (p<.01). The oldest group also had the lowest memory score, while the youngest group had the highest memory score (p<.000).

Social network takes into account presence of a spouse/partner and children living nearby. The smallest proportion of the oldest group lived with a spouse or a partner, while the largest proportion of the youngest group did (p<.000). About 57 percent of the youngest group had a

spouse/partner, while about 17 percent of the oldest group did (p<.000). The smallest proportion of the oldest group had children living nearby, while the largest proportion of the youngest group did (p<.000). The preceding suggests that the oldest group is most vulnerable, followed by the middle age group and the youngest group. This suggests that vulnerability is a more serious problem for the oldest-old population.

Table 2. Descriptive analysis of vulnerability

[Table 2 Summary: Descriptive analysis of vulnerability]

Variable	Age	Mean	p-value
ADL	65-74	2.48	.000***
	75-84	2.91	
	85+	3.85	
Vision	65-74	2.80	.000***
	75-84	2.96	
	85+	3.28	
Hearing	65-74	2.43	.000***
	75-84	2.79	
	85+	3.11	
Depression	65-74	2.58	.000***
	75-84	2.74	
	85+	2.99	
Memory	65-74	5.66	.000***
	75-84	4.76	
	85+	3.74	

** p < .01 *** p < .001

Variable	Age	Yes (percent)	No (percent)	p-value
Disease	65-74	64.31	35.69	.000***

	75-84	74.35	25.65	
	85+	78.03	21.97	
Computation	65-74	86.77	13.23	.006**
	75-84	86.94	13.06	
	85+	86.36	13.64	
Spouse/partner	65-74	57.79	42.21	.000***
	75-84	37.72	62.28	
	85+	17.19	82.81	
Children nearby	65-74	47.45	52.55	.000***
	75-84	42.45	57.55	
	85+	38.42	61.58	

** p < .01 *** p < .001

Multivariate regression analysis. To examine demographic characteristics affecting elder vulnerability, several multivariate regression analyses were conducted. As can be seen in Table 3, age, education, gender, race, and region commonly affected health status. Older persons were more likely to have poorer health status, cognitive skill, and social support than younger persons. Age increased the odds of having functional problems, poorer vision and hearing ability, and depression than their counterparts (p<.000). One year increase in age increased the odds of having a disease by 3 percent (p<.000). One year increase in age decreased the odds of having higher memory and computation skill by 10 percent and 2 percent, respectively (p<.000). One year increase in age decreased the odds of having a spouse and children nearby by 9 percent and 2 percent, respectively (p<.000).

Education was positively associated with good health status, cognitive skill, and presence of a spouse. Those with a high school diploma had lower odds of having functional problems, poor vision and hearing ability, and depression than their counterparts without a high school diploma (p<.000). Those with a high school diploma had lower odds of having a disease (p<.000). Those with a high school diploma had higher odds of having a higher memory ability and having a computation skill (p<.000). Those with a high school diploma had higher odds of having a spouse (p<.000).

Ethnic minority status was significantly associated with poorer health status, cognitive ability, and having a spouse. African-American and Hispanic respondents had higher odds of having

higher functional problems than White (p<.05). In addition, African-American had higher odds of having poorer vision than White (p<.05). Hispanic had higher odds of having poorer hearing, vision, and depression than White (p<.01). African-American and Hispanic had lower odds of having higher memory ability than White (p<.000). African-American and Hispanic had lower odds of having computation skill than White (p<.000). In addition, African-American had lower odds of having a spouse than White (p<.000).

Rural residence was significantly associated with poorer health status, cognitive ability, and presence of a spouse. Urban/suburban residents had lower odds of having functional problems, poor vision and hearing ability than rural residents (p<.01). Urban/suburban residents had lower odds of having a disease than rural residents (p<.05). Urban/suburban residents had higher odds of having memory ability and computation skill than rural residents (p<.01). In addition, urban/suburban residents had lower odds of having a spouse than rural residents (p<.05).

Gender had inconsistent effect on health status. The male older adults were less likely to have functional or depression problems than the female older adults (p<.01). In addition, male older adults were more likely to have higher computation skill than the female older adults. However, male had higher odds of having poorer hearing and memory ability than female.

Table 4. Multivariate regression analyses

[Table 4: Multivariate regression analyses]

Variable		Odds Ratio	p-value
Functional problem	High school	.620	.000***
	Men	.442	.000***
	African American	1.257	.002**
	Other	.970	.866
	Hispanic	1.242	.032*
	Region	.864	.004**
	Age	1.051	.000***
	Net worth	.999	.000***
Poor Vision	High school	.597	.000***
	Men	.911	.107
	African American	1.554	.000***

	Other	1.016	.926
	Hispanic	1.758	.000***
	Region	.838	.001**
	Age	1.034	.000***
	Net worth	1.000	.198
Depression	High school	.794	.000***
	Men	.844	.002**
	African American	.883	.101
	Other	.769	.144
	Hispanic	1.302	.010*
	Region	1.044	.398
	Age	1.022	.000***
	Net worth	.999	.001**
Computation	High school	3.841	.000***
	Men	2.120	.000***
	African American	.204	.000***
	Other	.167	.000***
	Hispanic	.365	.000***
	Region	1.350	.001**
	Age	.981	.001**
	Net worth	1.000	.010*
Children Nearby	High school	.691	.000***
	Men	.814	.001**
	African American	1.041	.622
	Other	.777	.217
	Hispanic	1.218	.085
	Region	1.009	.870
	Age	.981	.000***

	Net worth	1.000	.233
Poor hearing	High school	.687	.000***
	Men	1.803	.000***
	African American	1.053	.485
	Other	.910	.607
	Hispanic	1.365	.002**
	Region	.835	.001**
	Age	1.053	.000***
	Net worth	.999	.006**
Disease	High school	.789	.000***
	Men	1.055	.437
	African American	1.237	.024*
	Other	.647	.033*
	Hispanic	.719	.006**
	Region	.850	.012*
	Age	1.037	.000***
	Net worth	.999	.011*
Memory	High school	2.473	.000***
	Men	.523	.000***
	African American	.544	.000***
	Other	.606	.005**
	Hispanic	.580	.000***
	Region	1.255	.000***
	Age	.904	.000***
	Net worth	1.000	.000***
Spouse/partner	High school	1.252	.000***
	Men	1.062	.368
	African American	.431	.000***

	Other	.706	.098
	Hispanic	.931	.556
	Region	.882	.044*
	Age	.913	.000***
	Net worth	1.000	.000***

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

Discussion and conclusion

An important implication of this research is defining elder vulnerability as a multidimensional phenomenon including three factors: health status, cognitive ability, and social network. This is a unique approach because previous studies often treated "elder vulnerability" based on a single factor such as old age or lack of knowledge. All of the three factors above should be considered when considering "real" vulnerable older adults. Defining vulnerable elderly based on a single demographic or socioeconomic characteristic may mask underlying causes of elder vulnerability and the degree of heterogeneity within the older population.

The oldest old group was most vulnerable within an older population in all three dimensions of vulnerability. The regression analyses suggest that within the older population, age, education, ethnicity, and region are consistently associated with vulnerability: age increases vulnerability while education decreases vulnerability; African-American and Hispanic are more vulnerable than White; rural residents are more vulnerable than urban/suburban residents. This suggests that there is heterogeneity within an older population unlike its stereotyped definition. Those in their 60s and in 80s are different in terms of health status, cognitive ability, and social network. In addition, the minority, less educated, and rural older adults have a different level of vulnerability compared to their White, more educated, and urban/suburban counterparts.

The results of this study provide implications for policy makers and educators to improve older adults' quality of life. Given the association between socioeconomic and demographic variables and the elder vulnerability, it would be possible to use these variables to screen for the likelihood of being a vulnerable older adult. The level of protection needed is different by level of vulnerability among older adults. Educational programs should be designed to decrease elder vulnerability. Since elder vulnerability results from frail health, cognitive impairment, and weak social network, interventions are needed to decrease these vulnerability factors. Strengthening social network by linking lonely older adults and other older adults or younger persons in a community would be one way to decrease elder vulnerability. It would also be helpful to provide frequent social interaction programs with the lonely older adults in a community. Strengthened

social network will increase older adults' exposure to useful consumer information as well as prevent them from listening to con artists due to their loneliness. The oldest olds or older adults with frail health conditions need transportation or helpers to be provided to increase their participation in intervention programs. Since elder vulnerability is most severe to the oldest olds, the less educated, ethnic minorities, and rural residents, education or social support programs directed toward the elderly need to focus on these specific sub-older populations. This study examined factors contributing to the elder vulnerability. It is needed to investigate what contributes to successful later life by increasing older adults' resilience in future research. The strengths of older adults may have a protective or counteracting influence against the factors causing vulnerability.

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