

UPDATE OF THE 1973 EXACT MATCH

Bert Kestenbaum, Social Security Administration

The 1973 Exact Match project extracted records from the Social Security Administration's administrative files of earnings and benefits data for adults who were in the March 1973 Current Population Survey. The Exact Match file has met many needs of not only the sponsoring Federal agencies, but, because it was released for public use, of a large community of users doing research both related to the Social Security program and of a non-programmatic nature [1]. A number of papers describing the scope, methods, and products of the Exact Match were presented in past years at these meetings.

Recently we repeated the process of extracting administrative records of earnings and benefits for the same March 1973 Current Population Survey sample. One reason for the update is, quite simply, that the earlier information is becoming dated. Another is to enable the study of changes occurring since 1973. We are hopeful that the updated Exact Match file can also be released for public consumption.

For this paper we have chosen two applications of the updated Exact Match file. The first concerns the extent to which spouses' benefits under Social Security are targeted towards lower income couples. The second is an investigation of differential mortality according to educational attainment for men ages 65 and over.

THE SOCIAL SECURITY AGED-SPOUSE BENEFIT

Introduction

The Social Security benefit structure provides not only a benefit for a retiring worker, but an additional benefit for his aged spouse equal to one-half the primary benefit. However, the spouse benefit is payable only to the extent that it exceeds whatever primary benefit the spouse has earned herself.

Part of the theoretical basis for the aged-spouse benefit feature is the need to supplement low retirement benefits when two people are being supported by those benefits [2]. It would therefore be somewhat ironic if, in fact, aged-spouse benefits accrue largely to couples less in need of such supplementation, a situation which one would think may occur if higher-earning men are much more likely than lower-earning men to have a non-working wife who will qualify for the spouse benefit [3]. The identity of the principal beneficiaries of the aged-spouse benefit feature is an empirical question which can be resolved with the updated Exact Match.

To the aforementioned concern that among couples with high primary benefits the wife may be much less likely to work, another point can be added. Consider two women with identical earnings histories, one married to a high

earner, the other to a low earner: it may well be that only the wife of the high earner qualifies for the spouse benefit because only her husband's benefit is more than twice her own. This possibility suggests that some consideration might be given to the notion of a level spouse benefit, in place of the current principle which fixes the spouse benefit in proportion to the primary benefit. The opportunity for a working wife in a low-wage family to qualify for spouse-benefit supplementation is improved under the fixed-level scenario, while at the same time the spouse benefit for the wife of a high earner is not permitted to increase according to his earnings. Erasing the link between benefits and the earnings (and taxes) which support them does not seem so untoward in the context of aged-spouse benefits; these benefits are, after all, rooted in the "social adequacy" principle of the Social Security program, rather than the "individual equity" principle. With the updated Exact Match we will measure how much more effective a fixed-level spouse benefit would be in targeting benefits to those most in need.

Methodology

The administrative records systems maintained by the Social Security Administration cannot by themselves support empirical research into the experience of married couples under the program, because the identity of a beneficiary's spouse, and even the fact of marital status, are not required for program administration, and therefore are not accurately recorded in administrative records, unless the spouse is receiving a spouse benefit. The March 1973 Current Population Survey, through the medium of the Exact Match, provides the capability of identifying beneficiary couples.

Of course, some marriages have dissolved since 1973. This point touches on a fundamental limitation of the Exact Match update: only the administrative record data are current, not the demographic and socioeconomic information from the Current Population Survey. With respect to the marital status of beneficiaries, one approach we have thought of but have not yet implemented is to ascertain whether the persons married to each other in March 1973 currently receive their Social Security mail at the same address. For this paper we use the 1973 marital status information as if it were current, ignoring the possibility of divorce, on the grounds that divorce is an infrequent occurrence among older couples [4].

Our subsample for investigating the distribution of the aged-spouse benefit in mid-1983 thus consists of pairs of men and women married to each other in March 1973, as determined by the Current Population Survey, and both receiving old-age benefits in mid-1983, according to administrative records. To obtain a more homogeneous group we limit ourselves to couples in which the older member is not yet age 72 in mid-1983.

The updated Exact Match yielded 1,433 couples fitting this description, representing over 2 1/2 million beneficiary couples in the population. We ordered the sample couples according to the monthly primary benefits to which they are entitled. For a couple in which both members were entitled to primary benefits, we are dealing with the sum of those benefits. The benefit we used is the basic benefit payable upon retirement at age 65, called PIA, or Primary Insurance Amount, although the amount actually being paid would be smaller or larger if payment began before or after the month of attaining age 65. We divided the ordered distribution into quintiles, the quintiles being defined by the amounts: \$572, \$714, \$844, and \$1000.

Findings

To what extent do couples in the lower and higher positions in the distribution of primary benefits qualify for aged-spouse benefits? As can be seen in the upper panel of table 1, full spouse supplementation is virtually nonexistent in the two highest quintiles, implying that a couple can achieve a relatively high primary benefit only if both have worked substantially. By comparison, about 7 in 10 among couples in the two lowest quintiles are eligible for full spouse supplementation. With respect to the fraction not eligible for any spouse

supplementation, the highest quintile is by far the worst off, with 77 percent not eligible. The corresponding figure for the lowest quintile is only 26 percent. Actually, the next-to-lowest and middle quintiles do even better, with only 13 percent and 18 percent, respectively, with no aged-spouse benefit. We conclude that the aged-spouse benefit is indeed well-targeted upon couples most in need of supplementation.

A fixed-level aged-spouse benefit of \$300, with the stipulation that the spouse could receive no more than her husband's primary benefit, was determined, by trial and error, to involve approximately the same total outlay to the sample as the present 50-percent standard. The lower panel of table 1 shows that the differential in eligibility for spouse benefits by PIA quintile is even more pronounced under the fixed-level scenario. Moreover, the average aged-spouse benefit for the lowest quintile is substantially larger than the present-law average amount, and substantially smaller for the higher quintiles.

A related question is, how much more uniform is the distribution of Social Security benefits among aged couples when spouse benefits are included? The degree of uniformity in an income distribution is often measured by the gini index, representing the area between the 45° line drawn from the origin and the (Lorenz) curve obtained by plotting the cumulative percentage of income recipients (after ordering by income amount) along the abscissa and the cumulative percentage of aggregate income on the ordinate [5]. The index ranges from 0 for a uniform distribution to 1 for a most unequal distribution.

Partly because the Social Security benefit formula is weighted to the advantage of workers with lower earnings, the gini index

Table 1.—Aged-Spouse Benefits by Couples' Primary Benefit (Updated Exact Match)

Primary Benefits	Number of Couples (in Thousands)	Percent with No Spouse Benefit	With Spouse Benefit, Spouse Not Dually Entitled		With Spouse Benefit, Spouse Dually Entitled	
			Percent	Average Spouse Benefit	Percent	Average Spouse Benefit
CURRENT LAW						
Less than \$572	514	26%	69%	\$205	5%	\$28
\$572 - \$714	514	13	72	321	15	75
\$714 - \$844	512	18	38	382	44	112
\$845 - \$1,000	512	43	1	433	55	126
Over \$1,000	513	77	0	—	23	79
ALTERNATIVE OF FIXED LEVEL OF \$300						
Less than \$572	514	1%	69%	\$281	30%	\$83
\$572 - \$714	514	2	72	300	25	94
\$714 - \$844	512	12	38	300	50	102
\$845 - \$1,000	512	42	1	300	57	77
Over \$1,000	513	91	0	—	9	45

for the distribution of primary benefits alone is much smaller than for many other types of income. In our sample the index for primary benefits was 0.19, compared to values near 0.37 for total family income in recent years, as reported in the Current Population Survey [6]. When spouse benefits are now included, the gini index drops to 0.15, and under the fixed-level alternative even further, to 0.12.

MORTALITY BY EDUCATION: MEN
AGES 65 AND OLDER

Introduction

The major investigation in this country of mortality differentials by socioeconomic status, suggesting that reductions in mortality could be achieved through the betterment of socioeconomic conditions, was the "1960 Matched Records Study" linking approximately 60,000 death certificates to census schedules, reported on by Kitagawa and Hauser [7]. A major finding was that of a large differential for whites by educational level, the variable which Kitagawa and Hauser considered the best single indicator of socioeconomic status in their study, except for males ages 65 and over where the differential was quite small [8]. Kitagawa and Hauser did not put forth an explanation for the unimportance of education in the mortality of older men [9].

In a paper presented at these meetings in 1979 based on an earlier update of the Exact Match with mortality information through 1977, Rosen and Taubman reported finding a large differential in mortality by education for white men ages 65 and over [10]. Rosen-Taubman and Duleep have worked extensively with the Exact Match to study socioeconomic correlates of mortality [11], but my purpose here is merely to once again examine the evidence from the Exact Match on the extent of the mortality differential by education among older men, this time based on 10 years of experience and a somewhat better procedure for measuring the extent of mortality.

Methodology

While it is possible with the Exact Match to study mortality across the entire age spectrum, the data are best for older men. Older men are the most likely to be beneficiaries, and deaths of beneficiaries are better reported to and recorded in our administrative files than deaths of nonbeneficiaries. Actually, the reporting and recording of nonbeneficiary deaths are satisfactory when a death triggers the payment of either monthly survivor benefits to a widowed spouse, child, or parent, and/or the payment of a lump sum towards defraying the cost of interment (except that during 1978 and 1979 some lump-sum deaths were not recorded). It is for nonbeneficiary deaths for which no benefits are payable - for example, if the deceased

is not insured for Social Security purposes - that reporting is unsatisfactory, and, after 1977, no record of occurrence is made in the administrative files. Indeed, the number of deaths in this last category has recently increased due to 1981 legislation terminating the payment of lump-sum benefits to anyone other than a surviving child or spouse. The annual number of lump-sum awards is now around 800,000, compared to pre-legislation levels of as high as 1 1/2 million [12].

All white males in the Exact Match sample who reached age 65 before March 1983 (taken as the last month in the observation period) contribute exposure to our investigation. For each educational attainment category we allocated exposure appropriately among the age groups 65-69, 70-74, 75-79, 80-84, and 85+, and likewise the deaths, to derive age-specific death rates. We used these four categories for educational achievement: did not complete elementary school; completed elementary school, but did not attend high school; attended high school, but did not attend college; and attended college. Finally, using the 1980 U.S. population for direct standardization [13], we obtained standardized death rates for each educational category.

Findings

Standardized death rates at ages 65 and over for the four educational categories are as follows:

Educational Attainment	Standardized Death Rate
Didn't finish grade school	6.78%
Finished grade school, no high school	6.41
Some high school, no college	5.96
Some college	5.19
All categories, combined	6.14

The last entry, for all categories combined, compares fairly well to a death rate of 6.59% which we computed using 1978 vital statistics [14] and the 1980 census population standard, corroborating our expectation of satisfactory reporting and recording of deaths in Social Security administrative records for this age-sex-race group.

Our results clearly show that a marked mortality differential by education for white men beyond age 65 exists today. To square this finding with Kitagawa and Hauser's, we would guess that as the educational achievement norm rose during the last half-century, low educational attainment has become a more reliable index of low socioeconomic status. Kitagawa and Hauser's older men had their schooling at the turn of the century, when perhaps a paucity of formal schooling did not mean very much.

CONCLUSION

The two small studies presented in this paper on the distribution of the Social Security

aged-spouse benefit and the mortality differential by education among older men illustrate the capabilities of the updated Exact Match. The file could be of even greater value if data from other sources were matched in, but confidentiality considerations make difficult this type of undertaking. We are hopeful that at least what has been done can be made available in public-use form.

NOTES AND REFERENCES

- [1] A partial list appears in Kilss, Beth and Scheuren, Frederick J., "The 1973 CPS-IRS-SSA Exact Match Study," Social Security Bulletin, October 1978, pp. 14-22.
- [2] The 1937-38 Advisory Council on Social Security, in recommending that monthly benefits be extended to aged spouses, argued: "The inadequacy of the benefit payable during the early years of the program is more marked where the benefit must support not only the annuitant himself but also his wife." Quoted in Department of Health, Education, and Welfare, Social Security and the Changing Roles of Men and Women, February 1979.
- [3] This type of concern was voiced by Brittain, John, The Payroll Tax for Social Security, Brookings Institute, 1972, p. 174: "The relatively high return to couples who did not have the benefit of a wife's income may well be consistent with the objective of redistributing income in favor of those with greater need. However, this is by no means certain, since nonworking wives may tend to be concentrated among high-income couples."
- [4] According to National Center for Health Statistics, "Divorces and Divorce Rates," Vital and Health Statistics, Series 21, no. 29, 1978, table 8, the frequency of divorce in 1970 among married men ages 55-64 was about 4 per thousand annually and among married men ages 65 over about 2 per thousand.
- [5] Equivalently, the gini index is the quotient by mean income of the average income gain expected if each income recipient has the choice of being either himself or some other recipient selected at random.
- [6] U.S. Bureau of the Census, "Money Income of Households, Families and Persons in the United States: 1981," Current Population Reports, Series P-60, No. 137, 1983, table 17.
- [7] Kitagawa, Evelyn M. and Hauser, Philip M., Differential Mortality in the United States: A Study of Socioeconomic Epidemiology, 1973.
- [8] But the National Mortality Survey of 1962-63 found a large differential by education even for men ages 65 and over. Refer to National Center for Health Statistics, "Socioeconomic Characteristics of Deceased Person," Vital and Health Statistics, Series 22, No. 9, 1969, table 3.
- [9] We could theorize that the probability of death at age x in educational, category k is the sum of the terms $f(x)$ and $g(k)$, where the affect of education, $g(k)$, does not vary with age, yet the death rates of the various categories approach each other as x increases because $f(x)$ increases and becomes more and more the dominant term.
- [10] Rosen, Sherwin and Taubman, Paul, "Changes in the Impact of Education and Income on Mortality in the U.S.," 1979 American Statistical Association Proceedings, Social Statistics Section.
- [11] Especially see Duleep, Harriet, "The Socioeconomic Determinants of Mortality: The Role of Income," paper presented at the meetings of the Allied Social Science Associations, December 1983.
- [12] Social Security Administration, Annual Statistical Supplement to the Social Security Bulletin, 1982, p. 111.
- [13] Bureau of the Census, "General Population Characteristics," 1980 Census of Population, volume 1, PC 80-1-B1, 1983, table 43.
- [14] National Center for Health Statistics, Vital Statistics of the United States, 1978, volume II, section 5, Pub. No. PHS (81-1104), 1980. The year 1978 is midway through our 1973-83 observation period.