

Long-term Health Impacts of Forced Early Retirement Among Steelworkers

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Background. Previous studies of the health impacts of retirement have not investigated the effects of forced early retirement following plant closings.

Methods. Using a geriatric database representative of elderly people, the health impacts on employees forced to take early retirement from steel mills in the Youngstown, Ohio, area were assessed. A study group of forced early retirees was compared with two control groups: (1) regular steel industry retirees, and (2) regular retirees from jobs outside the steel industry. Utilizing multivariate analysis techniques, the effects of re-

tirement on a number of different health measures were isolated.

Results. Over the long term, the health of forced retirees does not seem adversely affected by sudden job loss and unexpected retirement, at least in the steel industry.

Conclusions. Continuity theories of retirement—that workers do not experience abrupt catastrophic changes in lifestyle and in health—best explain the lack of negative health impacts.

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Hundreds of thousands of people are being forced to retire early as corporations shut down operations to become more competitive.¹ The research community has yet to systematically study the health effects of forced early retirement on people following plant closings. Consequently, knowledge about forced early retirement is based on extrapolations from what is known about retirement at any age, about early retirement mandated by pension policy, or from studies of mass unemployment. Such extrapolations are not the best bases on which to build theories and devise public policies for those in need.

Although the subject of intense debate, retirement is often viewed as a potentially stressful life event.^{2,3} Forced early retirement, unanticipated and without time to plan, is expected to be especially stressful. Income falls, radically altering lifestyles, especially for those without adequate personal resources. Forced early retirees may be unable to afford medical care and be vulnerable to the

same physical health problems that affect the unemployed: psychosomatic illnesses, alcohol abuse, or drug abuse.^{4,5} Wrenched suddenly from their jobs, forced early retirees may lose support networks of friends and co-workers. Forced early retirees who are poor, members of minority groups, or disabled may be less healthy initially and less able to cope once retired.⁶ As time passes, forced early retirees as a group may become less well off as the debilities of age increase and resources are depleted.⁷

The purpose of this study was to examine steelworkers forced to retire early in a wave of steel mill closings in Youngstown, Ohio, during the late 1970s, to determine whether they experienced adverse health consequences. The research provides the basis for planning delivery of health care services targeted to the specific needs of early retirees.

Methods

In September 1977, Youngstown Sheet and Tube, one of the nation's largest steel producers, suddenly and unexpectedly closed its Campbell Works, idling about 5000 workers. Two years later the company closed its Brier Hill Works, laying off another 1500. Around the same

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time, US Steel and Republic Steel terminated another 4000 jobs through closings and cutbacks. As many as 30,000 steelworkers were laid off from all local steel plants during the 1970s and 1980s, nearly 7% of the total labor force.

An estimated 3000 of the workers laid off from Youngstown Sheet and Tube were forced to retire early, and did not look for other work. They joined the community of steelworkers who had already retired.

The Survey

Personal interviews with 990 noninstitutionalized elderly (62 years of age or older) in the Youngstown, Ohio, metropolitan area were completed between September and December 1987.⁸ Elderly people in nursing homes, adult day care centers, skilled nursing sites, or other long-term care facilities were not interviewed, but those living in retirement villages, high-rise buildings, and low-income housing complexes were. Households were selected from a simple random sample of telephone directory listings. When possible, interview appointments were set up in advance by telephone. Twenty interviewers completed interviews with 85% of the eligible households contacted.

The sample constituted a natural experiment on the long-term health effects of forced early retirement. Among the sample of 990, 60 forced early retirees (experimental group) and 95 regular retirees (control group) from the steel industry were identified. The ages at which the forced early retirees were originally laid off were less than 55 years (9), 55 to 59 years (26), and 60 to 64 years (25). The steel-industry groups included only men, reflecting the male dominance in the industry. Some 175 men of the 835 retirees in the remainder of the sample who had retired from non-steel-related jobs (a second control group) were also identified.

Definitions

Forced early retirement was defined using a set of questions. Initially, respondents were asked: "In what year were you born?" Those 62 years of age and older were included in the study. Next, respondents were asked: "Have you retired from any job?" If they had retired from a job, they were asked: "What was your usual occupation?" and "What kind of business or industry did you work for?" Both questions were deemed necessary to identify steelworkers: some nonsteel companies may employ steelworkers, and some steel companies may employ nonsteelworkers. Once steelworkers were identified, they were asked: "Were you forced to retire?" If they re-

Table 1. Demographics of Elderly People Living Independently in Youngstown

Variables	Youngstown Sample (N=990) No. (%)	1980 Census* No. (%)
Age (years)†		
62-64	193 (19.7)	4027 (19.3)
65-69	303 (30.7)	5938 (28.5)
70-74	221 (22.4)	4186 (20.1)
75-79	138 (14.0)	3159 (15.2)
80-84	74 (7.5)	1983 (9.5)
85+	56 (5.7)	1536 (7.3)
White	778 (78.6)	18534 (79.6)
Male	412 (41.6)	9570 (41.1)
Above poverty status‡	748 (83.0)	20078 (86.2)

*Source: Ohio Data Users Center, Columbus, Ohio.

†Five subjects in the Youngstown sample failed to respond to the question on age.

‡Eighty-nine subjects in the Youngstown sample provided no information about financial status.

sponded affirmatively, then they were asked: "Was this retirement because of a plant closing or mass layoff?" This question was necessary because some workers were forced to retire because of age. Only those workers responding "yes" to this last question were classified as forced early retirees. All other steelworkers who were retired, but not through forced early retirement, were classified as regular retirees.

Forced early retirees were originally laid off and retired between the years 1977 and 1980 from Youngstown Sheet and Tube, Jones and Laughlin, and US Steel. During these years companies were offering workers retirement options if they met age and seniority requirements. Respondent interviews occurred for 11 years (1987) following the closings. By implication, then, forced early retirees were at least 50 years of age, but not older than 62 years, the earliest age of eligibility for social security retirement benefits, when originally laid off. By fixing the initial age for interview eligibility at 62 years, the sample includes all of those who were eligible for the early retirement forced upon them.

Sample Validity

To assess its validity, the demographic characteristics of the entire sample were compared with 1980 census data and other studies. With respect to age, race, sex, and federal poverty status, respondent characteristics closely matched those of the census (Table 1). The sample appears representative of elderly people living independently in Youngstown.

Table 2. Analysis of Variance for Health Status by Retirement Groups (mean scores*)

Health Indicators	Steelworker Forced Retirement	Steelworker Regular Retirement	Nonsteelworker Retirement	Total	F Ratio	P Value
Determination of Need	3.36	1.80	3.17	2.80	2.110	.123
Symptom or problem	2.63	2.46	2.84	2.69	0.817	.443
Perceived health	1.43	1.44	1.39	1.41	0.317	.729

*Those scoring 8 or less have no significant impairment or need.

Major Variables

Health status. This dependent variable was measured in three ways: (1) Perceived health status, quantifying respondents' own view of their physical well-being⁹; (2) functional status, measuring how well respondents perform tasks associated with activities of daily living (ADL)¹⁰; this measurement was obtained by using the determination-of-need (DON) scale, which combines ADL and unmet needs, and is used in several states, including Illinois, Oklahoma, and Indiana, to allocate Medicaid home health services and nursing home subsidies¹¹; respondents scoring at least 28 qualify for services; those scoring between 9 to 27 are categorized as "at risk," that is, having an increased probability of requiring assistance; those scoring 8 or less are categorized as having no significant impairment or need^{4,5}; (3) a major "symptom or problem" checklist, although not exhaustive, capturing the respondent's major complaints.

Demographics. Race (white or black), above or below federal poverty line, living arrangement (living alone or with others), and age (62+ years) were measured. In addition, disability was measured on an index composed of the following questions: "Did you sustain any injuries

on the job in the past that are now bothering you?" "Did you contract any occupationally related illnesses or diseases in the past that are now bothering you?" and "Do you have any disabilities that would prevent you from working or would greatly limit the kind of work you could do?" Each question was followed by a series of open-ended questions so as to ascertain the nature of the disability. Respondents were also asked when they last worked for pay.

Analysis Strategy

Analysis of variance (ANOVA) was used to determine whether health status differed among retirement groups—forced, regular, and nonsteelworker retirees (Table 2). Health status might also be affected, however, by any or all of the demographics in the study. To determine how these demographics (covariates) affect health status, a multiple classification analysis was performed (Table 3). The multiple classification analysis first adjusts the measures of health status to take into account the effects of the demographic covariates, then reassesses the contribution of retirement groups (regression ap-

Table 3. Multiple Classification Analysis

Source of Variation	Determination of Need		Symptom or Problem		Perceived Health	
	F Ratio	P Value	F Ratio	P Value	F Ratio	P Value
All covariates	9.054	.001	16.874	.001	11.848	.001
Race	14.438	.001	9.247	.003	7.322	.007
Income	3.370	.067	2.408	.122	.072	.789
Living alone	1.370	.243	.103	.749	2.707	.101
Age	.009	.925	3.950	.048	3.297	.070
Disability	22.533	.001	75.062	.001	47.589	.001
Last worked	12.606	.001	10.475	.001	10.100	.002
Retirement factor	2.835	.060	2.154	.118	.591	.554
Explained variance	7.499	.000	13.194	.000	9.034	.000
Multiple <i>r</i>	.42		.52		.45	
Multiple <i>R</i> ²	.17		.27		.20	
Total cases	296		296		296	

Table 4. Selected Demographics by Retirement Groups

Demographics	Steelworker Forced Retirement (%)	Steelworker Regular Retirement (%)	Nonsteelworker Retirement (%)	Chi- square	P Value
White	65.5	67.0	87.9	21.661	.001
Above poverty	90.4	92.0	87.9	1.060	.589
Living alone	14.3	18.9	17.7	.0545	.762
Age (y)					
62-64	37.5	16.8	23.4	23.316	.007
65-70	39.3	21.1	33.7		
71-74	10.7	29.5	21.1		
75+	12.5	32.6	21.7		
Disabled	39.3	64.2	53.7	8.871	.012
When last worked (y)					
0-3	7.1	8.4	19.9	36.076	.001
4-8	51.8	21.1	36.8		
9-13	25.0	42.1	17.0		
14-18	10.7	15.8	17.0		
19+	5.4	12.6	9.4		

proach).¹² In other words, the analysis removes the effects of the covariates, leaving the simple effects of retirement.

Results

Health Status

The health status of retirees, including the forced early retirees, was excellent: retired workers scored low on the DON, had few medical symptoms or problems, and perceived themselves to be in excellent or good health (Table 2). It appears that being forced to retire early does not impair health over the long term.

Demographic Effects

Demographic differences among retirement groups were then examined (Table 4). Retirees from steel and other industries were dissimilar demographically. Steelworker retirees—both forced and regular—were more likely to be black than members of the control group. Unlike other industries, blacks were extensively recruited into the steel industry as cheap labor. Having prematurely lost their jobs, forced retirees were younger than either regular or other retirees. Forced retirees had a lower incidence of disability. Regular retirees were more disabled than either forced or nonsteelworker retirees. Regular retirees had also been out of the labor force much longer than either the forced or nonsteelworker retirees.

Retirees did not differ with respect to poverty or living arrangements. The low level of poverty among all retired groups is consistent with national trends, which have raised the income levels of the elderly. Steelworkers forced to retire early were not impoverished. More than four fifths of all retirees in the study lived with others.

Multivariate Analysis

Although forced early retirement did not appear to affect health, some groups were expected to fare worse than others. Multiple classification analysis was used to assess the extent to which some groups fared better or worse in retirement. Initially, variance attributed to demographic covariates—race, poverty status, living arrangement, age, disability, and last worked—were removed, and the relationship between retirement status and health status was examined (Table 3).

After the effects of the demographic covariates were removed, retirement status again failed to produce a statistically significant effect on any health status measure.

Demographic covariates were consistently better health status predictors than was retirement status. As expected, retirees who were disabled were in poorer health on all three measures in all groups. Disabled retirees were more likely to be dysfunctional and symptomatic and to perceive themselves to be in poorer health. Length of time out of the work force was the next most important predictor of poor health: the longer a retiree was out of the work force, the worse his health

status—holding age constant. Age was significant only in predicting greater symptoms of ill health. Finally, race was also statistically significant: blacks perceived themselves to be in poorer health on all three health status measures.

Discussion

Over the long term, the health of forced retirees may not be adversely affected by sudden job loss and unexpected retirement. In explaining the findings, two theories of retirement were considered. The crisis theory postulates that "retirement implies failure to perform, which reduces self-respect and status, which leads to further withdrawal from social participation, which leads to isolation, illness, and decline in happiness and life satisfaction."² The continuity theory postulates that retirement has become a legitimate and desirable role with opportunities for the continuation of other roles and development of new leisure roles, which provides a continuation of self-esteem and status.² The continuity theory seems to best explain steelworker behavior. The health of forced early retirees, like that of the population generally, is affected by race, age, and disability, not by retirement status.

Other factors should also be considered. First, some forced early retirees may have suffered ill health shortly after retirement, but subsequently recovered. If they had, the effects were either mild or short-lived. Other studies conducted on retired steelworkers 1, 2, and 8 years following the closing of Youngstown Sheet and Tube suggested that the effects were mild.⁵ Second, even if minorities, older workers, and the disabled population were not forced to retire, they likely would have suffered poorer health. These groups are usually more at risk than others.¹³

Third, the following criticism could be made: early retirees in poor health may have died or been institutionalized; therefore, the health effects of the closing are masked because only healthy people remain. Lacking this information is a potential disadvantage of cross-sectional research, which does not track people over time. Early retirees are not atypical when compared with other retirees. In a separate longitudinal study of laid-off steelworkers from Youngstown Sheet and Tube, conducted from 1977 to 1985, retired steelworkers were not found to have fared worse than others. In fact, on a variety of sociopsychological measures, they actually were comparable to the reemployed. Even assuming that those forced

early retirees in ill health did drop out of the community setting, they must have done so at the same rate as the regular and other retirees; their health status was identical. To argue otherwise would be to suggest that the forced early retirees were in better health than others as they retired, an unlikely proposition. Only a longitudinal study designed to measure health status before and then after a plant closing can ultimately resolve the issue.

The most compelling explanation for the lack of adverse health effects in early retirement is that steelworkers were not poor as a group and they were apparently supported by other household members (ie, they were not living alone).¹⁴ If study results are representative, health care systems need not develop special programs (eg, outreach, screening, or treatments) for workers suddenly forced out of the labor force. Of course, special programs for at-risk groups—poor, minorities, and disabled—should be pursued, but not simply because of forced retirement.

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