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by Tahsin Mehdi

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A cross-cohort comparison of the economic impact of divorce and widowhood on seniors

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The financial security of seniors has long been a concern for policy makers, especially with respect to seniors who have to deal with the financial aftermath of a divorce or separation (hereby “divorce”) or the death of a spouse later in life. Without sufficient economic resources to offset the loss of spousal income, divorce or widowhood can be devastating, especially at older ages when individuals are likely to be retired and relying to a greater extent on pension benefits and government transfers.

Previous studies have shown that living standards fall following divorce and that the resulting income losses tend to disproportionately affect women (LaRochelle-Coté, Myles and Picot, 2012; Leopold, 2018; Lin and Brown, 2021). However, the increased access of women to employer pensions (Morissette, 2020), and their growing wages and labour force participation rates over the last few decades (Statistics Canada, 2022) suggest that the financial effect of widowhood and divorce might be lower for recent cohorts of retired women than it was for earlier cohorts.

The study by LaRochelle-Coté, Myles and Picot (2012) tracked the permanent after-tax family income adjusted for family size (hereby “family income”) of individuals from ages 54 to 56 until ages 68 to 70 across two cohorts—1983 and 1993—and found no significant difference in outcomes across the cohorts of women who became widowed or divorced before age 68.¹ However, this finding does not preclude future cohorts of women from experiencing improved outcomes per se. This study makes two key contributions to the literature. First, it expands the analysis of the impact of divorce and widowhood on seniors’ living standards to a larger set of cohorts: 1984, 1987, 1990, 1993 and 1996 (the 1996 cohort has not been analyzed previously).² This allows for a more up-to-date assessment of the impact of marital dissolution on seniors’ living standards. Second, building on the method of Mehdi (2023), this study addresses measurement issues by computing family income received over a 10-year period from ages 70 to 80. This provides a more comprehensive measure of living standards following divorce or spousal death than the relatively short period (i.e., ages 68 to 70) used in previous Canadian studies.³ Therefore, this approach enables a more accurate assessment of the long-term effects of marital dissolution on seniors’ living standards.

1. Family income includes capital gains and is adjusted by dividing by the square root of the family size to account for economies of scale available to larger families (Mehdi, 2023). Individuals who died over the study period were still counted in the calculations in the years before their death.
2. The sample ranged from 184,400 women in 1984 to 242,670 women in 1996 and 230,985 men in 1984 to 273,135 men in 1996. Of the women from the 1996 cohort, roughly 64% remained married over the study period, 23% remained single, 11% were widowed and 2% were divorced before reaching age 68. Of the men from the 1996 cohort, about 86% remained married, 10% remained single, 2% were widowed and 2% divorced before age 68.
3. Divorces after age 65 are rare but they might be overestimated in tax data (LaRochelle-Coté, Myles and Picot, 2012). Because of this uncertainty, this study follows LaRochelle-Coté, Myles and Picot (2012) and excludes divorces after age 65.

Overall, recent cohorts of widowed and divorced women had higher family income later in life than earlier cohorts

In all cohorts, widows and divorcees were, overall, financially worse off later in life than individuals who remained married through ages 54 to 80. However, recent cohorts of widowed and divorced women fared somewhat better than their counterparts from earlier cohorts. For instance, median family incomes (2020 dollars) of widowed women, averaged across ages 70 to 80, increased from \$30,900 for the 1984 cohort to \$33,600 for the 1996 cohort. Median family incomes of divorced women, averaged across ages 70 to 80, increased from \$26,300 for the 1984 cohort to \$27,800 for the 1996 cohort (Table 1).

Income trajectories varied across the income distribution

Income trajectories differed across income quintiles. In the **top** quintile—individuals who were in the top 20% of the family income distribution at ages 54 to 56—the 1996 cohort of widowed women aged 70 to 80 years had median family incomes that were \$7,500 higher than those of their 1984 counterparts. This was because, in part, of increased income from Registered Retirement Savings Plans (RRSPs) and Registered Pensions Plans (RPPs) and net capital gains. In contrast, divorced women from the 1996 cohort saw their median family incomes decrease by \$5,400 relative to their 1984 counterparts, partly because of a reduction in investment income.

In the **middle** quintile, the 1996 cohort of widowed (+\$3,300) and divorced (+\$2,500) women saw their median family incomes at ages 70 to 80 increase relative to those of their 1984 counterparts. These improvements were because of increases in RRSP and RPP incomes.

In the **bottom** quintile, median family incomes remained stable across cohorts as changes over time generally amounted to around \$1,000. Median family incomes of widowed women aged 70 to 80 years from the 1996 cohort increased by \$600 relative to their 1984 counterparts, while median family incomes of divorced women aged 70 to 80 years decreased by \$500. Old Age Security and the Guaranteed Income Supplement were the largest sources of retirement income for the bottom quintile.

Regardless of income quintiles at ages 54 to 56, the cross-cohort income gains (or losses) of divorced women were lower (or higher) compared to single, married and widowed women.

Divorce also had a negative financial impact on men, but they were more likely, on average, to have higher family incomes than women at ages 70 to 80.

Table 1
Median adjusted permanent after-tax family incomes (2020 dollars), by family income quintile

	Married by age 54 to 56			
	Single from age 54 to 80	Married until age 80	Widowed by age 68	Divorced or separated by age 65
dollars				
Women at age 54 to 56				
Overall				
Cohort year				
1984	37,300	48,400	42,200	40,200
1987	36,500	49,300	42,400	39,900
1990	35,700	51,100	43,100	43,300
1993	34,000	49,300	41,500	41,200
1996	33,900	51,300	43,000	43,600
Top quintile				
Cohort year				
1984	79,300	81,600	78,700	81,600
1987	81,800	84,900	81,600	87,300
1990	85,600	87,900	84,500	87,400
1993	83,300	88,400	86,200	86,400
1996	83,900	91,300	88,000	93,200
Middle quintile				
Cohort year				
1984	43,600	44,200	44,000	44,300
1987	44,400	44,700	44,500	44,800
1990	45,200	45,900	45,300	45,700
1993	43,700	44,100	44,000	44,000
1996	44,800	45,300	44,900	45,600
Bottom quintile				
Cohort year				
1984	21,400	23,200	22,900	21,300
1987	20,900	22,800	22,300	21,400
1990	20,700	23,600	23,100	22,100
1993	18,600	22,200	22,000	20,900
1996	18,100	21,700	21,400	21,300
Men at age 54 to 56				
Overall				
Cohort year				
1984	39,500	47,000	44,500	39,100
1987	40,200	48,100	45,200	39,200
1990	38,300	50,300	45,800	38,300
1993	34,600	49,000	44,200	39,200
1996	35,300	50,400	44,100	40,900
Top quintile				
Cohort year				
1984	83,200	80,900	78,400	80,500
1987	86,400	85,400	83,400	83,100
1990	88,900	90,000	87,800	86,100
1993	89,500	90,600	88,700	88,800
1996	91,800	94,100	89,200	90,000
Middle quintile				
Cohort year				
1984	45,600	45,800	45,000	45,400
1987	46,700	47,000	46,600	45,900
1990	48,500	48,300	48,400	48,400
1993	46,400	47,000	46,500	46,200
1996	47,300	48,100	47,500	47,100
Bottom quintile				
Cohort year				
1984	21,300	23,800	22,400	23,000
1987	21,500	24,500	24,300	23,500
1990	20,700	25,100	24,900	24,200
1993	18,500	23,400	23,900	22,000
1996	17,700	22,800	22,900	22,300

Note: The quintiles refer to family income distribution rank at age 54 to 56; top quintile = top 20% of the distribution; middle quintile = middle 20% of the distribution; bottom quintile = bottom 20% of the distribution. Only individuals with at least \$13,000 at age 54 to 56 are included. Income quintiles are calculated separately by sex based on permanent after-tax family income adjusted for family size at age 54 to 56. Family income is divided by the square root of family size. Permanent income here is calculated by taking a three-year average of an individual's annual after-tax family income adjusted for family size. Median incomes at age 70 to 80 are calculated by averaging the median incomes across ages 69 to 71 through 78 to 80. The small group of widows and divorcees who subsequently remarried are excluded. Individuals who divorced or separated after age 65 are also excluded since it is rare among seniors but may be overestimated in administrative data.

Source: Statistics Canada, Longitudinal Administrative Databank, 1982 to 2020.

Table 1
Median adjusted permanent after-tax family incomes (2020 dollars), by family income quintile (continued)

	Single from age 54 to 80	Married until age 80	Married by age 54 to 56	
			Widowed by age 68	Divorced or separated by age 65
dollars				
Women at age 70 to 80				
Overall				
Cohort year				
1984	30,100	40,300	30,900	26,300
1987	30,000	40,900	31,600	27,000
1990	29,300	41,900	32,400	26,600
1993	29,100	43,000	32,800	27,700
1996	30,100	44,500	33,600	27,800
Top quintile				
Cohort year				
1984	55,600	62,800	52,500	47,400
1987	55,500	63,700	54,100	46,500
1990	58,000	64,900	55,300	44,600
1993	59,900	66,100	56,300	45,600
1996	61,900	68,200	60,000	42,000
Middle quintile				
Cohort year				
1984	34,100	36,400	30,600	26,200
1987	34,000	36,900	32,000	27,000
1990	34,900	37,400	32,700	26,200
1993	35,500	38,200	33,400	28,000
1996	37,400	39,400	33,900	28,700
Bottom quintile				
Cohort year				
1984	22,400	26,300	22,900	22,200
1987	22,600	26,300	23,400	22,500
1990	22,000	26,200	23,200	21,500
1993	21,900	26,700	23,400	20,700
1996	22,100	26,900	23,500	21,700
Men at age 70 to 80				
Overall				
Cohort year				
1984	32,300	39,800	38,000	32,200
1987	33,300	40,600	36,600	31,400
1990	31,400	42,000	38,500	28,300
1993	31,900	43,600	38,800	28,600
1996	33,000	44,800	38,600	30,500
Top quintile				
Cohort year				
1984	60,100	62,200	55,400	53,900
1987	61,500	63,700	59,800	56,100
1990	61,300	65,600	59,900	53,200
1993	60,500	68,000	63,000	48,500
1996	61,800	70,800	67,300	51,900
Middle quintile				
Cohort year				
1984	33,700	37,200	36,200	35,300
1987	34,900	38,200	35,800	37,200
1990	34,800	39,000	38,400	32,900
1993	36,400	40,100	39,600	32,900
1996	38,100	41,300	40,600	33,200
Bottom quintile				
Cohort year				
1984	22,700	26,800	25,600	23,400
1987	23,000	27,000	24,700	23,300
1990	22,700	27,100	24,800	22,200
1993	22,500	27,600	25,000	22,100
1996	22,600	28,200	25,400	22,900

Note: The quintiles refer to family income distribution rank at age 54 to 56; top quintile = top 20% of the distribution; middle quintile = middle 20% of the distribution; bottom quintile = bottom 20% of the distribution. Only individuals with at least \$13,000 at age 54 to 56 are included. Income quintiles are calculated separately by sex based on permanent after-tax family income adjusted for family size at age 54 to 56. Family income is divided by the square root of family size. Permanent income here is calculated by taking a three-year average of an individual's annual after-tax family income adjusted for family size. Median incomes at age 70 to 80 are calculated by averaging the median incomes across ages 69 to 71 through 78 to 80. The small group of widows and divorcees who subsequently remarried are excluded. Individuals who divorced or separated after age 65 are also excluded since it is rare among seniors but may be overestimated in administrative data.

Source: Statistics Canada, Longitudinal Administrative Databank, 1982 to 2020.

On average, recent cohorts of widowed men and women experienced smaller decreases in family income later in life than earlier cohorts

On average, widowed women from the 1984 cohort received, at ages 70 to 80, 77% of the income they had received at ages 54 to 56 (Table 2). The income replacement rate of the 1996 cohort was, at 83%, six percentage points higher, thereby indicating a smaller decrease in family income later in life for this cohort. Income replacement rates also increased across cohorts for widowed men.

In contrast, the income replacement rate for divorced women from the 1996 cohort (70%) was slightly lower than that of the 1984 cohort (73%). This drop in the income replacement rate occurred because the cross-cohort gains in family income of divorced women at ages 70 to 80 were not sufficient to offset the gains made at ages 54 to 56 when they were still married (Table 1).

In the **top** quintile, income replacement rates for widowed women amounted to roughly 64% for the 1984 and the 1996 cohorts. But replacement rates for divorced women decreased from 56% (1984 cohort) to 45% (1996 cohort). This reduction occurred as divorced women in the top quintile saw their income at ages 70 to 80 decrease across cohorts while their income at ages 54 to 56 rose across cohorts.

In the **middle** quintile, income replacement rates increased from 70% (1984 cohort) to 76% (1996 cohort) for widowed women and from 61% to 63% for divorced women.

In the **bottom** quintile, both widowed and divorced women from the 1996 cohort had somewhat higher income replacement rates than their counterparts from the 1984 cohort. For all cohorts, income replacement rates exceeded 100%, as income at ages 70 to 80 surpassed that at ages 54 to 56 (Table 1).

Lastly, in the middle and top quintiles, income replacement rates fell over time for divorced men but increased for widowed men.

Conclusion

Using a comprehensive measure of income and longitudinal data that track several cohorts of individuals from ages 54 to 56 onwards, this study shows that the living standards of widowed and divorced women later in life have, in general, improved slightly over time. However, the extent of the improvements varies across income quintiles. The study also shows that divorce reduces living standards during retirement to a greater extent than spousal death. In all the cohorts considered, women had lower family incomes than men later in life, regardless of marital status. Whether the current retirement income trajectories of widows and divorcees will persist in the future remains to be seen.

Table 2
Average of the median adjusted permanent after-tax family income replacement rates from age 70 to 80, by family income quintile

	Single from age 54 to 80	Married by age 54 to 56		
		Married until age 80	Widowed by age 68	Divorced or separated by age 65
percent				
Women				
Overall				
Cohort year				
1984	85.5	84.3	77.4	73.4
1987	86.9	83.2	78.8	75.4
1990	86.2	81.8	78.4	67.8
1993	91.1	86.2	82.1	72.0
1996	94.1	87.0	83.0	70.4
Top quintile				
Cohort year				
1984	68.8	74.1	63.5	56.1
1987	66.3	72.1	63.8	50.9
1990	64.5	70.4	60.8	45.3
1993	69.1	71.7	62.9	50.6
1996	70.7	72.5	64.0	45.3
Middle quintile				
Cohort year				
1984	77.4	82.3	69.9	61.1
1987	76.8	82.4	72.2	61.0
1990	76.4	81.5	72.3	57.5
1993	80.8	86.4	75.8	64.4
1996	82.8	87.3	75.5	63.3
Bottom quintile				
Cohort year				
1984	110.1	120.8	108.7	108.4
1987	114.0	121.0	112.3	109.0
1990	111.5	118.3	107.6	104.3
1993	121.0	128.9	112.1	105.4
1996	127.5	132.6	116.0	111.4
Men				
Overall				
Cohort year				
1984	83.4	85.4	83.1	82.5
1987	82.5	84.6	82.9	80.5
1990	82.3	82.7	81.9	78.1
1993	88.9	87.5	87.8	79.5
1996	90.0	88.1	89.1	81.1
Top quintile				
Cohort year				
1984	69.9	74.2	69.6	63.0
1987	67.0	72.1	73.2	62.7
1990	65.9	70.2	65.2	56.2
1993	66.2	72.2	69.0	53.3
1996	65.4	72.5	73.7	56.8
Middle quintile				
Cohort year				
1984	72.9	81.6	79.2	75.7
1987	74.9	81.5	75.9	80.0
1990	71.7	80.6	78.1	69.7
1993	78.2	85.4	83.6	70.9
1996	79.4	85.9	86.0	67.8
Bottom quintile				
Cohort year				
1984	112.3	119.9	119.2	110.2
1987	113.6	117.4	111.0	111.2
1990	112.8	115.7	112.4	99.1
1993	125.2	127.7	118.6	103.5
1996	132.2	132.0	118.9	114.1

Note: The quintiles refer to family income distribution rank at age 54 to 56; top quintile = top 20% of the distribution; middle quintile = middle 20% of the distribution; bottom quintile = bottom 20% of the distribution. Only individuals with at least \$13,000 at age 54 to 56 are included. Income quintiles are calculated separately by sex based on permanent after-tax family income adjusted for family size at age 54 to 56. Family income is divided by the square root of family size. Permanent income here is calculated by taking a three-year average of an individual's annual after-tax family income adjusted for family size. Replacement rates are calculated in three steps, which involves 1) computing at the individual level, income at all ages between 69 to 71 and 78 to 80 as a share of income at age 54 to 56, 2) taking the median of these shares across all individuals, and 3) averaging the median shares across ages 69 to 71 through 78 to 80. The small group of widows and divorcees who subsequently remarried are excluded. Individuals who divorced or separated after age 65 are also excluded since it is rare among seniors but may be overestimated in administrative data.

Source: Statistics Canada, Longitudinal Administrative Databank, 1982 to 2020.

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