Global Trends in the Demographics of Widowhood, 1970-2020

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Short Abstract

Despite widowhood being a critical life event, systematic evidence on global trends and over time in widowhood is still lacking. Three research questions are addressed: How does the prevalence of widowhood vary across countries? How does it vary once adjusted for the age compositions? To what extent does age account for change in the prevalence of widowhood over time across countries? We draw on harmonized IPUMS data to estimate crude and age-standardized widowhood rates, which reflect the proportion of the widowed population among individuals aged 18 and older. Widowhood is a status predominantly experienced by women and is closely linked to aging populations and higher life expectancy. After controlling for age, standardized rates show less divergence between countries and highlight the occurrence of widowhood at younger ages, especially in low- and middle-income countries. Our results call attention to the sensitivity of widowhood rates to period shocks, like wars and epidemics.

Introduction

Spousal death is argued to be one of the most stressful life events, entailing both mental and physical health consequences as well as requiring extensive adjustment from surviving spouses (Baumbach et al., 2024; Michael & Ben-Zur, 2007). Despite widowhood being a critical event among the married population, knowledge about its dynamics, including underlying causes, prevalence, and demographic impact, remains fragmented across countries (Delbès et al., 2006; Donnelly et al., 2023; Goldman & Lord, 1983; Requena et al., 2019; Tréguier et al., 2023). Systematic evidence on global trends in widowhood is still largely lacking.

Estimating the size and composition of the widowed population is essential to understanding the magnitude of this group, as well as its specific needs and the challenges it faces. This is especially relevant in the context of population aging where widowhood often corresponds with caregiving at older ages (Ornstein et al., 2017, 2019), thus increasing the likelihood of social isolation (Bolano & Arpino, 2020), mental and physical health decline (Williams et al., 2008), and even cognitive deterioration (Wu-Chung et al., 2022) and increased mortality (Elwert & Christakis, 2008). Cross-national differences in the degree of population ageing may translate into important differences

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not only in the size and composition of the widowed population, but also the challenges they face. This may be particularly the case in contexts where widowed individuals, especially women, are socially excluded, or in settings where informal support networks play a key role in providing assistance due to limited formal state aid.

We address three research questions to provide systematic evidence on global trends in widowhood. First, how does the prevalence of widowhood vary across countries? We draw on harmonized IPUMS data to estimate crude widowhood rates, which reflect the proportion of the widowed population among individuals aged 18 and older. Second, how does the prevalence of widowhood vary across countries once adjusted for differences in the age and sex compositions of populations? To this end, we assess widowhood rates separately for men and women and estimate age standardized rates. Third, to what extent does age account for change in the prevalence of widowhood over time across countries? This will shed light on the extent that other factors, such as conflicts, epidemics and marriage rates, account for change in the prevalence of widowhood across countries.

Data & Methods

We primarily use harmonized data provided by IPUMS International (Ruggles et al., 2025). In total, we consider 87 countries covering the period from 1970 to 2020. As a reference for global representation, the population analyzed in 2000 accounted for approximately 73% of the world's population. Since censuses and surveys correspond to different years, we estimate rates by decade, pooling the available waves to the closest year ending in zero. In the coming months, we aim to expand the temporal and population coverage by incorporating and harmonizing data from United Nations (UNData), censuses, surveys, and administrative registers of countries such as Nigeria, Australia, Sweden, Norway, Finland, Saudi Arab, Greenland, among others.

The initial stage of this analysis relies on the estimation of crude and standardized rates. To assess changes over time, we decompose the variation in widowhood rates across decades. First, we compute crude rates of widowhood, defined as the proportion of the widowed population among individuals aged 18 and older. We focus on this age group since widowhood can only occur among those who have ever been married or have cohabited. Although marriage under the age of 18 exists, particularly in low- and middle-income countries, the proportion of such cases is negligible, especially when considering partner loss at very early ages. As a second step, we compute standardized rates adjusted for age structure. For this purpose, we use the mean age structure of the world population in each decade as the standard.

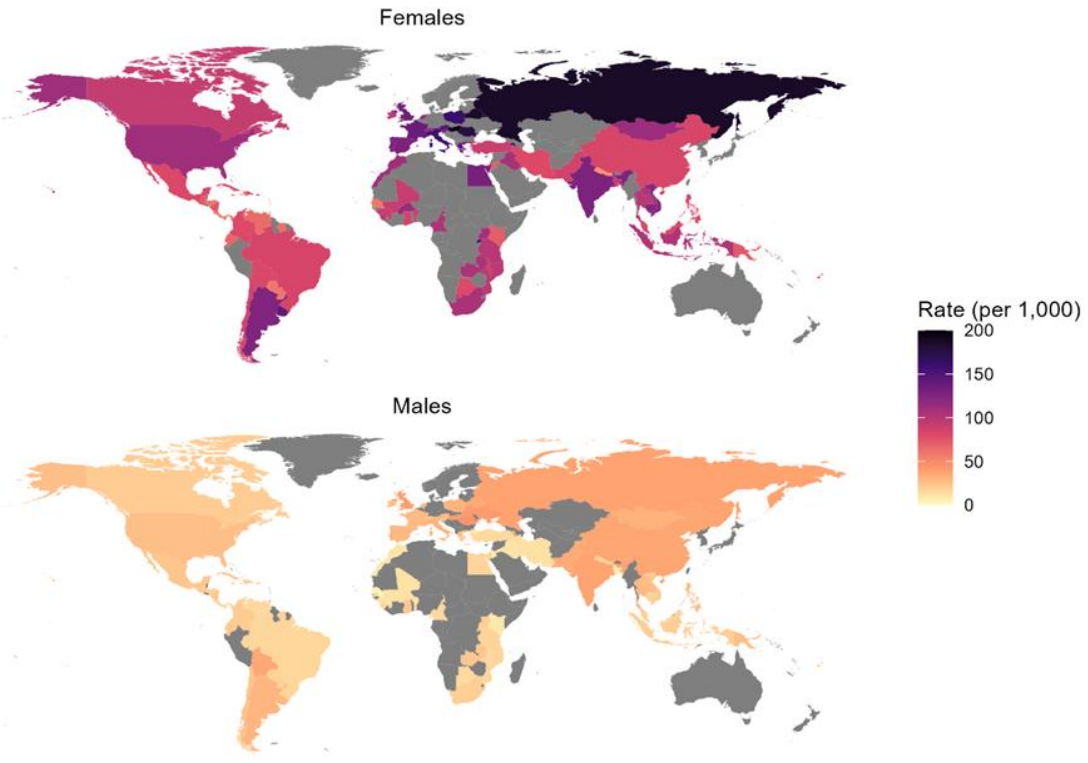
Preliminary findings

Widowhood rates show clear differences between sexes and across countries. Figure 1 presents crude widowhood rates, while Figure 2 presents standardized rates for the year 2000. Widowhood rates are consistently higher among females compared to males. On average, the crude widowhood rate in 2000 was 105.2 per 1,000 for females and 22.8 per 1,000 for males.

Female crude rates follow the pattern of countries according to their aging processes, with higher values observed in regions with advanced aging, such as Europe. Countries such as Russia, Belarus, Hungary, and Romania stand out for having the highest rates. Among men, rates are less divergent, although higher values are observed in Asia and Eastern Europe.

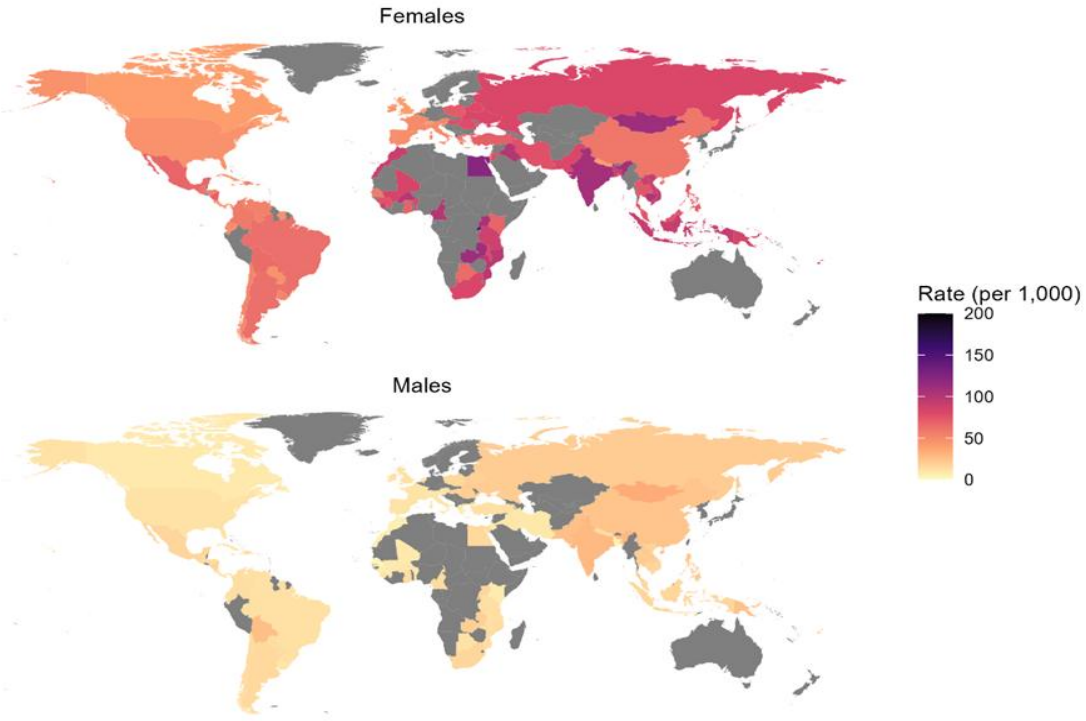
After controlling age, standardized rates reveal a pattern where higher rates are not necessarily in countries with ageing populations (see Figure 2). Worldwide, the standardized widowhood rate in 2000 was 82.7 per 1,000 for females and 17.0 per 1,000 for males. For both sexes, widowhood rates tend to be lower in high-income countries and higher in low- and middle-income countries. Female widowhood is particularly high in countries such as Egypt, Mongolia, and Zambia.

Fig. 1. Crude Widowhood Rate by Country. Population 18+, 2000.



Authors' elaboration based on IPUMS (2025).

Fig. 2. Standardized Widowhood Rate by Country. Population 18+, 2000.



Authors' elaboration based on IPUMS (2025).

Discussion

In this research, we analyze trends in widowhood across the world over the last 50 years. Preliminary results reveal important differences by sex, country, and over time. First, we addressed differences between females and males. As has been widely documented, widowhood is a status predominantly experienced by women, due to sex differences in mortality and the age gap within unions. Second, regional and country-level differences show clear divergence, particularly among women. Widowhood is closely linked to aging populations, and higher life expectancy among women results in a larger proportion of women at older ages. Crude widowhood rates reflect the expected values according to the progression of aging processes across countries, with higher prevalence of widowhood observed in older populations, such as those in high-income countries. In countries like Russia, the higher prevalence of widowed women is likely related with the high male mortality between 1960 and 1994 (Vallin et al., 2005). A similar explanation may be suggested for other former URSS countries.

After controlling for age, standardized rates show less divergence between countries and highlight the possible occurrence of widowhood at younger ages. Particular attention should be given to countries such as Mongolia, India, and Egypt. In the case of Mongolia, our results align with the country's mortality patterns: it has one of the largest sex gaps in life expectancy worldwide, at nearly nine years. Alcohol-related causes of death account for a significant share of male mortality (Chimed-Ochir et al., 2022). In other cases, such as Egypt, the sex gap in life expectancy is less pronounced, suggesting alternative explanations for the high prevalence of widowhood. Historical events, such as the wars of the 1960s and 1970s, caused tens of thousands of deaths, predominantly among military men. One of the first conclusions we can draw from this analysis is the sensitivity of widowhood rates to period shocks such as wars and epidemics. The effect of these events on both period and cohort widowhood must be further addressed and will constitute one of the next steps in this research.

As part of this ongoing research, we aim to further investigate the rationale behind these disparities. To this end, future analyses will examine the sex ratios of widowhood and associated mortality rates and life expectancy. To analyze the composition of the widowed population, we will estimate median ages and examine the distribution by age. Given the differences in the age at which widowhood is experienced across the world, we expect to observe regional differences or clusters in the age structure of widows. Changes over time in widowhood rates for each country will be estimated based on decomposition methods to differences observed between different points in time (Kitagawa, 1955). This approach will allow us to disentangle the extent to which differences in rates are explained by compositional variations in age, as opposed to differences in the rates themselves. Finally, as part of our preliminary agenda, we also aim to examine the influence of period shocks—such as wars and epidemics—and sex differentials in mortality on the prevalence of widowhood. In addition, we will extend the coverage of the countries analyzed and the evolution over time with data from UN, censuses, surveys and administrative data.

The ongoing results of this study seek to fill an important gap in understanding global trends in widowhood. The different methods employed aim to shed light on the diversity of this phenomenon across the world, as well as its sensitivity to past and present shocks. In future research, we plan to explore the impact of more recent shocks, such as COVID-19 (Van Winkle & Konechni, 2025), violence in regions such as Latin America, and armed conflicts in the Middle East, which may substantially increase the risk of widowhood.

References

Baumbach, A., Hughes, M. C., & Liu, Y. (2024). Challenges and Coping Strategies in Transitioning From Caregiving to Widowhood : A Systematic Review. Research on Aging, 46(9-10), 535-547. https://doi.org/10.1177/01640275241254396

Bolano, D., & Arpino, B. (2020). Life after death : Widowhood and volunteering gendered pathways among older adults. Demographic Research, 43, 581-616. https://doi.org/10.4054/DemRes.2020.43.21

Chimed-Ochir, O., Delgermaa, V., Takahashi, K., Purev, O., Sarankhuu, A., Fujino, Y., Bayarmagnai, N., Dugee, O., Erkhembayar, R., Lkhagvaa, B., Ochir, C., Sosorburam, T., & Naghavi, M. (2022). Mongolia health situation: Based on the Global Burden of Disease Study 2019. *BMC Public Health*, *22*(1), 5. https://doi.org/10.1186/s12889-021-12070-3

Delbès, C., Gaymu, J., & Springer, S. (2006). Women grow old alone, but men grow old with a partner. A European overview. *Population & Societies*, *419*(1), 1–4. https://doi.org/10.3917/popsoc.419.0001

Donnelly, R., Garcia, M. A., Cha, H., Hummer, R. A., & Umberson, D. (2023). Exposure to Family Member Deaths Across the Life Course for Hispanic Individuals. *Demography*, *60*(2), 539–562. https://doi.org/10.1215/00703370-10604036

Elwert, F., & Christakis, N. A. (2008). Wives and ex-wives : A new test for homogamy bias in the widowhood effect. Demography, 45(4), 851-873. https://doi.org/10.1353/dem.0.0029

Goldman, N., & Lord, G. (1983). Sex differences in life cycle measures of widowhood. *Demography*, *20*(2), 177–195. https://doi.org/10.2307/2061234

Kitagawa, E. M. (1955). Components of a Difference Between Two Rates. *Journal of the American Statistical Association*, *50*(272), 1168–1194. https://doi.org/10.2307/2281213

Michael, K., & Ben-Zur, H. (2007). Stressful Life Events : Coping and Adjustment to Separation or Loss of Spouse. Illness, Crisis & Loss, 15(1), 53-67. https://doi.org/10.1177/105413730701500104

Ornstein, K. A., Kelley, A. S., Bollens-Lund, E., & Wolff, J. L. (2017). A National Profile Of End-Of-Life Caregiving In The United States. Health Affairs, 36(7), 1184-1192. https://doi.org/10.1377/hlthaff.2017.0134

Ornstein, K. A., Wolff, J. L., Bollens-Lund, E., Rahman, O.-K., & Kelley, A. S. (2019). Spousal Caregivers Are Caregiving Alone In The Last Years Of Life. Health Affairs, 38(6), 964-972. https://doi.org/10.1377/hlthaff.2019.00087

Requena, M., Reher, D., Padyab, M., & Sandström, G. (2019). Women living alone in later life: A multicountry comparative analysis. *Population, Space and Place*, *25*(7), e2269. https://doi.org/10.1002/psp.2269

Ruggles, S., Cleveland, L., Lovaton, R., Sarkar, S., Sobek, M., Burk, D., Ehrlich, D., Heimann, Q., Lee, J., & Merrill, N. (2025). *Integrated Public Use Microdata Series, International: Version 7.6 [dataset]*. [Dataset]. IPUMS. https://doi.org/10.18128/D020.V7.6

Tréguier, J., Bonnet, C., & Blanchet, D. (2023). *How Long Will You be a Widow? Determinants, Trends and Income Gradient in Widowhood Duration*. https://hal.science/hal-04269972

Van Winkle, Z., & Konechni, B. (2025). Government Restrictions During the COVID-19 Pandemic and Depressive Symptoms Following Widowhood. *Demography*, *62*(1), 137–158. https://doi.org/10.1215/00703370-11790737

Vallin, J., Andreev, E. M., Meslé, F., & Shkolnikov, V. (2005). Geographical diversity of cause-of-death patterns and trends in Russia. *Demographic Research*, *12*, 323–380. https://doi.org/10.4054/DemRes.2005.12.13

Williams, B. R., Sawyer, P., Roseman, J. M., & Allman, R. M. (2008). Marital Status and Health : Exploring Pre-Widowhood. Journal of Palliative Medicine, 11(6), 848-856. https://doi.org/10.1089/jpm.2007.0190

Wu-Chung, E. L., Leal, S. L., Denny, B. T., Cheng, S. L., & Fagundes, C. P. (2022). Spousal caregiving, widowhood, and cognition : A systematic review and a biopsychosocial framework for understanding the relationship between interpersonal losses and dementia risk in older adulthood. Neuroscience & Biobehavioral Reviews, 134, 104487. https://doi.org/10.1016/j.neubiorev.2021.12.010