Education mortality differentials in metropolitan versus non-metropolitan areas.

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Abstract:

Aim: To determine if education mortality differentials vary in urban versus rural settings.

Background: Several studies have shown individuals with lower education levels lead shorter lives. Both educational attainment and mortality rates are different in metropolitan versus nonmetropolitan areas. It is unknown if education mortality differentials vary in metropolitan versus nonmetropolitan settings.

Methods: I constructed life tables and calculated mortality rates using Multiple Cause of Death data from the National Center for Health Statistics for 2000. I obtained population estimates via the U. S. Census. I did not stratify population estimates for education for those under the age of 25.

Results: The difference in mortality between those with greater than 12 years of education and those with less than 11 years is approximately the same in metropolitan and nonmetropolitan areas for both males and females. However, in metropolitan areas, those who achieve exactly 12 years of education have a life expectancy advantage of only 2 years for females and 0 years for males. In nonmetropolitan areas, the difference is greater (4 years for females and 2 years for males).

Conclusions: Completion of 12 years of schooling, generally equivalent to achieving a high school diploma, may not provide mortality advantages in metropolitan areas.

Introduction:

Although the United States has enjoyed more than a century of gains in life expectancy, those gains have not been experienced equally by all groups (Olshansky, Antonucci et al. 2012). Differences in mortality by education have been established in multiple studies throughout the literature in both the U.S. and abroad (Crimmins and Saito 2001; Muller 2002; Molla, Madans et al. 2004; Olshansky, Antonucci et al. 2012). Specifically, it has been established that those with less education, especially with less than a high school diploma, have shorter lives than their better educated counterparts (Crimmins and Saito 2001; Muller 2002; Molla, Madans et al. 2004; Olshansky, Antonucci et al. 2012). Moreover, several studies have found that the gap in life expectancy between high and low educated Americans is widening (Crimmins and Saito 2001; Olshansky, Antonucci et al. 2012).

However, no study to my knowledge has examined whether the gap in life expectancy between the well and less educated is larger in metropolitan versus nonmetropolitan areas. Education is thought to be a marker of socioeconomic status (SES), and SES has been linked to a variety of negative health outcomes (1999). Nonmetropolitan areas have lower educational attainment than metropolitan areas (Soo-yong Byun 2010). They are also more likely to have a higher proportion of jobs that do not require a higher education (Tickamyer and Duncan 1990). Moreover, outmigration of well-educated young people may also be a concern in rural areas (Tickamyer and Duncan 1990). It is possible income inequality and a lack of jobs for low-level workers may drive higher rates of mortality in those with less than a high school education in metropolitan areas compared to those in non-metropolitan areas. Moreover, “brain drain” in

rural areas may mean well-educated people who are left behind don't enjoy as many health benefits as those who live in metropolitan areas. If this is true, we would expect to see the gap in mortality between those with less than a high school education and those with a high school diploma or higher to be greater in metropolitan areas than in nonmetropolitan areas. This study aims to examine whether life expectancy gaps by education differ in nonmetropolitan versus metropolitan areas.

Background:

Educational achievement trends

Educational achievement among Americans has changed drastically over the last 40 years, and varies dramatically by cohort (Crimmins and Saito 2001). For example, though high school completion reached its peak in the 1970's and has declined more recently, people under age 35 are far more likely to have achieved high school and college graduation than elderly people (Heckman and LaFontaine 2010). However, the increase in educational attainment was not the same in metropolitan and nonmetropolitan areas, with the latter experiencing increases in high school and college completion rates more slowly than the former (Roscigno and Crowle 2001; Soo-yong Byun 2010). The percent of the population that has completed high school or its equivalency in 2011 was 86.1% in metropolitan areas and 82.8% in nonmetropolitan areas (Census 2011).

However, there is some evidence the gap may narrow in the future. Currently, while nonmetropolitan youth are still less likely than their metropolitan counterparts to go onto postsecondary education, they are more likely to do so than their parents (Soo-yong Byun 2010). Moreover, their high school and GED completion rates are more similar to students in metropolitan areas than in the past (Soo-yong Byun 2010). It is important to note therefore, that life tables and current mortality rates calculated may not reflect mortality conditions of the future, as better-educated cohorts age closer to the average age at death.

Education and health

The health benefits of education appear to generally increase with each level of education achieved (1999; Crimmins and Saito 2001; Olshansky, Antonucci et al. 2012). One interesting exception is the health of those who achieve a general equivalency diploma, who have been shown to have health outcomes similar to drop-outs or worse than high school graduates (Ou 2008; Zajacova 2012; Zajacova and Everett 2013). The biological mechanism by which lower education leads to greater mortality is unknown, but several possibilities exist. Lower educational achievement has been linked to a variety of risk factors for poor health, particularly coronary heart disease, such as smoking, lack of exercise, and social isolation (Matthews, Kelsey et al. 1989; Kubzansky, Berkman et al. 1998). Human capital theory posits education can lead to better health because it allows one to acquire cognitive resources (such as specialized skills that are desired by employers) and noncognitive psychological resources (self-esteem and respect for authority), and one study found cognitive resources were an important mediator in the relationship between education and health (Herd 2010). Higher

education levels also generally lead to higher levels of income, and affluence has been linked to better health outcomes and lower rates of mortality (Lynch, Kaplan et al. 1998; Muller 2002; Herd, Goesling et al. 2007). However, education has been found to be a predictor of health independent of income (Herd, Goesling et al. 2007) and income inequality (Muller 2002). Finally, because educational transitions are associated with childhood and adolescent health, health selection may lead frail individuals to fail to attain higher levels of education, at least partially driving the association between education and mortality.

Methods:

For this analysis, I created standard complete life tables to determine life expectancy for 12 groups: rural females and males with less than 12 years of schooling; exactly 12 years of schooling; and more than 12 years of schooling; and urban females and males with less than 12 years of schooling; exactly 12 years of schooling; and more than 12 years of schooling. The life tables consisted of 19 age groups: under 1, five-year-age intervals for those 1-85, and 85+.

I also compared mortality rates in metropolitan versus non-metropolitan areas by age, educational status, and sex. To account for age structure differences in metropolitan and non-metropolitan areas, I adjusted by average age structure. For each age interval, sex, and educational status, I calculated mortality rate ratios for those in metropolitan versus non-metropolitan areas.

Mortality and population estimates

I obtained death data from the Multiple Cause of Death (MCD) public use data file, which is maintained by the National Center of Health Statistics and contains information from every death certificate in the United States. After 1990, states began reporting educational attainment on death certificates. I chose to examine data from 2000 for several reasons. First, education reporting was not consistent for a majority of states until the late 90's. Second, seventeen states changed the way they coded education data on their death certificates (going from a year-based system to a degree-based system) after 2003. These differing reporting practices have been shown to produce different life expectancies after stratification by education because decedents answer differently when asked what the highest degree obtained was for the deceased rather than the highest year of schooling completed (Rostron BL 2010). Reporting across states after 2003 therefore may not be consistent, which may bias results as some states have higher concentrations of metropolitan dwellers than others. Moreover, the MCD public use data file does not contain geographic identifiers after 2005. Finally, the MCD does not contain population estimates. I chose 2000 because I was able to use long form United States Census data to determine the population at risk for death in each education category. The long form Census is a 5% weighted sample of the United States population on April 1, 2000, and includes questions not asked on the short form, such as educational attainment.

Education status

In this study, education is categorized as those with 11 or fewer years of formal schooling, those with exactly 12 years of formal schooling, and those with more than 12 years

of formal schooling. In the MCD data, degree obtained is not available. It is therefore impossible to know whether those with exactly 12 years of education failed to graduate from high school and whether those with less than 12 years of formal schooling may have been able to obtain a general equivalency diploma (GED). In the Census data, degree obtained is available. I classified everyone who had completed grade 12 or was a high school graduate or was a GED holder as exactly 12 years of education. However, in the Census data, it is not clear whether GED holders finished 12 years of schooling, so it is possible some GED holders may be classified differently in the MCD data than the Census data. The Census data does not separate GED holders from high school graduates. Finally, because the majority (though not all) people have completed their formal education by age 25, I only stratified by education after this age.

Metropolitan status

Both MCD and Census data contain information on metropolitan status. A metropolitan area "is an area consisting of a large population center and adjacent communities (usually counties) that have a high degree of economic and social interaction with that center. Metropolitan areas often cross state lines. Some metropolitan areas contain more than one central city (Center)." For this analysis, I created a binary variable for metropolitan status, where both urban and suburban areas are grouped together and compared to non-metropolitan areas. I chose metropolitan status for a few reasons. First, metropolitan area may be a proxy for labor market (Molloy, Smith et al. 2011), and the association between higher mortality and low educational attainment may be at least partially attributable to income and employment opportunities (Crimmins and Saito 2001; Muller 2002; Olshansky, Antonucci et al.

2012). Moreover, the US Census Bureau defines an urban area as cities and incorporated places with 2,500 residents or more (Center). I felt this measure would capture too many small towns with no economic ties to larger cities.

Missing information

Three states (Georgia, Kentucky, Rhode Island, and South Dakota) did not report educational data for more than 80% of death certificates and were therefore excluded from this analysis. Approximately 3.5% of the remaining deaths (n=81,079) did not list educational status. I calculated the percentage of each education category by sex, age, and metropolitan status among deaths that listed educational attainment and then distributed the deaths missing education status accordingly. All death certificates listed metropolitan status. However, MCD contained a small number of deaths 3,768 (0.16% of the dataset) to decedents who expired while living abroad. I excluded these deaths. The Census education data was complete. However, the metropolitan status of 1,031,438 (7.71%) respondents was classified as unknown. I calculated percentage of metropolitan status by sex, age, education level, and state among those with metropolitan status data available and then distributed the population missing metropolitan status accordingly.

Results:

I found that regardless of education level, women had greater longevity than men and those in nonmetropolitan areas lived longer than those in metropolitan areas. Having a low education leads to a lower life expectancy compared to those with higher education levels in both metropolitan and nonmetropolitan areas (Figure 1). Females with at least some college

had a life expectancy of 84 years in non-metropolitan areas, while those with 11 years or less had a life expectancy of 77. Rural males with less than 11 years of education had five years lower life expectancy than females with the same level of education and 8 years less than non-metropolitan males with the highest level of education. The group with the lowest life expectancy (70.55 years) in this study was metropolitan males with exactly 12 years of education. However, metropolitan males with less than 11 years of education had a very similar life expectancy (71.04 years).

However, contrary to my original hypothesis, except for the difference between females with less than 11 years of education and those with more than 12, the gap was larger in non-metropolitan areas than metropolitan areas for all other groups (Figure 2). The gap between those with less than 12 years of education and those with at least some college was one year bigger in metropolitan areas for females, but one year smaller in non-metropolitan areas for males.

The difference in mortality outcomes for those who had completed 12 years of school and those who had not did differ more significantly by metropolitan status. The gap between those who had completed exactly 12 years and those who had not was 4 years in non-metropolitan areas for females and only 2 years in metropolitan areas. For males, the mortality advantage of completing 12 years of schooling disappeared entirely in metropolitan areas, but added 2 years of life expectancy in non-metropolitan areas.

When comparing age-standardized mortality rates by education status, mortality is slightly higher for infants in metropolitan areas, but then is lower in metropolitan under age 25

for both sex and all education levels. The trend then reverses for the working-aged years, where metropolitan dwellers have higher mortality rates for each education level in females and most educational levels in men. The mortality rate ratios comparing metropolitan to non-metropolitan areas are highest for working age adults with exactly 12 years of schooling. Mortality rate ratios comparing metropolitan to non-metropolitan areas are more similar for those with more than 12 years of education and those with 12 years of education in females. For males, those with more than 12 years have slightly higher mortality rate ratios than those with less than 12 years when comparing metropolitan to non-metropolitan areas.

Conclusion and discussion

Results show mortality disparities exist between those who have completed at least 12 years of education compared to those who have not. However, in contrast to my original hypothesis, the gap appears bigger in non-metropolitan areas rather than metropolitan ones. In metropolitan areas, the mortality advantage enjoyed by those who complete exactly 12 years of school completely disappears in males and greatly attenuates in females. This suggests completing 12 years of schooling, generally the amount of time to achieve a high school diploma is not as valuable in terms of health advantage in metropolitan areas. There are several possible explanations for this. First, proportions of high school and college graduates are higher in metropolitan areas (Soo-yong Byun 2010). A recent paper by Beaudry et al. posits than since 2000, the demand for highly educated workers has not kept pace with graduation rates for those with advanced degrees (Beaudry, Green et al. 2013). As a consequence, high-skilled

workers take positions that require less education, pushing lower-skilled workers down the "occupational ladder," at times out of the workforce altogether. It's possible that in urban areas, where high-skill, high education workers are more plentiful, this process is even more acute.

The current study had several strengths. This study is the first to examine education and mortality in metropolitan versus nonmetropolitan areas. Deaths were obtained via the Multiple Cause of Death (MCD), which records every death in the United States, and educational attainment is available for the majority of decedents and metropolitan status is available for all decedents. Population counts were obtained via the United States, which samples the entire population and has been found to have generally reliable education reporting (Olshansky, Antonucci et al. 2012). However, this study also had several limitations. First, missing data for metropolitan status made up a substantial proportion of the Census dataset and 3.5% of deaths did not list education status, even after three non-reporting states were excluded. Second, general equivalence diploma holders (GED) may have been misclassified in death counts. This may be problematic because GED holders have different mortality trajectories than both high school dropouts and high school graduates (Zajacova 2012; Zajacova and Everett 2013). However, rural and nonrural areas have roughly similar prevalence of GED holders (Soo-yong Byun 2010), so this misclassification is unlikely to have biased the results.

In this analysis, I was unable to determine how long a decedent lived in metropolitan area, so it is impossible to measure the effect of migration. One concern is that people may move shortly before death. For example, it is possible someone may have spent their entire life

in a metropolitan area and then retired to a non-metropolitan area or vice versa. However, for the majority of decedents, this probably was not the case. Among lifetime migrants, the group with the highest mortality levels (65+) has the lowest levels of recent migration, defined as a move within the last five years (Molloy, Smith et al. 2011). Moreover, rural to urban or suburban migration has been stagnant since 1970, with the proportion of people living in non-rural areas (75%) holding more or less steady since for the last 40 years (Molloy, Smith et al. 2011). In fact, migration in the United States has been on the decline since 1980, well before the current housing crisis, and the United States may be experiencing a decline in internal migration greater than any recorded since 1900 (Molloy, Smith et al. 2011).

Recent migration is unlikely to be a driver in any educational mortality differentials. However, historical migratory patterns may play a larger role. In the middle of the last century, Bachmura wrote about the "brain drain" phenomena in which bright young people from farms poured into cities looking for greater economic opportunity (Bachmura 1959). Of course, many of those motivated young people of yesterday are now at the ages at which death is most common. So, it is possible, in the 1950's the most ambitious and healthy young people left non-metropolitan areas to obtain higher degrees. But if this were the case, we would expect to see lower mortality rates in metropolitan areas for those with a high school diploma or some college, when in fact, the opposite is true.

The results from this paper may have a few policy implications. Mortality differentials by education are a persistent and pernicious problem. If in metropolitan areas those who receive 12 years of education have little or no mortality reduction than those who receive 11 years or

fewer, it may be worthwhile to invest more heavily in postsecondary education for the most vulnerable students and to encourage a lifelong learning model, that allows adult students with a high school diploma to gain marketable skills. Moreover, if those with higher education are "crowding out" those with a high school education in the job market, it may be worthwhile to focus on building job opportunities for those on with the lowest levels of education in metropolitan areas. In rural areas, investing in high school completion programs may be a higher priority and may provide more "bang for buck" when reducing mortality differentials.

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PRELIMINARY AND INCOMPLETE. DO NOT CIRCULATE.

Table 1. Life table for rural females with 11 or fewer years of formal education, United States 2000.

Age	n	${}_nD_x$	${}_nPY_x$	${}_na_x$	${}_nM_x$	SE(${}_nM_x$)	${}_nq_x$	SE(${}_nq_x$)	l_x	SE(l_x)	${}_nd_x$	${}_nL_x$	T_x	e_x	SE(e_x)
0	1	2,156	365,672	0.070	0.005896	0.000127	0.005864	0.000126	100,000	0	586	99,454	7,655,766	**76.5577**	0.0502
1-4	4	417	75,943	1.513	0.000275	0.000013	0.001097	0.000054	99,414	13	109	397,383	7,556,312	76.0088	0.0495
5-9	5	329	106,235	2.500	0.000155	0.000009	0.000774	0.000043	99,305	14	77	496,330	7,158,929	72.0907	0.0494
10-14	5	361	114,733	2.500	0.000157	0.000008	0.000786	0.000041	99,228	14	78	495,943	6,662,598	67.1446	0.0493
15-19	5	1,016	116,086	2.500	0.000438	0.000014	0.002186	0.000068	99,150	15	217	495,206	6,166,655	62.1954	0.0493
20-24	5	899	1,747,001	2.500	0.000515	0.000017	0.002570	0.000086	98,933	16	254	494,029	5,671,449	57.3262	0.0493
25-29	5	228	255,063	2.500	0.000894	0.000059	0.004462	0.000295	98,679	18	440	492,293	5,177,420	52.4674	0.0492
30-34	5	289	263,627	2.500	0.001097	0.000064	0.005468	0.000321	98,238	34	537	489,849	4,685,127	47.6914	0.0471
35-39	5	497	326,391	2.500	0.001522	0.000068	0.007582	0.000339	97,701	46	741	486,654	4,195,278	42.9399	0.0450
40-44	5	835	326,958	2.500	0.002554	0.000088	0.012688	0.000436	96,960	57	1,230	481,726	3,708,624	38.2489	0.0432
45-49	5	965	272,713	2.500	0.003540	0.000113	0.017543	0.000560	95,730	70	1,679	474,452	3,226,898	33.7083	0.0407
50-54	5	1,554	281,111	2.500	0.005528	0.000138	0.027265	0.000682	94,051	87	2,564	463,843	2,752,446	29.2655	0.0373
55-59	5	2,496	310,386	2.500	0.008041	0.000158	0.039411	0.000773	91,486	106	3,606	448,418	2,288,603	25.0158	0.0331
60-64	5	3,915	327,650	2.500	0.011950	0.000185	0.058015	0.000900	87,881	124	5,098	426,658	1,840,185	20.9395	0.0288
65-69	5	5,945	370,809	2.500	0.016033	0.000200	0.077074	0.000960	82,782	141	6,380	397,961	1,413,526	17.0752	0.0242
70-74	5	9,352	368,934	2.500	0.025349	0.000246	0.119192	0.001157	76,402	153	9,107	359,244	1,015,565	13.2924	0.0205
75-79	5	13,720	320,307	2.500	0.042835	0.000328	0.193457	0.001483	67,296	161	13,019	303,931	656,321	9.7528	0.0168
80-84	5	18,627	221,459	2.500	0.084111	0.000498	0.347485	0.002057	54,277	164	18,860	224,233	352,391	6.4925	0.0126
85+	5	49,326	178,492	0.000	0.276349	-NA-	1.000000	-NA-	35,416	-NA-	35,416	128,158	128,158	3.6186	-NA-

PRELIMINARY AND INCOMPLETE. DO NOT CIRCULATE.

Table 2. Life table for rural females with 12 years of formal education, United States 2000.

Age	n	${}_nD_x$	${}_nPY_x$	${}_na_x$	${}_nM_x$	SE(${}_nM_x$)	${}_nq_x$	SE(${}_nq_x$)	l_x	SE(l_x)	${}_nd_x$	${}_nL_x$	T_x	e_x	SE(e_x)
0	1	2,156	365,672	0.070	0.005896	0.000127	0.005864	0.000126	100,000	0	586	99,454	8,077,484	**80.7748**	0.0383
1-4	4	417	1,518,870	1.513	0.000275	0.000013	0.001097	0.000054	99,414	13	109	397,383	7,978,030	80.2509	0.0371
5-9	5	329	2,124,693	2.500	0.000155	0.000009	0.000774	0.000043	99,305	14	77	496,330	7,580,647	76.3374	0.0369
10-14	5	361	2,294,659	2.500	0.000157	0.000008	0.000786	0.000041	99,228	14	78	495,943	7,084,316	71.3946	0.0368
15-19	5	1,016	2,321,730	2.500	0.000438	0.000014	0.002186	0.000068	99,150	15	217	495,206	6,588,373	66.4488	0.0368
20-24	5	899	1,747,001	2.500	0.000515	0.000017	0.002570	0.000086	98,933	16	254	494,029	6,093,167	61.5889	0.0366
25-29	5	453	574,262	2.500	0.000789	0.000037	0.003938	0.000185	98,679	18	389	492,422	5,599,138	56.7411	0.0363
30-34	5	624	672,776	2.500	0.000927	0.000037	0.004624	0.000185	98,290	26	455	490,314	5,106,716	51.9556	0.0350
35-39	5	1,163	873,493	2.500	0.001331	0.000039	0.006634	0.000194	97,836	31	649	487,555	4,616,402	47.1853	0.0340
40-44	5	1,702	923,755	2.500	0.001842	0.000044	0.009169	0.000221	97,187	37	891	483,705	4,128,846	42.4837	0.0330
45-49	5	2,233	819,459	2.500	0.002725	0.000057	0.013531	0.000284	96,295	42	1,303	478,220	3,645,141	37.8537	0.0321
50-54	5	2,894	771,369	2.500	0.003752	0.000069	0.018587	0.000342	94,992	50	1,766	470,548	3,166,922	33.3387	0.0309
55-59	5	4,009	713,056	2.500	0.005623	0.000088	0.027723	0.000432	93,227	59	2,585	459,673	2,696,374	28.9227	0.0295
60-64	5	5,652	652,653	2.500	0.008660	0.000113	0.042383	0.000552	90,642	70	3,842	443,607	2,236,701	24.6761	0.0278
65-69	5	7,684	572,996	2.500	0.013411	0.000148	0.064880	0.000716	86,801	83	5,632	419,924	1,793,094	20.6576	0.0258
70-74	5	10,738	546,374	2.500	0.019653	0.000181	0.093663	0.000861	81,169	100	7,603	386,839	1,373,170	16.9174	0.0232
75-79	5	14,275	434,379	2.500	0.032863	0.000253	0.151840	0.001170	73,566	114	11,170	339,906	986,331	13.4074	0.0207
80-84	5	15,958	298,046	2.500	0.053543	0.000370	0.236112	0.001634	62,396	130	14,732	275,150	646,425	10.3600	0.0168
85+	5	29,908	232,967	0.000	0.128378	-NA-	1.000000	-NA-	47,664	-NA-	47,664	371,276	371,276	7.7895	-NA-

PRELIMINARY AND INCOMPLETE. DO NOT CIRCULATE.

Table 3. Life table for rural females with more than 12 years of formal education, United States 2000.

Age	n	${}_nD_x$	${}_nPY_x$	${}_na_x$	${}_nM_x$	SE(${}_nM_x$)	${}_nq_x$	SE(${}_nq_x$)	l_x	SE(l_x)	${}_nd_x$	${}_nL_x$	T_x	e_x	SE(e_x)
0	1	2,156	365,672	0.070	0.005896	0.000127	0.005864	0.000126	100,000	0	586	99,454	8,416,865	**84.1686**	0.0397
1-4	4	417	1,518,870	1.513	0.000275	0.000013	0.001097	0.000054	99,414	13	109	397,383	8,317,410	83.6647	0.0385
5-9	5	329	2,124,693	2.500	0.000155	0.000009	0.000774	0.000043	99,305	14	77	496,330	7,920,027	79.7550	0.0383
10-14	5	361	2,294,659	2.500	0.000157	0.000008	0.000786	0.000041	99,228	14	78	495,943	7,423,697	74.8148	0.0381
15-19	5	1,016	2,321,730	2.500	0.000438	0.000014	0.002186	0.000068	99,150	15	217	495,206	6,927,753	69.8717	0.0381
20-24	5	899	1,747,001	2.500	0.000515	0.000017	0.002570	0.000086	98,933	16	254	494,029	6,432,547	65.0193	0.0379
25-29	5	291	854,085	2.500	0.000341	0.000020	0.001704	0.000100	98,679	18	168	492,973	5,938,518	60.1803	0.0376
30-34	5	407	913,693	2.500	0.000445	0.000022	0.002224	0.000110	98,511	21	219	492,005	5,445,545	55.2788	0.0372
35-39	5	676	1,058,392	2.500	0.000639	0.000025	0.003189	0.000122	98,292	23	313	490,674	4,953,539	50.3964	0.0368
40-44	5	1,025	1,111,330	2.500	0.000922	0.000029	0.004600	0.000143	97,978	26	451	488,763	4,462,866	45.5497	0.0365
45-49	5	1,549	1,082,119	2.500	0.001432	0.000036	0.007133	0.000181	97,527	30	696	485,898	3,974,102	40.7486	0.0361
50-54	5	2,001	899,230	2.500	0.002225	0.000049	0.011066	0.000246	96,832	34	1,071	481,480	3,488,205	36.0234	0.0357
55-59	5	2,158	631,971	2.500	0.003415	0.000073	0.016932	0.000361	95,760	41	1,621	474,748	3,006,725	31.3985	0.0351
60-64	5	2,358	461,487	2.500	0.005109	0.000104	0.025224	0.000513	94,139	53	2,375	464,758	2,531,977	26.8962	0.0340
65-69	5	3,063	356,291	2.500	0.008597	0.000152	0.042080	0.000744	91,764	71	3,861	449,168	2,067,220	22.5275	0.0323
70-74	5	4,347	324,006	2.500	0.013416	0.000197	0.064901	0.000952	87,903	96	5,705	425,251	1,618,052	18.4073	0.0295
75-79	5	5,951	254,921	2.500	0.023344	0.000285	0.110284	0.001348	82,198	123	9,065	388,326	1,192,801	14.5113	0.0264
80-84	5	7,300	169,666	2.500	0.043025	0.000452	0.194233	0.002041	73,133	156	14,205	330,151	804,475	11.0002	0.0215
85+	5	20,551	165,421	0.000	0.124236	-NA-	1.000000	-NA-	58,928	-NA-	58,928	474,323	474,323	8.0492	-NA-

PRELIMINARY AND INCOMPLETE. DO NOT CIRCULATE.

Table 4. Life table for rural males with 11 or fewer years of formal education, United States 2000.

Age	n	${}_nD_x$	${}_nPY_x$	${}_na_x$	${}_nM_x$	SE(${}_nM_x$)	${}_nq_x$	SE(${}_nq_x$)	l_x	SE(l_x)	${}_nd_x$	${}_nL_x$	T_x	e_x	SE(e_x)
0	1	2,753	365,672	0.065	0.007529	0.000143	0.007476	0.000142	100,000	0	748	99,301	7,166,485	**71.6648**	0.0617
1-4	4	575	1,518,870	1.630	0.000379	0.000016	0.001513	0.000063	99,252	14	150	396,654	7,067,183	71.2042	0.0613
5-9	5	462	2,124,693	2.500	0.000217	0.000010	0.001087	0.000051	99,102	15	108	495,242	6,670,530	67.3096	0.0612
10-14	5	583	2,294,659	2.500	0.000254	0.000011	0.001270	0.000053	98,995	16	126	494,659	6,175,288	62.3801	0.0612
15-19	5	2,352	2,321,730	2.500	0.001013	0.000021	0.005052	0.000104	98,869	17	500	493,096	5,680,629	57.4562	0.0612
20-24	5	2,646	1,747,001	2.500	0.001515	0.000029	0.007544	0.000146	98,369	20	742	489,991	5,187,534	52.7353	0.0612
25-29	5	638	255,063	2.500	0.002501	0.000098	0.012428	0.000489	97,627	24	1,213	485,103	4,697,542	48.1171	0.0613
30-34	5	798	263,627	2.500	0.003026	0.000106	0.015016	0.000528	96,414	53	1,448	478,450	4,212,440	43.6912	0.0577
35-39	5	1,236	326,391	2.500	0.003788	0.000107	0.018764	0.000529	94,966	73	1,782	470,376	3,733,990	39.3192	0.0541
40-44	5	1,747	326,958	2.500	0.005344	0.000126	0.026368	0.000622	93,184	88	2,457	459,778	3,263,614	35.0233	0.0513
45-49	5	2,136	272,713	2.500	0.007832	0.000166	0.038408	0.000815	90,727	103	3,485	444,924	2,803,836	30.9041	0.0481
50-54	5	2,805	281,111	2.500	0.009980	0.000184	0.048684	0.000897	87,242	124	4,247	425,594	2,358,912	27.0386	0.0434
55-59	5	4,439	310,386	2.500	0.014300	0.000207	0.069033	0.001000	82,995	141	5,729	400,652	1,933,318	23.2943	0.0386
60-64	5	6,356	327,650	2.500	0.019399	0.000232	0.092508	0.001105	77,266	156	7,148	368,460	1,532,666	19.8363	0.0338
65-69	5	9,317	370,809	2.500	0.025126	0.000244	0.118204	0.001150	70,118	165	8,288	329,870	1,164,206	16.6035	0.0290
70-74	5	14,260	368,934	2.500	0.038651	0.000294	0.176228	0.001339	61,830	166	10,896	281,909	834,336	13.4941	0.0255
75-79	5	16,815	320,307	2.500	0.052498	0.000355	0.232035	0.001568	50,934	160	11,818	225,123	552,427	10.8460	0.0220
80-84	5	17,991	221,459	2.500	0.081240	0.000493	0.337629	0.002049	39,115	147	13,206	162,560	327,305	8.3677	0.0181
85+	5	28,071	178,492	0.000	0.157267	-NA-	1.000000	-NA-	25,909	-NA-	25,909	164,744	164,744	6.3586	-NA-

PRELIMINARY AND INCOMPLETE. DO NOT CIRCULATE.

Table 5. Life table for rural males with exactly 12 years of formal education, United States 2000.

Age	n	${}_nD_x$	${}_nPY_x$	${}_na_x$	${}_nM_x$	SE(${}_nM_x$)	${}_nq_x$	SE(${}_nq_x$)	l_x	SE(l_x)	${}_nd_x$	${}_nL_x$	T_x	e_x	SE(e_x)
0	1	2,753	365,672	0.065	0.007529	0.000143	0.007476	0.000142	100,000	0	748	99,301	7,385,663	**73.8566**	0.0430
1-4	4	575	1,518,870	1.630	0.000379	0.000016	0.001513	0.000063	99,252	14	150	396,654	7,286,362	73.4124	0.0420
5-9	5	462	2,124,693	2.500	0.000217	0.000010	0.001087	0.000051	99,102	15	108	495,242	6,889,708	69.5212	0.0418
10-14	5	583	2,294,659	2.500	0.000254	0.000011	0.001270	0.000053	98,995	16	126	494,659	6,394,466	64.5941	0.0417
15-19	5	2,352	2,321,730	2.500	0.001013	0.000021	0.005052	0.000104	98,869	17	500	493,096	5,899,807	59.6730	0.0417
20-24	5	2,646	1,747,001	2.500	0.001515	0.000029	0.007544	0.000146	98,369	20	742	489,991	5,406,712	54.9634	0.0415
25-29	5	1,220	652,820	2.500	0.001869	0.000053	0.009303	0.000265	97,627	24	908	485,865	4,916,720	50.3622	0.0410
30-34	5	1,411	732,220	2.500	0.001927	0.000051	0.009587	0.000254	96,719	35	927	481,277	4,430,855	45.8116	0.0394
35-39	5	2,198	908,600	2.500	0.002419	0.000051	0.012024	0.000255	95,792	43	1,152	476,079	3,949,578	41.2309	0.0381
40-44	5	3,313	943,660	2.500	0.003510	0.000060	0.017399	0.000300	94,640	49	1,647	469,083	3,473,499	36.7023	0.0372
45-49	5	4,079	781,600	2.500	0.005218	0.000081	0.025755	0.000398	92,993	56	2,395	458,979	3,004,416	32.3079	0.0364
50-54	5	4,877	636,420	2.500	0.007663	0.000108	0.037596	0.000528	90,598	66	3,406	444,476	2,545,438	28.0959	0.0352
55-59	5	5,990	565,880	2.500	0.010586	0.000133	0.051565	0.000649	87,192	79	4,496	424,720	2,100,962	24.0958	0.0335
60-64	5	7,734	502,140	2.500	0.015402	0.000169	0.074156	0.000811	82,696	94	6,132	398,149	1,676,242	20.2699	0.0317
65-69	5	9,679	414,880	2.500	0.023331	0.000224	0.110224	0.001057	76,564	110	8,439	361,720	1,278,093	16.6932	0.0298
70-74	5	11,940	340,560	2.500	0.035059	0.000294	0.161167	0.001351	68,124	127	10,979	313,173	916,373	13.4515	0.0277
75-79	5	14,140	253,560	2.500	0.055767	0.000408	0.244717	0.001789	57,145	141	13,984	250,764	603,200	10.5556	0.0254
80-84	5	12,828	147,660	2.500	0.086874	0.000615	0.356865	0.002527	43,161	147	15,403	177,297	352,436	8.1657	0.0223
85+	5	14,033	88,540	0.000	0.158492	-NA-	1.000000	-NA-	27,758	-NA-	27,758	175,139	175,139	6.3095	-NA-

PRELIMINARY AND INCOMPLETE. DO NOT CIRCULATE.

Table 6. Life table for rural males with more than 12 years of formal education, United States 2000.

Age	n	${}_nD_x$	${}_nPY_x$	${}_na_x$	${}_nM_x$	SE(${}_nM_x$)	${}_nq_x$	SE(${}_nq_x$)	l_x	SE(l_x)	${}_nd_x$	${}_nL_x$	T_x	e_x	SE(e_x)
0	1	2,753	365,672	0.065	0.007529	0.000143	0.007476	0.000142	100,000	0	748	99,301	7,980,164	**79.8016**	0.0438
1-4	4	575	1,518,870	1.630	0.000379	0.000016	0.001513	0.000063	99,252	14	150	396,654	7,880,863	79.4022	0.0426
5-9	5	462	2,124,693	2.500	0.000217	0.000010	0.001087	0.000051	99,102	15	108	495,242	7,484,209	75.5201	0.0424
10-14	5	583	2,294,659	2.500	0.000254	0.000011	0.001270	0.000053	98,995	16	126	494,659	6,988,967	70.5995	0.0422
15-19	5	2,352	2,321,730	2.500	0.001013	0.000021	0.005052	0.000104	98,869	17	500	493,096	6,494,309	65.6861	0.0421
20-24	5	2,646	1,747,001	2.500	0.001515	0.000029	0.007544	0.000146	98,369	20	742	489,991	6,001,213	61.0069	0.0418
25-29	5	522	688,420	2.500	0.000758	0.000033	0.003782	0.000165	97,627	24	369	487,213	5,511,222	56.4517	0.0413
30-34	5	571	728,079	2.500	0.000784	0.000033	0.003911	0.000163	97,258	29	380	485,339	5,024,009	51.6565	0.0404
35-39	5	867	830,015	2.500	0.001044	0.000035	0.005207	0.000176	96,878	33	504	483,127	4,538,670	46.8495	0.0398
40-44	5	1,371	904,299	2.500	0.001516	0.000041	0.007552	0.000203	96,373	37	728	480,046	4,055,543	42.0817	0.0392
45-49	5	2,333	1,009,545	2.500	0.002311	0.000048	0.011489	0.000236	95,645	42	1,099	475,479	3,575,497	37.3829	0.0386
50-54	5	3,370	937,402	2.500	0.003595	0.000061	0.017816	0.000304	94,546	47	1,684	468,521	3,100,018	32.7883	0.0382
55-59	5	3,266	625,773	2.500	0.005219	0.000090	0.025759	0.000445	92,862	54	2,392	458,330	2,631,497	28.3377	0.0377
60-64	5	3,886	476,075	2.500	0.008163	0.000128	0.039999	0.000629	90,470	67	3,619	443,303	2,173,167	24.0209	0.0367
65-69	5	5,020	377,577	2.500	0.013297	0.000182	0.064344	0.000878	86,851	86	5,588	420,285	1,729,864	19.9176	0.0353
70-74	5	6,399	302,099	2.500	0.021183	0.000251	0.100588	0.001192	81,263	111	8,174	385,879	1,309,579	16.1153	0.0334
75-79	5	7,699	205,844	2.500	0.037404	0.000388	0.171026	0.001775	73,089	139	12,500	334,194	923,700	12.6380	0.0313
80-84	5	6,989	112,505	2.500	0.062125	0.000635	0.268868	0.002750	60,589	174	16,290	262,218	589,506	9.7296	0.0272
85+	5	8,831	65,245	0.000	0.135350	-NA-	1.000000	-NA-	44,298	-NA-	44,298	327,288	327,288	7.3883	-NA-

PRELIMINARY AND INCOMPLETE. DO NOT CIRCULATE.

Table 7. Life table for urban females with 11 years or fewer of formal education, United States 2000.

Age	n	${}_nD_x$	${}_nPY_x$	${}_na_x$	${}_nM_x$	SE(${}_nM_x$)	${}_nq_x$	SE(${}_nq_x$)	l_x	SE(l_x)	${}_nd_x$	${}_nL_x$	T_x	e_x	SE(e_x)
0	1	9,478	73,261	0.071	0.006469	0.000296	0.006430	0.000066	100,000	0	643	99,403	7,488,601	**74.8860**	0.0303
1-4	4	1,620	294,875	1.512	0.000275	0.000031	0.001098	0.000027	99,357	7	109	397,157	7,389,199	74.3702	0.0300
5-9	5	1,002	393,861	2.500	0.000127	0.000018	0.000636	0.000020	99,248	7	63	496,082	6,992,042	70.4503	0.0300
10-14	5	1,159	391,255	2.500	0.000148	0.000019	0.000740	0.000022	99,185	7	73	495,740	6,495,960	65.4935	0.0300
15-19	5	2,617	375,307	2.500	0.000349	0.000030	0.001742	0.000034	99,111	8	173	495,125	6,000,220	60.5402	0.0300
20-24	5	3,176	6,709,609	2.500	0.000473	0.000008	0.002364	0.000042	98,939	8	234	494,109	5,505,094	55.6414	0.0300
25-29	5	846	983,589	2.500	0.000861	0.000030	0.004293	0.000147	98,705	9	424	492,465	5,010,985	50.7674	0.0300
30-34	5	1,178	985,043	2.500	0.001196	0.000035	0.005962	0.000173	98,281	17	586	489,941	4,518,521	45.9755	0.0292
35-39	5	1,975	1,048,238	2.500	0.001884	0.000042	0.009374	0.000210	97,695	24	916	486,186	4,028,580	41.2362	0.0284
40-44	5	2,744	952,572	2.500	0.002881	0.000055	0.014301	0.000271	96,779	32	1,384	480,437	3,542,394	36.6028	0.0274
45-49	5	3,193	787,179	2.500	0.004056	0.000071	0.020077	0.000352	95,395	41	1,915	472,188	3,061,957	32.0976	0.0262
50-54	5	4,378	702,397	2.500	0.006233	0.000093	0.030687	0.000457	93,480	52	2,869	460,229	2,589,769	27.7040	0.0244
55-59	5	6,239	703,084	2.500	0.008873	0.000110	0.043404	0.000537	90,611	66	3,933	443,225	2,129,540	23.5019	0.0220
60-64	5	9,531	696,643	2.500	0.013681	0.000135	0.066142	0.000655	86,679	80	5,733	419,060	1,686,315	19.4548	0.0194
65-69	5	14,750	740,363	2.500	0.019923	0.000156	0.094889	0.000743	80,945	94	7,681	385,525	1,267,255	15.6557	0.0164
70-74	5	23,739	735,972	2.500	0.032255	0.000193	0.149243	0.000893	73,265	104	10,934	338,987	881,731	12.0349	0.0136
75-79	5	34,141	644,402	2.500	0.052980	0.000251	0.233919	0.001108	62,330	110	14,580	275,201	542,743	8.7075	0.0109
80-84	5	45,799	429,612	2.500	0.106606	0.000379	0.420864	0.001497	47,750	109	20,096	188,510	267,542	5.6030	0.0080
85+	5	123,303	352,390	0.000	0.349904	-NA-	1.000000	-NA-	27,654	-NA-	27,654	79,033	79,033	2.8579	-NA-

PRELIMINARY AND INCOMPLETE. DO NOT CIRCULATE.

Table 8. Life table for urban females with exactly 12 years of formal education, United States 2000.

Age	n	${}_nD_x$	${}_nPY_x$	${}_na_x$	${}_nM_x$	SE(${}_nM_x$)	${}_nq_x$	SE(${}_nq_x$)	l_x	SE(l_x)	${}_nd_x$	${}_nL_x$	T_x	e_x	SE(e_x)
0	1	9,478	1,465,214	0.071	0.006469	0.000066	0.006430	0.000066	100,000	0	643	99,403	7,724,396	**77.2440**	0.0220
1-4	4	1,620	5,897,503	1.512	0.000275	0.000007	0.001098	0.000027	99,357	7	109	397,157	7,624,993	76.7434	0.0216
5-9	5	1,002	7,877,218	2.500	0.000127	0.000004	0.000636	0.000020	99,248	7	63	496,082	7,227,837	72.8261	0.0215
10-14	5	1,159	7,825,093	2.500	0.000148	0.000004	0.000740	0.000022	99,185	7	73	495,740	6,731,755	67.8708	0.0214
15-19	5	2,617	7,506,147	2.500	0.000349	0.000007	0.001742	0.000034	99,111	8	173	495,125	6,236,015	62.9193	0.0214
20-24	5	3,176	6,709,609	2.500	0.000473	0.000008	0.002364	0.000042	98,939	8	234	494,109	5,740,889	58.0247	0.0213
25-29	5	1,534	1,802,115	2.500	0.000851	0.000022	0.004246	0.000108	98,705	9	419	492,476	5,246,780	53.1563	0.0213
30-34	5	2,440	2,071,004	2.500	0.001178	0.000024	0.005875	0.000119	98,286	14	577	489,985	4,754,304	48.3723	0.0206
35-39	5	4,328	2,467,593	2.500	0.001754	0.000027	0.008732	0.000132	97,708	18	853	486,409	4,264,319	43.6434	0.0200
40-44	5	6,667	2,508,255	2.500	0.002658	0.000032	0.013201	0.000161	96,855	22	1,279	481,079	3,777,910	39.0058	0.0194
45-49	5	8,500	2,215,722	2.500	0.003836	0.000041	0.019000	0.000204	95,577	27	1,816	473,343	3,296,831	34.4941	0.0187
50-54	5	11,303	2,083,140	2.500	0.005426	0.000050	0.026767	0.000248	93,761	33	2,510	462,529	2,823,488	30.1138	0.0179
55-59	5	14,589	1,825,854	2.500	0.007990	0.000065	0.039169	0.000318	91,251	40	3,574	447,319	2,360,959	25.8733	0.0169
60-64	5	19,638	1,628,342	2.500	0.012060	0.000084	0.058537	0.000405	87,677	48	5,132	425,553	1,913,640	21.8261	0.0156
65-69	5	28,192	1,524,239	2.500	0.018496	0.000105	0.088390	0.000503	82,544	57	7,296	394,482	1,488,087	18.0277	0.0140
70-74	5	42,250	1,555,757	2.500	0.027157	0.000123	0.127154	0.000578	75,248	67	9,568	352,321	1,093,605	14.5333	0.0121
75-79	5	60,721	1,353,525	2.500	0.044862	0.000163	0.201688	0.000731	65,680	73	13,247	295,284	741,284	11.2863	0.0105
80-84	5	67,316	937,763	2.500	0.071784	0.000231	0.304309	0.000978	52,433	75	15,956	222,277	446,001	8.5061	0.0084
85+	5	126,294	774,591	0.000	0.163046	-NA-	1.000000	-NA-	36,477	-NA-	36,477	223,724	223,724	6.1332	-NA-

PRELIMINARY AND INCOMPLETE. DO NOT CIRCULATE.

Table 9. Life table for urban females with more than 12 years of formal education, United States 2000.

Age	n	${}_nD_x$	${}_nPY_x$	${}_na_x$	${}_nM_x$	SE(${}_nM_x$)	${}_nq_x$	SE(${}_nq_x$)	l_x	SE(l_x)	${}_nd_x$	${}_nL_x$	T_x	e_x	SE(e_x)
0	1	9,478	1,465,214	0.071	0.006469	0.000066	0.006430	0.000066	100,000	0	643	99,403	8,308,179	**83.0818**	0.0204
1-4	4	1,620	5,897,503	1.512	0.000275	0.000007	0.001098	0.000027	99,357	7	109	397,157	8,208,777	82.6190	0.0197
5-9	5	1,002	7,877,218	2.500	0.000127	0.000004	0.000636	0.000020	99,248	7	63	496,082	7,811,620	78.7082	0.0196
10-14	5	1,159	7,825,093	2.500	0.000148	0.000004	0.000740	0.000022	99,185	7	73	495,740	7,315,538	73.7566	0.0196
15-19	5	2,617	7,506,147	2.500	0.000349	0.000007	0.001742	0.000034	99,111	8	173	495,125	6,819,798	68.8094	0.0195
20-24	5	3,176	6,709,609	2.500	0.000473	0.000008	0.002364	0.000042	98,939	8	234	494,109	6,324,673	63.9251	0.0194
25-29	5	1,396	4,407,107	2.500	0.000317	0.000008	0.001583	0.000042	98,705	9	156	493,134	5,830,564	59.0707	0.0193
30-34	5	2,091	4,707,382	2.500	0.000444	0.000010	0.002219	0.000048	98,549	10	219	492,196	5,337,430	54.1604	0.0192
35-39	5	3,488	5,175,350	2.500	0.000674	0.000011	0.003364	0.000057	98,330	11	331	490,823	4,845,233	49.2753	0.0191
40-44	5	5,552	5,074,767	2.500	0.001094	0.000015	0.005455	0.000073	97,999	13	535	488,659	4,354,411	44.4331	0.0189
45-49	5	7,809	4,625,218	2.500	0.001688	0.000019	0.008406	0.000095	97,465	14	819	485,275	3,865,751	39.6631	0.0188
50-54	5	10,158	3,864,453	2.500	0.002629	0.000026	0.013057	0.000129	96,645	17	1,262	480,072	3,380,476	34.9782	0.0186
55-59	5	10,479	2,574,669	2.500	0.004070	0.000039	0.020145	0.000195	95,383	21	1,921	472,113	2,900,405	30.4079	0.0184
60-64	5	11,094	1,744,972	2.500	0.006358	0.000059	0.031291	0.000292	93,462	28	2,925	459,998	2,428,291	25.9816	0.0179
65-69	5	13,845	1,330,904	2.500	0.010402	0.000086	0.050694	0.000420	90,537	38	4,590	441,213	1,968,293	21.7401	0.0169
70-74	5	19,470	1,236,575	2.500	0.015745	0.000108	0.075743	0.000522	85,948	53	6,510	413,464	1,527,080	17.7675	0.0154
75-79	5	27,290	980,529	2.500	0.027832	0.000157	0.130109	0.000735	79,438	66	10,336	371,350	1,113,616	14.0187	0.0138
80-84	5	30,988	645,640	2.500	0.047995	0.000242	0.214267	0.001079	69,102	82	14,806	308,495	742,266	10.7416	0.0113
85+	5	72,431	578,651	0.000	0.125172	-NA-	1.000000	-NA-	54,296	-NA-	54,296	433,771	433,771	7.9890	-NA-

PRELIMINARY AND INCOMPLETE. DO NOT CIRCULATE.

Table 10. Life table for metroplitan males with 11 years or fewer of formal education, United States 2000.

Age	n	${}_nD_x$	${}_nPY_x$	${}_na_x$	${}_nM_x$	SE(${}_nM_x$)	${}_nq_x$	SE(${}_nq_x$)	l_x	SE(l_x)	${}_nd_x$	${}_nL_x$	T_x	e_x	SE(e_x)
0	1	12,008	73,261	0.067	0.008195	0.000333	0.008133	0.000074	100,000	0	813	99,241	7,104,299	**71.0430**	0.0362
1-4	4	2,098	294,875	1.654	0.000356	0.000035	0.001422	0.000031	99,187	7	141	396,416	7,005,058	70.6250	0.0361
5-9	5	1,283	393,861	2.500	0.000163	0.000020	0.000814	0.000023	99,046	8	81	495,027	6,608,642	66.7232	0.0361
10-14	5	1,825	391,255	2.500	0.000233	0.000024	0.001165	0.000027	98,965	8	115	494,537	6,113,615	61.7755	0.0361
15-19	5	6,802	375,307	2.500	0.000906	0.000049	0.004521	0.000055	98,850	9	447	493,131	5,619,078	56.8447	0.0361
20-24	5	9,953	6,709,609	2.500	0.001483	0.000015	0.007390	0.000074	98,403	10	727	490,196	5,125,947	52.0915	0.0362
25-29	5	2,398	983,589	2.500	0.002438	0.000049	0.012116	0.000246	97,676	12	1,183	485,420	4,635,751	47.4607	0.0363
30-34	5	2,776	985,043	2.500	0.002818	0.000053	0.013993	0.000264	96,492	27	1,350	479,086	4,150,331	43.0121	0.0349
35-39	5	4,124	1,048,238	2.500	0.003934	0.000061	0.019477	0.000300	95,142	37	1,853	471,078	3,671,245	38.5870	0.0337
40-44	5	5,502	952,572	2.500	0.005776	0.000077	0.028469	0.000378	93,289	46	2,656	459,805	3,200,168	34.3038	0.0324
45-49	5	6,311	787,179	2.500	0.008018	0.000099	0.039300	0.000485	90,633	57	3,562	444,261	2,740,362	30.2358	0.0308
50-54	5	7,362	702,397	2.500	0.010481	0.000119	0.051066	0.000580	87,071	70	4,446	424,240	2,296,101	26.3704	0.0286
55-59	5	10,444	703,084	2.500	0.014854	0.000140	0.071611	0.000675	82,625	84	5,917	398,332	1,871,861	22.6549	0.0259
60-64	5	14,121	696,643	2.500	0.020271	0.000162	0.096465	0.000772	76,708	96	7,400	365,041	1,473,528	19.2096	0.0231
65-69	5	19,893	740,363	2.500	0.026870	0.000178	0.125893	0.000835	69,308	105	8,725	324,729	1,108,487	15.9935	0.0200
70-74	5	30,954	735,972	2.500	0.042058	0.000215	0.190284	0.000973	60,583	108	11,528	274,095	783,758	12.9369	0.0176
75-79	5	36,640	644,402	2.500	0.056859	0.000257	0.248912	0.001127	49,055	106	12,210	214,749	509,663	10.3896	0.0152
80-84	5	37,265	429,612	2.500	0.086740	0.000360	0.356413	0.001481	36,845	97	13,132	151,393	294,914	8.0043	0.0127
85+	5	58,223	352,390	0.000	0.165222	-NA-	1.000000	-NA-	23,713	-NA-	23,713	143,521	143,521	6.0525	-NA-

PRELIMINARY AND INCOMPLETE. DO NOT CIRCULATE.

Table 11. Life table for urban males with exactly 12 years of formal education, United States 2000.

Age	n	${}_nD_x$	${}_nPY_x$	${}_na_x$	${}_nM_x$	SE(${}_nM_x$)	${}_nq_x$	SE(${}_nq_x$)	l_x	SE(l_x)	${}_nd_x$	${}_nL_x$	T_x	e_x	SE(e_x)
0	1	12,008	1,465,214	0.067	0.008195	0.000074	0.008133	0.000074	100,000	0	813	99,241	7,055,327	**70.5533**	0.0248
1-4	4	2,098	5,897,503	1.654	0.000356	0.000008	0.001422	0.000031	99,187	7	141	396,416	6,956,086	70.1312	0.0244
5-9	5	1,283	7,877,218	2.500	0.000163	0.000005	0.000814	0.000023	99,046	8	81	495,027	6,559,670	66.2287	0.0244
10-14	5	1,825	7,825,093	2.500	0.000233	0.000005	0.001165	0.000027	98,965	8	115	494,537	6,064,643	61.2807	0.0244
15-19	5	6,802	7,506,147	2.500	0.000906	0.000011	0.004521	0.000055	98,850	9	447	493,131	5,570,106	56.3493	0.0243
20-24	5	9,953	6,709,609	2.500	0.001483	0.000015	0.007390	0.000074	98,403	10	727	490,196	5,076,975	51.5938	0.0243
25-29	5	4,499	2,076,559	2.500	0.002167	0.000032	0.010776	0.000160	97,676	12	1,053	485,747	4,586,779	46.9593	0.0242
30-34	5	5,586	2,278,775	2.500	0.002451	0.000033	0.012182	0.000162	96,623	20	1,177	480,173	4,101,032	42.4436	0.0233
35-39	5	8,511	2,613,847	2.500	0.003256	0.000035	0.016149	0.000174	95,446	25	1,541	473,377	3,620,859	37.9362	0.0227
40-44	5	12,513	2,560,828	2.500	0.004886	0.000043	0.024137	0.000213	93,905	30	2,267	463,857	3,147,482	33.5178	0.0221
45-49	5	15,554	1,998,797	2.500	0.007782	0.000061	0.038166	0.000300	91,638	35	3,497	449,447	2,683,625	29.2850	0.0216
50-54	5	17,335	1,614,239	2.500	0.010739	0.000079	0.052290	0.000387	88,141	44	4,609	429,181	2,234,178	25.3479	0.0207
55-59	5	19,915	1,399,313	2.500	0.014232	0.000097	0.068714	0.000470	83,532	54	5,740	403,309	1,804,997	21.6085	0.0195
60-64	5	24,265	1,171,772	2.500	0.020708	0.000126	0.098444	0.000600	77,792	64	7,658	369,815	1,401,687	18.0184	0.0182
65-69	5	30,607	1,007,207	2.500	0.030388	0.000161	0.141211	0.000748	70,134	74	9,904	325,910	1,031,873	14.7129	0.0166
70-74	5	41,021	894,982	2.500	0.045834	0.000202	0.205612	0.000905	60,230	82	12,384	270,191	705,963	11.7211	0.0149
75-79	5	50,322	705,224	2.500	0.071356	0.000266	0.302768	0.001127	47,846	85	14,486	203,015	435,772	9.1078	0.0133
80-84	5	48,705	451,577	2.500	0.107855	0.000371	0.424749	0.001460	33,360	80	14,170	131,375	232,757	6.9772	0.0114
85+	5	53,026	280,134	0.000	0.189287	-NA-	1.000000	-NA-	19,190	-NA-	19,190	101,382	101,382	5.2830	-NA-

PRELIMINARY AND INCOMPLETE. DO NOT CIRCULATE.

Table 12. Life table for urban males with more than 12 years of formal education, United States 2000.

Age	n	${}_nD_x$	${}_nPY_x$	${}_na_x$	${}_nM_x$	SE(${}_nM_x$)	${}_nq_x$	SE(${}_nq_x$)	l_x	SE(l_x)	${}_nd_x$	${}_nL_x$	T_x	e_x	SE(e_x)
0	1	12,008	1,465,214	0.067	0.008195	0.000074	0.008133	0.000074	100,000	0	813	99,241	7,844,384	**78.4438**	0.0208
1-4	4	2,098	5,897,503	1.654	0.000356	0.000008	0.001422	0.000031	99,187	7	141	396,416	7,745,143	78.0865	0.0201
5-9	5	1,283	7,877,218	2.500	0.000163	0.000005	0.000814	0.000023	99,046	8	81	495,027	7,348,727	74.1953	0.0200
10-14	5	1,825	7,825,093	2.500	0.000233	0.000005	0.001165	0.000027	98,965	8	115	494,537	6,853,700	69.2538	0.0199
15-19	5	6,802	7,506,147	2.500	0.000906	0.000011	0.004521	0.000055	98,850	9	447	493,131	6,359,163	64.3316	0.0199
20-24	5	9,953	6,709,609	2.500	0.001483	0.000015	0.007390	0.000074	98,403	10	727	490,196	5,866,032	59.6124	0.0196
25-29	5	2,551	3,825,583	2.500	0.000667	0.000013	0.003328	0.000066	97,676	12	325	487,566	5,375,836	55.0376	0.0193
30-34	5	3,268	4,204,117	2.500	0.000777	0.000014	0.003880	0.000068	97,351	14	378	485,809	4,888,270	50.2131	0.0191
35-39	5	4,995	4,593,371	2.500	0.001087	0.000015	0.005422	0.000077	96,973	15	526	483,550	4,402,462	45.3989	0.0189
40-44	5	7,658	4,609,885	2.500	0.001661	0.000019	0.008272	0.000094	96,447	17	798	480,241	3,918,911	40.6327	0.0187
45-49	5	12,149	4,454,673	2.500	0.002727	0.000025	0.013544	0.000122	95,649	19	1,296	475,008	3,438,670	35.9508	0.0185
50-54	5	16,386	3,989,226	2.500	0.004108	0.000032	0.020329	0.000157	94,354	22	1,918	466,974	2,963,663	31.4101	0.0183
55-59	5	16,605	2,663,085	2.500	0.006235	0.000048	0.030698	0.000235	92,436	26	2,838	455,084	2,496,689	27.0100	0.0180
60-64	5	17,971	1,866,423	2.500	0.009629	0.000070	0.047012	0.000342	89,598	34	4,212	437,460	2,041,605	22.7863	0.0176
65-69	5	23,724	1,478,644	2.500	0.016044	0.000100	0.077127	0.000481	85,386	44	6,586	410,465	1,604,145	18.7870	0.0168
70-74	5	31,482	1,231,846	2.500	0.025556	0.000135	0.120108	0.000635	78,800	58	9,465	370,340	1,193,679	15.1482	0.0157
75-79	5	39,232	888,427	2.500	0.044159	0.000200	0.198842	0.000899	69,336	71	13,787	312,211	823,339	11.8747	0.0145
80-84	5	35,366	515,358	2.500	0.068625	0.000307	0.292877	0.001310	55,549	85	16,269	237,072	511,128	9.2014	0.0124
85+	5	43,352	302,467	0.000	0.143328	-NA-	1.000000	-NA-	39,280	-NA-	39,280	274,056	274,056	6.9770	-NA-

Figure 1. Life expectancies by education status, sex, and metropolitan status, United

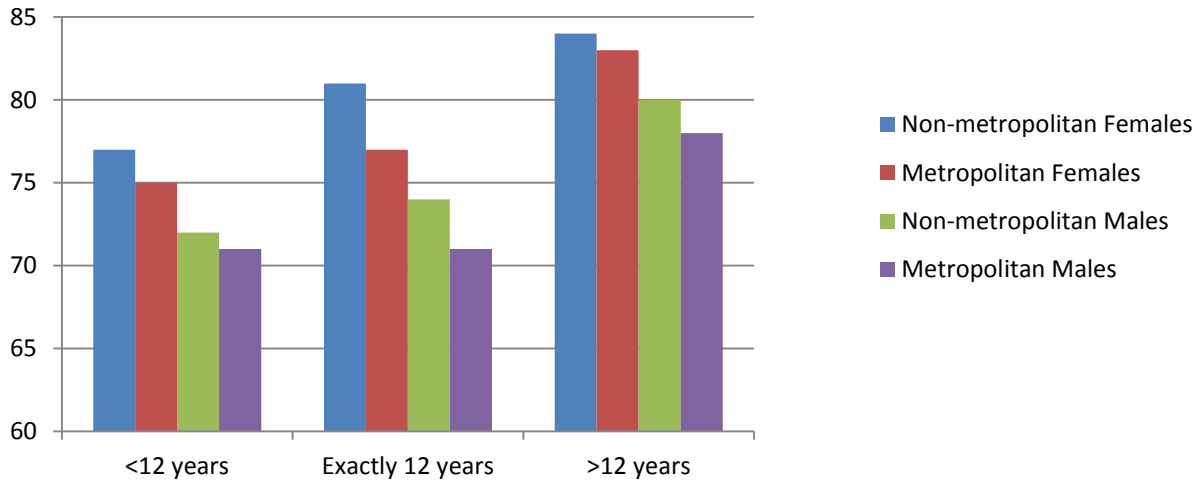

Figure 2. Difference in years of life expectancy between those with less than 12 years of education and those with exactly 12 and those with more than 12 by sex and metropolitan status, United States, 2000

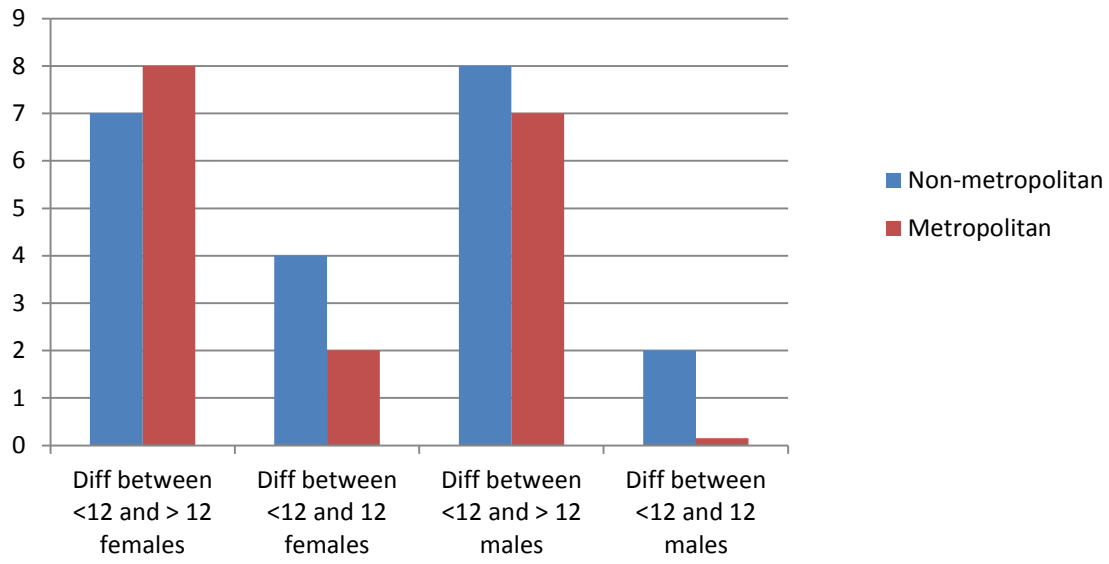

Figure 3. Ratio of metropolitan to non-metropolitan mortality rates by education. United States females, 2000.

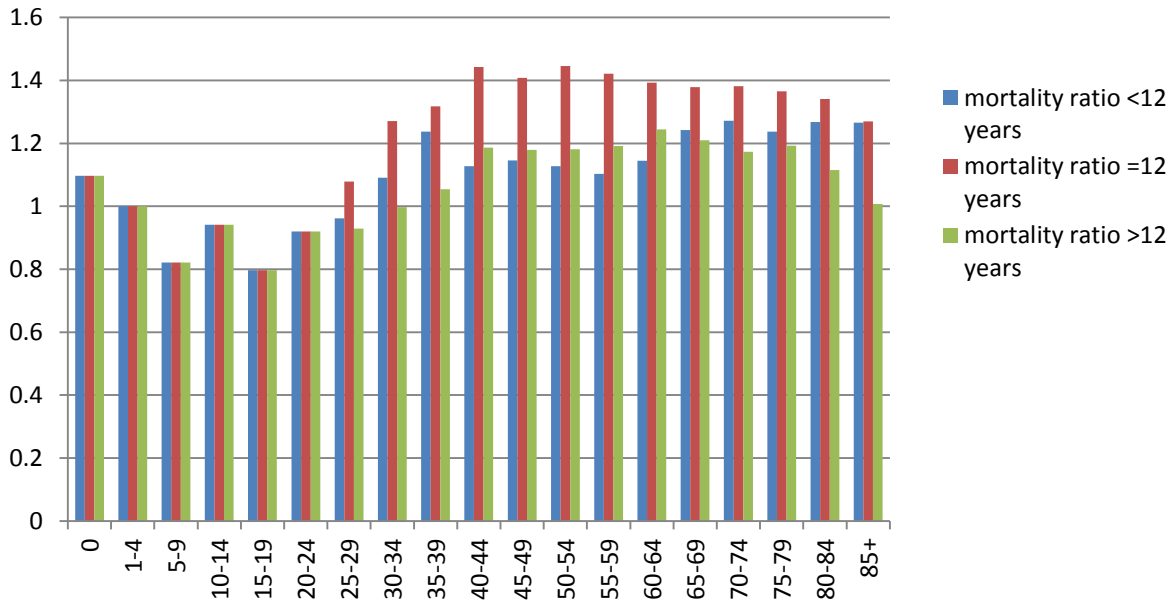

Figure 4. Ratio of metropolitan to non-metropolitan mortality rates by education. United States males, 2000.