

# *Health Behaviors and Social Roles Among Mature Men and Women*

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This article explores the relationship between gender, social roles, age, education, number of health problems, and health behaviors in mature adults. Data from a national study focus on women and men ages 54 to 64. Analyses indicate that women are more likely to avoid risk-taking health behaviors; in particular, men are more likely to report that they drink alcohol. There were no gender differences in promotive health behaviors or cancer detection behaviors. Further analyses focus on the relationship of two social roles (marital and employment status), demographic variables (gender, age, education), and number of health problems on promotive health behaviors, risk avoidance behaviors, and cancer detection behaviors. Social roles are related to health behaviors as follows: employed women are less likely to report cancer detection behaviors than are unemployed women; married men are more likely to engage in risk avoidance behaviors than are unmarried men. Demographic comparisons indicate that education and to some extent, age, are associated with promotive health behaviors. Men and women with health problems are more likely to engage in cancer detection behaviors. The small sample size, however, suggests caution in the interpretation and generalization of these findings.

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*The Institute of Medicine* has said that with the outstanding medical advances of this century, in both knowledge concerning diseases and technological developments in treatments, the major health improve-

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ments of the next century will be in the arena of preventive health behaviors (Hamburg, 1982). This article examines self-reported health behaviors in a mature sample of adults and includes both promotive health behaviors such as exercise, dietary, and sleep patterns, and risk-taking behaviors such as smoking and drinking alcohol. In addition, cancer detection behaviors such as obtaining chest x-rays and pap smear tests are included. Because of the possible implications for gender differences in life expectancy and disease, gender differences in health behaviors as well as the relation of social roles to the performance of health behaviors are examined.

Data are available which focus on health behaviors in both regional and national samples among all adults and older people specifically (Berkman & Breslow, 1983; Hickey, Rakowski, & Julius, 1988; Prohaska, Leventhal, Leventhal, & Keller, 1985; Rakowski, Julius, Hickey, & Halter, 1987; Rakowski, 1988; Verbrugge, 1982, 1989; Wingard, 1984). Traditionally it has been thought that although the direction of gender differences varies for specific health behaviors, women generally have better health habits than men (Schoenborn, Danchik, & Elinson, 1981). The findings have not always been strong or consistent, especially across age. In fact, recently, researchers (Hickey et al., 1988; Rakowski, 1988) exploring demographic differences in health behaviors among older adults caution that conclusions should remain tentative and that future research should explore additional explanatory factors. Hickey et al. (1988) reported gender and age differences in preventive health behaviors but emphasized that little is known about the nature of these differences, especially with respect to causal factors.

One particularly interesting hypothesis suggests that gender differences may be confounded by age in that men and women may become more similar in their preventive health behaviors with age. This could be the result of a variety of factors, including differential morbidity and mortality; that is, those who are most different in their health behaviors either are already chronically ill or have already died. Another

possibility is that life-styles become increasingly similar with age. This may be because those characteristics that make the life-styles of men and women most different are age-linked, for example, intensive involvement with child care or intensive involvement in strenuous physical activities, such as active physical sports or physically taxing occupations.

In addition, much recent research has suggested that social roles are linked to health behaviors, and that gender differences in roles may therefore help explain differences in health (Barnett, Biener, & Baruch, 1987; Coleman & Antonucci, 1983; Crosby, 1984; Umberson, 1987; Verbrugge, 1985). In general, the evidence indicates that marriage and employment are associated with greater health and well-being. Some argue that marriage can benefit well-being by providing essential social support. Similarly, the experience of employment may provide feelings of mastery, control, and accomplishment that serve to enhance well-being. Others suggest that social roles provide external regulation and facilitate self-regulation of health behaviors (Umberson, 1987). It should also be noted, however, that an opposite argument suggests roles and well-being are linked because people who are not healthy are less likely to be employed or to be married. Recent research suggests, for example, that employment affects health but health also influences employment (Adelmann, Antonucci, Crohan, & Coleman, *in press*). Only a few studies have focused on the potential relationship between social roles and health among mature adults.

Although not specifically a study of social roles and health, Rakowski's (1988) recent study of nine personal health practices within four adult age cohorts (ages 20-30, 31-41, 42-53, and 54-64), using data from the National Survey of Personal Health Practices and Consequences ( $N = 3,025$ ) provides information on this topic. He concluded that few predictors were consistently important across the four age cohorts. Given the increased likelihood of chronic health problems with age and the changing nature of social roles across the life span, age, and, indirectly, social roles, might significantly affect the gender/health relationship. For example, during young adulthood, involvement in employment, maintaining job security, or climbing a career ladder might negatively influence one's health behaviors. On the other hand, mature adults may experience less conflict from the demands of employment and see health behaviors as more critical than employment

goals. The purpose of the present article is to examine the frequency of health behaviors among mature men and women, and to examine the relationship between gender, marital status, employment status, and health behaviors. The data are drawn from a nationally representative sample of adults over age 54. Because of our interest in social roles, the sample excludes people at or beyond the traditional retirement age of 65. We have only included people between the ages of 54 and 64 to permit the examination of employment effects before the traditional age of retirement.

## *Method*

### *DATA COLLECTION*

The data were collected as the second wave of a national survey of social support and well-being of adults over age 54 conducted by the Survey Research Center at the University of Michigan in 1984 (Antonucci & Kahn, 1986). The response rate in the first wave in 1980 reached 70%; the wave two response rate was 73.5%. The total sample size of the second wave was 404. The present study is limited to the 99 women and 85 men who were between the ages of 54 and 64 in 1984. The interviews were conducted using the computer-assisted telephone interviewing system (CATI).

### *MEASURES*

*Role variables.* The two major role variables included in this study were marital status and employment status. Because all but eight people in the sample had children, parental status could not be included as a variable. Marital status was coded 1 = currently married and 0 = not currently married (including never married, divorced, separated, and widowed). Employment status was similarly coded with 1 = currently employed for pay, and 0 = not currently employed (including homemakers, retired, employed, laid off, student, and disabled).

*Background variables.* Three background variables were also selected for inclusion in the analyses. Age was measured continuously and ranged from 54 to 64 years. Education was assessed as the highest

grade of schooling completed, and ranged from less than one grade to 17 grades and beyond. Number of health problems treated by a doctor in the preceding four years came from the following list (and could range from 0 to 14): stomach problems; arthritis or rheumatism; ulcer; cancer; high blood pressure; liver, kidney, heart, lung, and eye problems; stroke; circulatory disorders; and hearing loss.

*Dependent measures.* The three dependent measures were indices of Promotive Health Behaviors, Risk Avoidance Behaviors, and Cancer Detection Practices. The Promotive Health Behavior index consisted of the sum of the responses to four items and could range from 3 to 16, divided by the number of items (four). "How often do you usually engage in active physical exercise?" was rated as 1 = never, 2 = rarely, 4 = sometimes, and 5 = often. "How often do you eat breakfast?" was measured as 1 = never, 2 = rarely, 3 = sometimes, 4 = almost every day, 5 = every day, and "How often do you eat in between meals?" could be answered 1 = every day, 2 = almost every day, 3 = sometimes, 4 = rarely, 5 = never. Sleep habits was coded 0 = abnormal (less than 6 hours or more than 9 hours) and 1 = normal (6-9 hours). The Risk Avoidance Behavior index included cigarette smoking and alcohol drinking, coded 0 = either smoking or drinking or both, 1 = neither smoking nor drinking. The Cancer Detection Index included six common cancer detection practices (regular physical check-ups, chest x-ray, rectal exam, stool test, pap test, and breast x-ray; the last two items were asked of women only). Each practice received a score ranging from 1 to 5 based on frequency of practice, measured as 1 = never, 2 = less than every 5 years, 3 = every 18 months to 5 years, 4 = every 6 to 8 months, and 5 = at least every 6 months. Averages were calculated by summing the frequency scores and dividing by the number of items. Scores were calculated separately for men and women.

#### *SAMPLE CHARACTERISTICS*

The average age of women in the sample is 59.98 (SD = 3.26 years), and for men is 59.44 (SD = 3.46). Both men and women have an average educational level of approximately 11 grades (mean = 11.29, SD = 2.97 for women; mean = 11.69, SD = 3.59 for men). Among women, 52% are married and 42% are employed; among men, 84%

are married and 69% employed. Men and women report a comparable number of health problems.

#### DATA ANALYSIS

Two sets of data analyses are reported in this study. First, the mean differences for men and women on the three health behavior indices as well as each health practice item from the indices are examined with *t*-tests and  $X^2$  tests. Second, three multivariate analyses examine the relationship between health behaviors and social roles, age, education, and health problems. One simultaneous regression model including women and men tests and effects of marital status, employment status, gender, age, education, and health problems. Next, separate equations for men and women are tested, again assessing the effects of employment, marital status, age, education, and health problems. Ordinary Least Square (OLS) simultaneous regression analyses are used with the Promotive Health Behavior and Cancer Detection Behavior indices. Logit regression analyses are used with the Risk Avoidance Behavior index because the dependent variable is dichotomous.

#### Results

Table 1 provides the means and standard deviations on each of the specific health behaviors and the three indices for men and women. The *t*-statistics and  $X^2$  statistics indicate there are few gender differences in health behaviors in this age group. The only exception is among Risk Avoidance Behaviors. Women tend to have better health habits concerning both smoking cigarettes and drinking alcohol, although only in their reported alcohol consumption is their level of abstinence significantly higher than men's.

In Table 2 are presented the results of the multivariate analyses examining the relationships between the three health behavior indices and marital status, employment status, gender, age, education, and health problems.

Analyses including both men and women account for between 8 and 11% of the variance in the OLS analyses. Gender and social roles have little association with either Promotive Health Behaviors or

TABLE 1  
Health Behaviors for Men and Women Age 54-64<sup>a</sup>

	Women (N = 99)		Men (N = 85)		t-statistic
	Mean	SD	Mean	SD	
<i>Promotive Health Behavior Index</i>	1.91	.42	1.98	.47	1.15
Physical Exercise	3.48	1.61	3.88	1.48	1.76
Eat Breakfast Regularly	4.21	1.22	4.09	1.28	-.65
Don't Eat Between Meals	2.91	1.37	3.01	1.37	.51
	<i>Proportion</i>		<i>Proportion</i>		<i>X<sup>2</sup>-statistic</i>
Normal Sleep Habits	.86 <sup>b</sup>		.77		.63
Don't Smoke Cigarettes	.74		.54		3.09
Don't Drink Alcohol	.69		.45		10.28**
<i>Risk Avoidance Health Behavior Index</i>	.51		.29		9.58**
	Women (N = 99)		Men (N = 85)		t-statistic
	Mean	SD	Mean	SD	
<i>Cancer Detection Index</i>	2.94	.84	3.13	1.06	1.33
Physical Check-ups	3.57	.93	3.50	1.20	-1.58
Chest X-ray	3.09	1.08	3.16	1.24	.42
Rectal Exam	3.10	1.24	3.14	1.26	.21
Stool Test	2.42	1.41	2.71	1.40	1.38
Pap Test	3.33	1.12			
Breast X-ray	1.94	1.24			

a. High scores on all variables reflect better health behavior (*t*-statistic is positive if men do more of behavior than women).

b. Proportions are presented for sleep habits (an item in the Promotive Health Behavior Index) and smoking and drinking (items in the Risk Avoidance Index) because these items are dichotomous.

\*\**p* < .01.

Cancer Detection Behaviors. Instead, background variables are significant predictors of those two health behavior indices. Individuals with higher levels of education tend to engage in Promotive Health Behaviors, and, at least marginally, to engage in cancer detection behaviors. Those with more health problems are more likely to engage in Cancer Detection Behaviors. The logit analysis in the model including both women and men indicates that gender has a significant association only with Risk Avoidance Behaviors; men are more likely to smoke and drink alcohol than are women.

TABLE 2  
 OLS Regression Analysis of Orderly Health Behavior

	<i>Men &amp; Women</i>		<i>Women</i>		<i>Men</i>	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Intercept	1.12	.63	2.58	.86	-.30	.90
Gender <sup>a</sup>	-.09	-.07	—	—	—	—
Age	.01	.01	-.01	.01	.03*	.01
Education	.03**	.01	.02	.01	.03*	.01
Health Problems	-.04*	.02	-.02	.03	-.05	.03
Marital Status <sup>b</sup>	.01	-.07	-.04	.09	.05	.13
Empl. Status <sup>c</sup>	-.08	-.07	-.17	.09	-.04	.11
R <sup>2</sup>	.08	—	.06	—	.14	—
F	2.49*	—	1.29	—	2.68*	—

*OLS Regression Analysis of Cancer Detection Practice*

	<i>Men &amp; Women</i>		<i>Women</i>		<i>Men</i>	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Intercept	1.45	1.32	2.44	1.68	.38	2.05
Gender <sup>a</sup>	-.24	.15	—	—	—	—
Age	.02	.02	.00	.03	.03	.03
Education	.04	.02	.04	.03	.03	.03
Health Problems	.17**	.05	.14*	.06	.23**	.07
Marital Status <sup>b</sup>	-.02	.15	.01	.17	-.17	.30
Empl. Status <sup>c</sup>	-.18	.15	-.41*	.18	.17	.25
R <sup>2</sup>	.11	—	.12	—	.14	—
F	3.78**	—	2.42*	—	2.67*	—

*Logit Regression Analysis of Risk Avoidance Behavior*

	<i>Men &amp; Women</i>		<i>Women</i>		<i>Men</i>	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Intercept	3.47	3.16	4.59	4.34	2.93	4.71
Gender <sup>a</sup>	.99**	.35	—	—	—	—
Age	-.06	.05	-.04	.07	.09	.07
Education	-.08	.05	-.16*	.08	.02	.07
Health Problems	.08	.10	-.02	.15	.19	.15
Marital Status <sup>b</sup>	.40	.36	.07	.43	1.88	1.02
Empl. Status <sup>c</sup>	-.50	.34	-.69	.45	-.24	.57
R <sup>2</sup>	18.59**	—	7.53	—	8.44	—

a. 0 = male, 1 = female

b. 0 = not married, 1 = married

c. 0 = not employed, 1 = employed

\* $p < .05$ ; \*\* $p < .01$ .



Results of the analyses for women only indicate that the regression model for Promotive Health Behaviors accounts for 6% of the variance. The regression model for the Cancer Detection Index accounts for 12% of the variance. An important finding is that employed women are significantly less likely to engage in cancer detection practices. Women with more health problems are more likely to have cancer checkups than are those women with fewer health problems. The logit regression analysis for the Risk Avoidance Behaviors among women indicates that less educated women are more likely to avoid risk-taking behaviors than are better educated women.

Similar OLS analyses for men indicate that these models account for greater proportions of the variance among men, with 14% of the variance in both Promotive Health Behaviors and Cancer Detection practices explained. Older men and more educated men tend to engage in more Promotive Health habits. Men who have more health problems are more likely to engage in Cancer Detection Behaviors.

### *Discussion*

Although women were significantly more likely to avoid risk-taking health behaviors than were men, we found few gender differences in other types of health behaviors in this sample of mature adults. These results are therefore only partially congruent with previous reports on gender differences in health behaviors that generally suggest better health habits among women compared to men (Schoenborn et al., 1981).

One possibility is that the health behaviors of men and women change across the life span and with life style. Because the majority of previous reports focused on the younger population, the inconsistency between those reports and the present study might be accounted for by the age difference in the samples studied. The changing nature of social roles and the increased likelihood of health problems with age are assumed to affect the health behaviors of middle-aged and older adults. The gender difference in health behaviors might disappear or even be reversed at a certain phase of the life course. The effect of life stage on the relationship between gender and health behaviors still remains to be studied.

It is difficult to explain the apparently paradoxical result that there are few gender differences in health behaviors among the mature adults in this sample, in light of the fact that men, in general, have higher early mortality rates. There are several possible explanations, the most plausible of which focuses on the age range of our sample. Previous research has found that younger men have poorer health behaviors than women have (Rakowski, 1988). By midlife, the consequences of this pattern may begin to take their toll in mortality; for example, the years between 45 and 54 are when coronary problems become manifest in men, often fatally (Waldron, 1982). Men who successfully negotiate this heart attack period may have superior health behavior patterns for two reasons. First, those with worse health behaviors are probably more likely to have died at younger ages, leaving men with better health habits as their survivors. Second, middle-aged men who begin to experience losses among their friends, co-workers, and relatives due to illness may become increasingly conscious of their own mortality. This awareness may lead to attempts to improve health behaviors. Thus, in either case, it may be that the health behaviors of women do not necessarily worsen, but that those of men as a group improve.

Another possible explanation of disparities between the results of this study and earlier research may lie in the measures used. Although Rakowski (1988) did find five out of nine significant gender differences in the same age group, he did not find them for the Alameda County measures, which are most similar to those used in the current study.

Our results suggest that social roles have a relatively limited association with health behaviors of individuals between 54 and 64 years of age. Employment was negatively related to cancer detection practices among women. This may be attributed to lack of time, because even women employed full-time are likely to assume almost full responsibility for household tasks in addition to duties in the work place (Coverman, 1983). In addition, it may be that characteristics of social roles are more important than role occupancy itself in predicting health and well-being. For example, evidence suggests that quality of employment is important to well-being (Adelmann, 1987; Crohan, Antonucci, Coleman, & Adelmann, 1989). It is also conceivable that social roles have stronger links to the health behaviors of younger

adults, for indirect reasons, such as the increased probability of women caring for small children.

In general, interpretation and generalization from the results of this study should be made with caution. The sample is small, and replication with larger samples is recommended. Additional tasks for future research are also suggested by these findings. As Rakowski (1988) has indicated, studies of health behaviors of men and women should include consideration of a life course perspective and, by extension, an examination of the effects of the changing nature of social roles over the life course.

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