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Widowhood, Socio-Economic Status, Health and Wellbeing in Low and Middle-Income Countries

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Abstract

Using data on women aged 50 and over from the WHO's Survey of Ageing and Adult Health for China, Ghana, India, the Russian Federation and South Africa (N=17,009), we assess associations between widowhood and socio-economic, health and quality of life deprivations. We find variations in the prevalence and timing of widowhood across the study countries, and associations between widowhood and being in the poorest wealth quintile for all five countries. For other deprivations, national experiences varied, with stronger and more consistent effects for India and China. These findings challenge generalised claims about widowhood and call for more contextualised analysis.

1. INTRODUCTION

> "Absent in statistics, unnoticed by researchers, neglected by national and local authorities and mostly overlooked by civil society organizations – the situation of widows is, in effect, invisible" (United Nations tatement for International Widows Day, 2014).

It is commonly claimed that widowhood is strongly associated with a wide range of deprivations across low and middle-income countries (LMICs) (Baden, Green, Otoo-Oyortey, & Peasgood, 1994; Owen, 1996; UN Women, 2012; Mannan, 2012). These claims are particularly focussed on women in South Asia, supported by a substantial body of primarily qualitative research (Chen, 2001; Giri, 2002; Jensen, 2005; Nayar, 2006). There is a smaller, but growing body of research on the effects of widowhood in parts of sub-Saharan Africa (Rosenblatt & Nkosi, 2007; Ewelukwa, 2002; Nnodim, Albert and Isife, 2012). A stylised discourse about female widowhood, deprivation and vulnerability in LMICs has emerged, and this is reflected in the statements and publications of various development agencies (Global Fund for Widows, 2014; UN Women, 2013). According to UN Secretary General Ban Ki-Moon:

> "No woman should lose her status, livelihood or property when her husband dies, yet millions of widows in our world face persistent abuse, discrimination, disinheritance and destitution" (United Nations Statement for International Widows Day, 2014).

In the light of these concerns, it is instructive to compare the experiences of widows within and across different national settings to verify the validity of generalised claims, to assess whether widowhood inevitably leads to deprivation or whether this is contingent on how it interacts with other personal characteristics and contextual factors. Despite the high level of interest among development agencies, there are substantial gaps in the available evidence relating widowhood to deprivations. These gaps partly result from a tendency to exclude widowhood from routinely reported data. For example, the UN Demographic Yearbook provides information on marriage and divorce, but not on widowhood (UN Department of Economic and Social Affairs (UNDESA), 2012). As a result, there is no quantitative research comparing the effects of widowhood across different national settings. This paper seeks to address some of these gaps, drawing on newly available survey data for older people in five diverse LMICs. The paper provides insights about differing national contexts of widowhood, as well as the consequences of widowhood for various aspects of socio-economic status, health and wellbeing. By comparing effects across different settings, the paper also seeks to explore some of the potential pathways between widowhood and deprivation.

Qualitative studies identify a number of ways in which widowhood can lead to socio-economic disadvantage and impaired wellbeing for women (Chen, 2001; Mannan, 2002; Eboh, 2005). These studies claim that cultural norms associated with widowhood often confer numerous, interacting disadvantages including denial of inheritance, limited mobility outside the home and economic participation, prohibitions on remarriage and restricted social participation. Yet, there is also evidence that cultural norms towards widows vary markedly across LMICs: for example, an international public opinion poll in 2008 reported that 7 per cent of Thais felt widows were substantially disadvantaged in their society, compared to 19 per cent of Indians and 25 per cent of Nigerians (World Public Opinion.org, 2009).

Systematic quantitative analysis of the potential impact of widowhood on socio-economic status is hampered by difficulties of extracting data on individual economic status from wider household data (Haddad & Kanbur, 1990). For example, Dreze and Srinivasan (1997) conclude that in India female widowhood is not significantly associated with household poverty, but observe that widowed women may still be significantly disadvantaged compared to other household members. This household discrimination effect has been identified in a number of qualitative studies (Chen, 2001; UN Women, 2012). Another analytical challenge is that the risk of widowhood may be associated with pre-existing deprivations (for example, poorer, less educated women may be more likely to be widowed at a given point in time) and so it is necessary to separate the effect of widowhood from these potential confounders. Attributable effects of widowhood on health and quality of life are more readily identifiable. A number of epidemiological studies in LMICs have identified widowhood as a potential risk factor for adverse outcomes, including elevated risk of mortality (Rahman, Foster, &

Menken, 1992; Shor et al., 2012; Sudha, Suchindran, Mutran, Rajan, & Sarma, 2006), poor self-rated health (Doubova, Pérez-Cuevas, Espinosa-Alarcón, & Flores-Hernández, 2010; Li, Liang, A, & Gu, 2005) and depression (Averina et al., 2005; Li et al., 2005; Suemoto et al., 2012).

There is a larger body of research, both qualitative and quantitative, on the effects of widowhood in high-income countries (Moon et al; 2012; Stroebe et al, 2007). These studies also demonstrate that widowhood is associated with economic vulnerability as well as with an increased risk of mortality, impaired health and quality of life for some women, but that there is considerable heterogeneity of experience (Sevak, Weir and Willis, 2003/4; Elwert and Christakis, 2006). Rather than cultural sanctions against widows, these studies focus on the initial emotional impact of losing a spouse (known as "the widowhood effect"), adaptability to changing circumstances (such as solitary living) and the extent to which widows are protected by pension schemes (Drennan et al, 2008; Nuriddin and Perrucci, 2008). According to a recent report:

> "..immediately after the deaths of their partners 60 per cent of widows and widowers were shown to be lonely. Thanks to efforts of the widowed persons themselves and the support of children, friends and neighbours in the period following the death of the partner, loneliness decreased to a certain extent." (Oxfordshire Age UK, 2011).

To some extent, this different research focus may both reflect and feed back into polarised representations of widowhood in the "developed and developing worlds".

It is likely that the individual experiences and effects of female widowhood in LMICs will be just as variable as they are in rich countries. In some cases widowhood could conceivably enhance a woman's socio-economic status and quality of life, particularly if her previous spousal relationship had been conflictive, if the spouse had appropriated a large share of disposable income for his personal use or if the spouse had experienced a period of care dependency (in which case, widowhood may lead to relief from care responsibilities) (Lloyd-Sherlock, 2012). The few available quantitative studies for LMICs support the view that widowhood does not affect all women to the same degree. With reference to India, Jensen (2005) shows that the effects of widowhood on employment, BMI and self-rated health vary significantly according to caste, tribe and religion.

This paper provides systematic analysis of the effects of widowhood on a wide range of outcomes for older women in five diverse low and middle-income countries (China, Ghana, India, the Russian Federation and South Africa). This analysis draws on newly available nationally representative data for these countries collected as part of the World Health Organisation's Survey of Global Ageing and Adult Health (SAGE). The next section provides information on the general survey design and the analytical approach taken in this paper. This is followed by analysis on patterns of widowhood and marital status across the five countries, including the timing as well as the prevalence of widowhood. This leads onto an analysis of the effects of widowhood on a wide range of outcomes including socio-economic status, quality of life and health. A final section interprets and draws together the

results to reveal similarities and differences in the effects of widowhood in different national settings, and to identify some wider policy implications.

2. DATA AND METHODS

(a) Study design and response rates

This study uses newly available data from the SAGE, which includes detailed information on health behaviours, use of health services and health outcomes, as well as a varied set of socio-economic items. SAGE comprises nationally representative household surveys for people aged 50 or older in six countries: the People's Republic of China, Ghana, India, Mexico, the Russian Federation and South Africa, conducted between 2008 and 2010. Across these six countries, the total SAGE study population comprises 35,145 people aged 50 or older. SAGE sampling methods are based on the design developed for the 2003 World Health Survey where a probability sampling design was employed using multi-stage, stratified, random cluster samples. The primary sampling units were stratified by region and location (urban/rural) and, within each stratum, enumeration areas were selected. Further information about the SAGE survey design and methods is available from a published data resource profile (Kowal et al., 2012). Table 1 provides data on the sample size and for selected characteristics of the SAGE survey. Since the low response rate for the Mexican survey could have potentially introduced biases in our findings, we did not include that country in our analysis.[1]

(b) Description of variables

Data on demographic and socio-economic-status (SES) included: age, sex, marital status, current area of residence and place of birth (urban, rural), highest level of education completed (none, primary, secondary and higher) and employment status (never worked, not currently working, and worked in the last seven days). For widowed subjects, timing at widowhood was derived by current age and years from widowhood. Weight and height were measured as part of the face-to-face interview process and used to calculate individual body mass index (BMI). BMI values were classified into categories for each individual based on established WHO BMI recommendations (World Health Organization, 2000). An indicator of scarcity of food was calculated from question "In the last 12 months, how often did you ever eat less than you felt you should because there wasn't enough food?" and was dichotomized as yes (every month, almost every month, some months but not every month, only in 1 or 2 months) and no (never). Wealth quintiles were derived from the household ownership of durable goods, dwelling characteristics (type of floors, walls, and cooking stove), and access to services for the dwelling, such as improved water, sanitation, and type of cooking fuel used. Household economic status was determined using a dichotomous hierarchical ordered probit model, based on ownership of these selected assets and access to certain services (Ferguson, Murray, Tandon, & Gakidou, 2003; Gakidou et al., 2007). This model returns a summary index between 0 (low ownership/access) and 1 (high), whose quintiles are entered into the logistic regression as a covariate. Subjects were asked to rate

[1]Reasons for non-response in the Mexico survey were refusal (40%), failure to locate the respondent (36%), respondent resident elsewhere (18%) and other (6%). No further information is available for the Mexican non-respondent households and so it is not possible to ascertain the extent of potential non-response bias.

their health at time of interview (bad/very bad, moderate, good/very good). The difficulty of dealing with conflicts and tensions with other people in the last 30 days and depression status was evaluated using 3 categories (none, mild, moderate/severe). Well-being was evaluated as unhappy/very unhappy, neither happy nor unhappy, happy/very happy, answering question "Taking all things together, how would you say you are these days?" Loneliness was evaluated as "Did you feel lonely yesterday?"

Whilst SAGE represents a unique set of data on the health and wellbeing of older people in LMICs, it has a number of limitations for the purposes of this analysis. First, SAGE asks older people about their present marital status and the period they have held this status. As such, it only provides data for current widows, not for those who have remarried. Second, SAGE does not provide data on individual (as opposed to household) ownership of assets, such as land or jewellery. These data would be helpful to assess the means by which widowhood may confer disadvantage, such as through exclusion from inheritance. Third, SAGE does not provide disaggregated data for individual income or consumption. Consequently, it is not possible to assess the extent to which widows are disadvantaged in socio-economic terms within the household, only at the level of the household. By contrast, SAGE has a very large number of items referring to individual health and wellbeing and these do permit some analysis of individual level effects. Finally, SAGE does not provide data on older people's reproductive history. Qualitative evidence from some countries suggests that the consequences of widowhood for women depend on whether they have already given birth to a son who survives into adulthood (Lamb, 2000). Despite these important limitations, SAGE has a number of strengths including systematic data for different countries and a wide range of items relating to health, quality of life and socio-economic status. This permits a more comprehensive analysis of potential deprivations than is often possible with other surveys.

(c) Statistical methods

Prevalence rates and means are age-standardized by age groups (50–64, 65–74 and 75+) (Ahmad et al., 2001) and using the WHO standard population. A multivariate logistic regression analysis investigated the association between wealth quintile (poorest vs others) and marital status (married as reference), adjusting for age, educational level and location. Generalised logits models examined the relationship of both depression and self-reported health to marital status, adjusting for age, educational level and location. A generalised logits model explored the association between conflict and marital status, adjusting for wealth quintile. Goodness of fit was evaluated by plotting the estimated values versus the residuals and through the Hosmer and Lemeshow's test. Multicollinearity was checked by computing the tolerance and the variance inflation produced by the regression analyses. Analysis was performed using the SAS 9.2 (Statistical Analysis Software, SAS institute) survey procedure which produces estimates from complex sample survey data, taking into account the individual weights, cluster and strata. The significance level was set at 0.05.

3. RESULTS

(a) The prevalence of marital status and timing of widowhood

Table 1 shows the prevalence of marital status for women aged 50 and over in the SAGE countries. There are large national variations in the prevalence of widowhood: 42.1 per cent of women in Ghana were widowed compared to only 17.5 per cent in China. These national variations are likely to result from a combination of effects. First, there were large differences in the risk of spousal mortality across the five countries: estimated male survival rates to age 60 in 2000/2005 ranged from 81.3% in China to 33.5% in South Africa (United Nations Population Division, 2002). In the case of Ghana average age gaps at age of first marriage are very high by international standards, increasing the probability that women will outlive their husbands (Barbieri & Hertrich, 2005). Second, the prevalence of widowhood in later life reflects national variations in the rate of widow remarriage. In India it is very unusual for female widows to remarry, whereas in China this is a common practice (Huang, 2012). Thirdly, national variations reflect different prevalence of divorce and separation, which for women ranged from 17.81 per cent in Ghana to 0.86 per cent in India. Finally, there may be varied cultural understandings of marital status, including potentially blurred distinctions between marriage and other forms of partnership in some settings. This can be seen in South Africa, where over a third of older women reported that they had never been married or in a cohabiting relationship. This was partly a consequence of an apartheid era policy which barred official recognition of customary unions (Gustafsson & Worku, 2006). Linked to this, stigmatisation of divorce or widowhood may, in some settings, lead to response bias (Mand, 2005). In contrast with national variations, there were no significant differences in the prevalence of marital status between rural and urban populations for women, with the exception of South Africa, where widowhood was more prevalent in rural areas (p-value <.0005) (data not shown).

Table 2 shows the prevalence of timing of widowhood in older women's lives. In all countries, the majority of older women had been widowed since the age of 50 or more, but there are significant variations in the rate of widowhood at younger ages. In South Africa and India a significant proportion had been widowed under the age of 40 (18.1 and 16.5 per cent, respectively), compared to just 6.1 per cent in China. High rates of early life widowhood are likely to result from lower rates of remarriage (in the case of India) and high rates of spousal mortality due to HIV, violence and other causes (in the case of South Africa). In Ghana relatively low rates of older women widowed since young ages may in part reflect the practice of forced widow remarriage in parts of the country (Oppong, 2006).

(b) Widowhood and socio-economic status, health and wellbeing

Table 3 presents the age-adjusted prevalence of a range of outcomes relating to the socio-economic status, health and quality of life of women aged 50 and over, according to their marital status. For all countries the prevalence of widowed older women in the lowest quintile households was significantly higher (ranging from 21.3 per cent in South Africa to 31.6 per cent in China) than for married women (p- value<.0001 for all countries). This does not in itself mean that widowhood was associated with economic disadvantage through the life-course. If early life deprivation is associated with widowhood in adulthood (and with

remaining unmarried after widowhood), then any association between widowhood and poverty may be due to a link between early and later life deprivation, rather than the specific effect of widowhood. Consequently, it is useful to include data which indicate socio-economic status in early life, such as education. Table 3 shows that having no education was significantly associated with widowhood in all the study countries other than the Russian Federation. Table 4 presents the findings of a multivariate model adjusted for education, as well as place of birth (rural/urban) and age. Widowhood (compared to being married) was significantly associated with being in the lowest wealth quintile for all countries other than South Africa. Taken together, Table 3 and Table 4 indicate that widowhood was associated with early life deprivation, but that it also had an independent effect on wealth status in later life.

Although widowhood is associated with a higher risk of economic deprivation at the household level, it is also instructive to analyse individual level indicators. If the majority of widows live alone, the household patterns of economic deprivation will closely coincide with individual ones. Also, solitary living is sometimes identified as a potential pathway between widowhood and economic vulnerability, impaired mental health and poor quality of life (UN DESA, 2005). Table 3 shows that more widowed women live alone than married women. However, there are significant national variations in rates of living alone among widows, ranging from 7.5 per cent in India to 54.3 per cent in the Russian Federation. The low prevalence of Indian female widows living alone is noteworthy, given the widespread claims that widowhood is strongly associated with economic vulnerability and deprivation in that country.

Separating out individual and household socio-economic status is not an easy task, yet it has been argued that failing to do this may understate the real levels of disadvantage experienced by widows (Drèze & Srinivasan, 1997). Whilst it is widely accepted that it is not feasible to extract individual data on income or consumption from household data (Haddad & Kanbur, 1990), SAGE includes other items relating to individual deprivation, including nutritional status. Table 3 presents associations between marital status and respondents who reported experiencing food scarcity. The most notable variations in food scarcity occur between countries, rather than by marital status, with rates for older women ranging from 0.8 per cent in China to 44.1 per cent in Ghana (p-value <.0001). In all countries other than the Russian Federation, widowed women experience more food scarcity than married women (although in South Africa the p-value is not significant). Supplementary Table S1 in the Appendix presents a multivariate model of food scarcity adjusted for education, rural/urban location and age, which only generates a significant association for India (OR=1.52; CI 1.15–2.00).

Data for being underweight (Table 3) again show large national variations, but do not demonstrate an obvious pattern of associations with marital status. This in part may be because standard BMI measurements are less effective in demonstrating the nutritional status of people at very old ages (Price, Uauy, E.Breeze, C.Bulpit, & A.Fletcher, 2006). Nonetheless, the high prevalence of underweight older women in India is striking, particularly in comparison with a low-income country such as Ghana. In the case of India, being a widow is associated with being underweight compared to married women (p-value . 0004), and being underweight is associated with being a widow since aged under 45. Taken

together, the findings on food scarcity and low BMI indicate that widowhood is significantly associated with poor nutrition in India, with less robust effects for the other SAGE countries.

SAGE provides some opportunities to assess mechanisms that may link widowhood to economic deprivation, where this effect occurs. The main sources of income and livelihood for older people in LMICs are pensions, employment and family support. Table 3 shows that in all countries other than South Africa, a smaller proportion of widows lived in pensioner households, although the effect was only significant in Ghana (p-value <.0001). Conversely, in South Africa widowhood was significantly associated with being in a pensioner household (p-value .0203). This suggests that public policies may, in part, account for national variations in patterns of widowhood and deprivation. Table 3 shows that a smaller proportion of widows had worked in the previous week in all countries other than India, although the effect was only significant for China (p-value = .0006). The lack of association between widowhood and not working in India contradicts the claims made by other studies for that country (Kitchlu, 1993). It is also surprising given the socio-economic deprivations associated with widowhood in India, although working in later life may signify economic necessity as much as opportunity or advantage (Lloyd-Sherlock, 2012).

SAGE includes a wide range of items relating to older people's quality of life. In terms of self-reported wellbeing, a higher proportion of widows were unhappy/very unhappy in all countries other than the Russian Federation, with significant associations for China (p-value<.0001), Ghana (p-value = .0019) and India (p-value<.0001). Conversely, in the Russian Federation marriage was significantly associated with being unhappy/very unhappy. Widowhood was significantly associated with loneliness in China and the Russian Federation (p-value<.001). Separate multivariate analysis controlling for education, age and rural/urban location also found significant associations for China (OR 5.42; CI 4.06–7.24) and the Russian Federation (OR 4.09; CI 2.50–6.71) (see Supplementary Table S2 in Appendix). Table 3 also shows significant associations between marital status and reported levels of conflict with other people (p-value <.0001 in all countries other than Ghana: p-value=.0009). This is particularly notable in India, where 42.1 per cent of widows reported moderate/severe conflict, compared to 29.3 per cent of married women. Widowhood is associated with relative poverty and poverty itself may potentially increase the risk of household conflict. Table 5 shows that, controlling for wealth quintile, being a widow was still significantly associated with conflict in all countries other than Ghana.

Finally, Table 3 presents data on selected health outcomes. In all countries other than Ghana widowhood was significantly associated with bad/ very bad self-rated health status (p-values of <.0001 for China, equal to .0018 for India, .0455 for Russia and .0027 for South Africa). Separate multivariate analysis of self-reported health controlling for education, age and location only found a significant association for bad/very bad health for women in China (OR 1.41; CI 1.09–1.82) (Table 6). Table 5 shows that a higher proportion of widows reported moderate/severe depression in all countries, with significant associations for China (p-value<.0001), Ghana (p-value = .0221), India (p-value<.0001) and the Russian Federation (p-value = .0050). Table 7 presents the results of the same multivariate model as used for self-reported health and finds significant associations between widowhood and moderate/ severe depression in China (OR 1.89; CI 1.25–2.88) and India (OR 1.76; CI 1.32–2.34). This

supports the findings of separate studies from China and Brazil (Suetomoto et al, 2012; Li et al, 2005).

DISCUSSION

This paper presents the first comparative analysis of the effects of old age widowhood on a range of deprivations, drawing on nationally representative samples from five low and middle-income countries. A number of general findings emerge from this analysis. Although widowhood clearly does not mean poverty and deprivation for all women, in all five countries, being a widow is significantly associated with deprivations in at least some domains when compared to their married counterparts. The association between widowhood and being in the poorest household wealth quintile was most consistent across the five countries. Associations with conflict and depression were also broadly consistent. For other forms of deprivation, national experiences were more varied. Only in one case, (self-reported wellbeing in the Russian Federation) was widowhood associated with a lower risk of a deprivation. The space and scope for contextualised comparisons across countries and groups is limited, and there are clear national variations in the patterns and the strength of these associations. Taken together, these five national experiences show that the effects of widowhood are strongly framed by a range of contextual effects and that generalised cross-national claims should be avoided.

In India widowhood was prevalent and strongly associated with a wide range of deprivations, including relative poverty, poor nutritional status, poor health, quality of life, depression and conflict. These findings support the particular prominence of claims made about widowhood and disadvantage in the Indian academic and policy literature. In the light of evidence that widows are often discriminated against in the household allocation of resources, the real level of association between widowhood and poverty may be greater than these household level indicate. Associations with poverty and disadvantage cannot be explained by lower rates of economic participation by older widows, by solitary living or lower rates of pension coverage (which were low for all women). It is likely that these deprivations resulted from more complex processes of intra-household and community discrimination that are not captured by SAGE, but are well-documented elsewhere (Chen, 2001; Nayar, 2006).

In China, mainly due to higher rates of remarriage, widowhood was relatively uncommon, but still affected 17 per cent of women aged over 50. Remarriage also explains the low proportion of older women widowed since early adulthood. It is possible that the strong association with household poverty resulted from selective remarriage, whereby poorer widows were less likely to remarry than wealthier ones. Other studies show that remarriage in China is positively associated with income and education (Wang & Zhao, 2010). These effects will have been compounded by incomplete pension coverage, especially in rural areas (Shen & Williamson, 2010) and by lower rates of economic participation by widows. The general availability of food in China means that widowhood was not associated with individual nutritional deprivation, but there were clear associations between widowhood and bad/very bad wellbeing, depression, loneliness, poor self-rated health and conflict. This is in line with an association between widowhood and loneliness reported by Yang and Victor

(2008). The strength of these associations compared to the other SAGE countries in part reflects the larger sample size for China.

Ghana provides an example of prevalent widowhood in a context of generalised poverty and deprivation. The country had the highest rate of widowhood for older women among the five SAGE countries (42 per cent), mainly due to large age spousal gaps and high rates of male adult mortality. In a context of very limited social protection (Aboderin, 2004), widowhood was associated with household poverty and individual food scarcity (which was widespread for all older people). Widowhood was also significantly associated with bad/very bad wellbeing and depression, but not for self-reported health or conflict. Taken together, the findings indicate a less consistent pattern of deprivations associated with widowhood than in other countries, albeit in a setting of generalised poverty, limited education for older cohorts, low nutrition and poor health. This has occurred in the absence of effective policies specifically concerned with widowhood and vulnerability (Kutsoati & Morck, 2012). The findings challenge generalised claims about widowhood and relative disadvantage in Ghana, although these claims may be more valid in the rural north of Ghana where particular forms of discrimination occur, including accusations of witchcraft (ActionAid, 2013).

By contrast, in the Russian Federation the majority of older people in the survey had secondary education or better and there was almost universal pension coverage for women aged 60 and over. Associations between widowhood and socio-economic deprivations were inconsistent. Widowhood was significantly associated with being in the poorest wealth quintile, yet it was also associated with lower rates of food scarcity. More than half widows lived alone, reflecting low lifetime fertility rates for women in this cohort, emigration of younger adults and declining traditions of co-residence (Kashnitsky, 2013; Vishnevsky, 1996). The lack of contact with other family members may explain the low rates of reported conflict for widows, but this may also explain the association with depression and loneliness which is also reported in other studies (Averina et al., 2005).

In South Africa nearly one in five older women reported that they had never been married, suggesting a greater degree of fluidity in partnerships than in the other SAGE countries. Despite this, the proportion of older women who described themselves as widows was still substantial (37.33 per cent), and a high proportion of these women had been widowed from a young age, due to the effects of HIV/AIDS. One reason for the lack of an association between widowhood and poverty or nutrition may be an old age grant which provides pensions worth at least 100 US$ to older women, irrespective of spousal economic status. This grant has led to family pension sharing, encouraging other family members to live with beneficiaries (Lloyd-Sherlock, Barrientos, Moller, & Saboia, 2012; Woolard, Harttgen, & Klasen, 2010). The old age grant may explain why the majority of older widows (70.63 per cent) lived in households of three or more. Despite this, widowhood was still associated with conflict and depression, suggesting that pension sharing did not always occur in a context of harmonious family relations.

There are a number of limits to this comparative analysis. Significant associations in themselves do not represent conclusive evidence of cause/effect relationships between widowhood and deprivation. Where there are potential confounding effects (such as the

influence of early life deprivation on later life poverty or the influence of poverty on conflict) these have been built into simple multivariate models. However, the SAGE survey does not include a number of items, which would be of explanatory value, such as data on individual asset ownership (which could shed light on the extent of widow discrimination in inheritance) or on older women's reproductive histories (which would analysis of the effects of having a surviving adult sons). Data for the second wave of SAGE are now being collected. This will offer the opportunity for longitudinal analysis of the effects of incident widowhood, which may shed further light on the mechanisms that link widowhood and disadvantage, as well as the potential effect of widowhood on the risk of mortality and incident health problems.

Despite these limitations, the study calls into question the universal applicability of the dominant narrative of female widowhood and deprivation in developing countries. This discourse, which emphasises discrimination and social sanctions, does broadly correspond with the findings reported for India. By contrast, the findings for the Russian Federation conform more closely to the "loneliness and grief" model of widowhood which prevails in studies of high-income countries. South Africa, China and Ghana each have unique features and do not approximate either of these models. This highlights the need for more nuanced, evidence claims about the nature and effects of widowhood on different groups of women in different countries. This will facilitate the identification of the most vulnerable widows and the development of effective interventions.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1

Age-adjusted prevalence (%) of selected characteristics for women aged 50 and over, by country.

		China (n=6700)	Ghana (n=2374)	India (n=3496)	Mexico (n=1231)	Russian Federation (n=2300)	South Africa (n=2148)
Response rate (%)		93	78	87	53	83	78
Age (years)	[50–59]	43.3	40.1	46.8	46.9	40.9	48.1
	[60–69]	31.1	27.7	31.6	25.0	24.3	30.6
	[70+	25.6	32.2	21.6	28.1	34.8	21.3
Education	None	32.7	62.9	73.0	21.4	0.7	27.5
	Primary	37.1	21.2	18.8	58.9	5.3	45.7
	Secondary	16.7	2.3	4.3	11.1	18.3	15.2
	Higher	13.5	13.6	3.9	8.6	75.7	11.6
Location	Urban	50.4	40.5	29.6	83.1	72.8	64.0
	Rural	49.6	59.5	70.4	16.9	27.2	36.0
Marital status	Never married	0.6	1.4	0.4	10.8	3.7	18.8
	Married/Cohabiting	80.4	38.7	59.8	60.1	50.6	36.4
	Separated/Divorced	1.5	17.8	0.9	6.4	10.5	7.5
	Widowed	17.5	42.1	38.9	22.7	35.2	37.3

Table 2

Prevalence (%) of widowhood for women aged 50 and over according to time of widowhood, by country.

	20–39 (n=530)	40–44 (n=400)	45–49 (n=482)	50–54 (n=715)	55–59 (n=759)	60+ (n=1864)
China	6.1	5.8	10.4	10.8	15.8	51.1
Ghana	7.3	9.0	14.1	16.7	14.8	38.1
India	16.4	9.9	12.1	19.1	13.1	29.4
Russian Federation	6.7	8.0	6.0	12.2	20.7	46.4
South Africa	18.1	10.6	17.1	15.6	13.4	25.2

Table 3

Age-adjusted prevalence (%) of women according to selected characteristics.

Country			Overall (n=17009)	Married (n=10792)	Widowed (n=5313)	p-value
	Household wealth					
China		Poorest Q	16.4	13.4	31.6	<.0001
		Wealthiest Q	21.9	23.0	15.8	<.0001
Ghana		Poorest Q	20.0	15.4	24.1	<.0001
		Wealthiest Q	18.0	20.5	12.4	<.0001
India		Poorest Q	19.4	17.7	23.7	<.0001
		Wealthiest Q	23.4	25.3	17.3	<.0001
Russian Federation		Poorest Q	16.4	8.9	23.9	<.0001
		Wealthiest Q	21.8	26.1	13.9	<.0001
South Africa		Poorest Q	21.1	13.9	21.3	.0001
		Wealthiest Q	17.6	26.9	12.6	<.0001
	Education					
China		none	32.7	30.3	41.7	<.0001
Ghana		none	62.9	62.7	69.7	.0039
India		none	73.0	71.0	80.1	<.0001
Russian Federation		none	0.7	1.0	0.6	ns
South Africa		none	27.5	21.9	32.6	<.0001
	Household size					
China		1	11.7	2.8	43.8	<.0001
		2	48.2	58.2	16.5	<.0001
		3+	40.2	39.0	39.7	ns
Ghana		1	7.9	2.3	10.8	<.0001
		2	12.6	9.7	13.4	.0110
		3+	79.6	88.1	75.8	<.0001
India		1	3.0	0.1	7.5	<.0001
		2	9.2	13.0	6.4	<.0001

Country		Overall (n=17009)	Married (n=10792)	Widowed (n=5313)	p-value
	3+	87.8	86.9	86.1	ns
Russian Federation	1	29.1	1.2	54.3	<.0001
	2	42.4	66.5	23.3	<.0001
	3+	28.5	32.3	22.4	<.0001
South Africa	1	14.5	7.7	14.6	<.0001
	2	18.9	27.2	14.8	<.0001
	3+	66.6	65.1	70.6	.0206
Food scarce					
China	Scarce	0.8	0.6	1.1	ns
Ghana	Scarce	44.1	42.0	49.4	.0036
India	Scarce	17.6	15.3	22.8	<.0001
Russian Federation	Scarce	14.5	16.0	11.3	.0022
South Africa	Scarce	34.3	27.1	34.4	.0023
BMI					
China	underweight	4.2	4.0	5.2	ns
Ghana	underweight	14.4	14.0	14.0	ns
India	underweight	38.8	36.3	42.9	.0004
Russian Federation	underweight	1.0	1.0	1.0	ns
South Africa	underweight	2.6	1.9	1.8	ns
in pension households					
China	yes	43.8	44.5	42.6	ns
Ghana	yes	5.8	9.8	2.1	<.0001
India	yes	15.8	16.9	15.9	ns
Russian Federation	yes	86.4	89.4	87.9	ns
South Africa	yes	59.0	57.3	63.1	.0203
worked in the last 7 days					
China	yes	34.8	36.1	30.9	.0006
Ghana	yes	68.2	70.4	66.4	ns

Country		Overall (n=17009)	Married (n=10792)	Widowed (n=5313)	p-value
India	yes	19.9	21.1	21.7	ns
Russian Federation	yes	41.1	39.8	36.9	ns
South Africa	yes	22.2	23.2	19.7	ns
Self-reported wellbeing					
China	unhappy/very unhappy	6.2	5.9	9.4	.0001
Ghana	unhappy/very unhappy	13.7	11.2	16.7	.0019
India	unhappy/very unhappy	11.0	7.6	16.3	<.0001
Russian Federation	unhappy/very unhappy	11.2	12.5	8.3	.0024
South Africa	unhappy/very unhappy	18.4	14.7	17.9	ns
Conflict					
China	Moderate/severe	2.7	2.3	4.2	.0023
Ghana	Moderate/severe	21.7	22.7	22.1	ns
India	Moderate/severe	34.5	29.3	42.1	<.0001
Russian Federation	Moderate/severe	11.0	9.5	10.4	ns
South Africa	Moderate/severe	20.6	17.7	26.7	<.0001
Health					
China	bad/very bad	23.8	23.0	31.8	<.0001
Ghana	bad/very bad	18.3	18.4	18.2	ns
India	bad/very bad	26.3	23.7	28.8	.0018
Russian Federation	bad/very bad	22.4	21.4	25.2	.0455
South Africa	bad/very bad	17.8	13.7	19.4	.0027
Depression					
China	moderate/severe	4.9	4.4	10.6	<.0001
Ghana	moderate/severe	23.6	21.0	25.9	.0221

Country		Overall (n=17009)	Married (n=10792)	Widowed (n=5313)	p-value
India	moderate/severe	31.8	26.4	39.4	<.0001
Russian Federation	moderate/severe	17.0	14.0	18.7	.0050
South Africa	moderate/severe	27.5	25.0	29.3	.0601
Feel lonely yesterday					
China	Yes	6.3	3.8	18.6	<0.001
Ghana	Yes	12.9	13.4	12.4	Ns
India	Yes	20.5	18.0	23.5	0.003
Russian Federation	Yes	11.6	4.8	16.1	<0.001
South Africa		10.3	8.1	10.8	0.761

Table 4

OR (95% CI) for lowest wealth quintiles for women aged 50 and over. Reference category is Married/ Cohabiting (n=10792).

	Never married (n=322)	Separated/divorced (n=583)	Widowed (n=5313)
China	5.29 (1.75–15.98)	2.05 (1.26–3.34)	2.32 (1.90–2.84)
Ghana	4.24 (1.56–11.51)	1.73 (1.25–2.40)	1.79 (1.34–2.39)
India	20.44 (6.41–65.14)	3.23 (0.93–11.26)	1.76 (1.27–2.43)
Russian Federation	5.10 (2.32–11.20)	3.82 (1.94–7.52)	2.77 (1.68–4.58)
South Africa	2.78 (1.63–4.74)	1.58 (0.79–3.13)	1.03 (0.65–1.65)

Adjusted for education, age and birth location.

Table 5

OR (95% CI) for conflict for women aged 50 and more. Reference category is Married/Cohabiting (n=10792).

	Conflict	Never married (n=322)	Separated/divorced (n=583)	Widowed (n=5313)
China	Mild	0.76 (0.13–4.53)	0.55 (0.17–1.75)	1.78 (1.29–2.44)
	Moderate/severe	3.19 (0.28–37.06)	1.56 (0.30–8.21)	2.46 (1.28–4.74)
Ghana	Mild	3.93 (1.07–14.49)	1.81 (0.92–3.55)	2.57 (1.45–4.56)
	Moderate/severe	0.29 (0.04–2.41)	0.88 (0.49–1.57)	1.22 (0.76–1.96)
India	Mild	0.42 (0.05–3.93)	0.18 (0.03–1.09)	1.74 (1.14–2.66)
	Moderate/severe	1.93 (0.45–8.28)	0.54 (0.07–4.01)	2.03 (1.33–3.12)
Russian Federation	Mild	1.52 (0.45–5.09)	1.73 (0.75–3.98)	0.91 (0.48–1.71)
	Moderate/severe	2.57 (0.77–8.56)	2.99 (0.96–9.26)	2.58 (1.08–6.15)
South Africa	Mild	1.67 (0.70–4.00)	3.93 (1.30–11.87)	1.20 (0.58–2.49)
	Moderate/severe	1.13 (0.42–3.04)	4.62 (1.23–17.43)	3.54 (1.69–7.41)

Adjusted for wealth quintile.

Table 6

OR (95% CI) for self-rated health for women aged 50 and more. Reference category is Married/Cohabiting (n=10792).

	Self-rated health	Never married (n=322)	Separated/divorced (n=583)	Widowed (n=5313)
China	Moderate	0.51 (0.22–1.18)	1.140 (0.80–1.63)	1.21 (0.97–1.50)
	Bad/very bad	0.86 (0.29–2.53)	1.07 (0.59–1.94)	1.41 (1.09–1.82)
Ghana	Moderate	3.87 (1.09–13.90)	0.94 (0.66–1.340)	1.09 (0.82–1.47)
	Bad/very bad	5.26 (1.34–20.62)	1.12 (0.72–1.73)	0.97 (0.64–1.46)
India	Moderate	0.49 (0.16–1.47)	0.73 (0.24–2.29)	1.08 (0.81–1.43)
	Bad/very bad	0.60 (0.11–3.24)	1.51 (0.43–5.23)	1.33 (0.93–1.90)
Russian Federation	Moderate	0.58 (0.25–1.34)	1.70 (0.88–3.30)	0.51 (0.270–0.98)
	Bad/very bad	0.34 (0.11–1.10)	2.31 (0.83–6.40)	0.64 (0.30–1.35)
South Africa	Moderate	1.14 (0.71–1.85)	1.00 (0.53–1.90)	1.51 (1.02–2.24)
	Bad/very bad	1.59 (0.74–3.41)	1.12 (0.45–2.80)	1.63 (0.92–2.89)

Adjusted for education, age and living location.

Table 7

OR (95% CI) for depression for women aged 50 and more. Reference category is Married/Cohabiting (n=10792).

	Depression status	Never married (n=322)	Separated/divorced (n=583)	Widowed (n=5313)
China	Mild	1.18 (0.60–2.32)	1.07 (0.59–1.94)	1.28 (1.07–1.52)
	Moderate/severe	1.66 (0.45–6.16)	0.23 (0.05–0.95)	1.89 (1.25–2.88)
Ghana	Mild	0.55 (0.12–2.47)	0.92 (0.65–1.30)	1.07 (0.79–1.44)
	Moderate/severe	1.71 (0.63–4.60)	1.04 (0.68–1.58)	1.27 (0.93–1.74)
India	Mild	1.77 (0.49–6.42)	7.28 (2.40–22.03)	1.37 (1.02–1.83)
	Moderate/severe	1.04 (0.19–5.78)	3.01 (0.99–9.14)	1.76 (1.32–2.34)
Russian Federation	Mild	0.79 (0.30–2.10)	2.03 (1.13–3.64)	1.20 (0.80–1.80)
	Moderate/severe	1.72 (0.52–5.66)	2.48 (1.38–4.45)	1.38 (0.68–2.81)
South Africa	Mild	2.116 (1.22–3.67)	1.89 (0.92–3.89)	1.76 (1.10–2.82)
	Moderate/severe	1.15 (0.69–1.92)	1.60 (0.75–3.40)	1.30 (0.82–2.06)

Adjusted for education, age and living location.