Age differences at marriage and divorce

Ben Wilson and Steve Smallwood Office for National Statistics

This article explores the age difference of marrying and divorcing couples, calculated by subtracting the wife's age from the husband's. Age difference is of interest in the study of families and partnership behaviour. It is also important because of its link with broader socio-demographic changes, such as population ageing, delayed fertility and the provision of care.

The main finding is that between 1963 and 2005, the distribution of age differences for all marriages is very similar in each year to the distribution of age differences for the subset of couples who married in that year, but have since divorced. While there is some evidence of small variations in the proportion of marriages that end in divorce by age difference, there does not seem to be evidence of a strong association.

Introduction

Partnership is important in terms of many social, economic and demographic characteristics, such as household composition or the provision of care at older ages. The majority of demographic and sociological analysis examines people as separate units. However, when exploring partnership behaviour it is important to go beyond this and examine both of the partners as well as the interaction between their characteristics. Age appears in most analyses of partnership behaviour, but often the ages of partners are not compared. Variations in age differences for partnership formation and dissolution may be of interest in themselves in understanding partnership change, but age difference effects may be relevant to the interpretation of any other statistics involving age and partnership status.

Analysis of age difference is therefore important to policy makers, social scientists, and anyone seeking to understand society and the family. Any change in age differences over time will influence the age structure of the married and unmarried population. This relates to marriage markets and the population available to marry or at risk of divorce in the future. It also has a relationship with the population available to form any type of partnership, including cohabitation.

Previous articles in Population Trends provide a thorough discussion of age differences at marriage in England and Wales. 1,2 There are also a number of detailed research studies relating to the topic.³ Previous research shows that there are variations in the pattern of marital age differences for different marital statuses (prior to marriage). Age differences also vary by sex and age at marriage. The first part of this article illustrates and discusses these findings using distribution charts. This gives an indication of how age differences at marriage

have changed over time. The remainder of the article builds upon previous work by looking at age differences at divorce. This includes a comparison of age differences at marriage and divorce to consider whether marital age difference has any association with likelihood of divorce.

This article uses marriage and divorce data for England and Wales from 1963 to 2005.4 The article is based on all marriage and divorce events recorded over this period rather than a sample survey, which means that conclusions are not subject to sampling error. Importantly, a direct comparison can be made between aggregate marriages and divorce because the year of marriage is recorded when couples divorce. However the analysis is unable to take account of migration or events that took place outside England and Wales.5 To illustrate the general findings clearly, two or three years of marriage are selected and compared. The results may not therefore be completely representative of intervening trends, and do not cover trends in age difference at marriage prior to 1963. Data has been collated for each marriage cohort since 1963 and some discussion is provided where information is known from other work, or from this dataset. Throughout this article, age differences are calculated by subtracting the wife's age from the husband's.6

Marital age differences

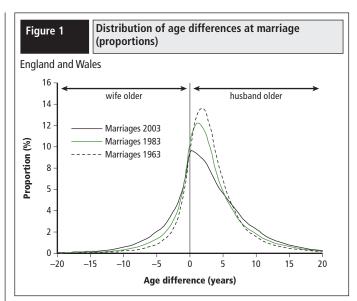
As suggested in previous research,7 there is a contrast between the relative stability of the mean age difference and the substantial variability in age difference distributions. This is also illustrated by Figure 1, which shows the distribution of age differences for all marriages in three different years: 1963, 1983 and 2003.89 For the purpose of this report it is worth highlighting the notable shift in the distribution of age differences over the last forty years.¹⁰ Changes in the mean age difference conceal this shift to a more varied distribution of age differences (and smaller frequency of the most common values) for recent marriages. This is also shown by calculating, as a measure of spread, the standard deviations of each of the distributions. The standard deviations for the three years 1963, 1983 and 2003 are 4.8, 5.4 and 6.3 years age difference respectively.11

Marital age differences and previous marital status

When looking beyond overall age differences it is important to consider data separately by wives and husbands. 12 Separating the data by sex is particularly appropriate when considering the previous marital status of marrying couples. This is because both partners may or may not have the same previous marital status. For example, a divorced woman may marry a single (never-married), widowed or divorced man.

One of the reasons for examining previous marital status is because of recent increases in the proportion of remarriages. Table 1 shows that between 1963 and 2003 the proportion of marriages involving divorcees increased by over 20 percentage points. Alongside this change, there has been a drop of almost 20 percentage points in the proportion of marriages to single individuals (slightly less for men compared with women).

Figure 2 shows the distribution of age differences for women according to their marital status before marriage. The change noted in Figure 1 between 1963 and 2003 is apparent in the difference between single brides, where the distribution of age difference is very similar to the distribution for all marriages. This is unsurprising given that the majority of marriages involve single brides, 90 per cent in 1963 and 71 per cent in 2003 (Table 1). On the other hand, brides who were previously widowed or divorced do not show any substantial change in age differences between 1963 and 2003. This is of particular interest given the recent



Note: Age differences are calculated by subtracting the wife's age from the husband's Age differences larger than 20 years are not shown, but are very uncommon

Table 1	Proportion of marriages by sex and previous marital status, England and Wales (percentages)

	1963		2003		difference ¹	
Marital status	Men	Women	Men	Women	Men	Women
Single	88.6	89.6	70.8	70.1	-17.8	-19.5
Widowed	5.3	4.6	2.2	2.3	-3.2	-2.3
Divorced	6.1	5.7	27.1	27.5	21.0	21.8

1 Difference in percentage points between 2003 and 1963

increase in remarriages. It suggests that there are two main reasons for the changing pattern in overall age differences. The first is the change in the distribution of age differences for single women. The second is the increase in the proportion of remarriages for divorced women. The age difference profile is broadly unchanged for this group, but they remain more likely than single women to marry a man of a similar age, so their increased proportion will weight the overall age difference profile towards their distribution.

Is this also true for men? Figure 3 suggests that the answer is not simple (Figure 3 is the same as Figure 2, but for marrying men). There is a similar change in the distribution of age differences for single men. This suggests that changes in the age difference distribution for single men have contributed to the overall change in age differences in the same way as single women. However, when it comes to the increase in the proportion of remarriages for divorced men, the influence upon overall age differences is not the same as for divorced women. To begin with, the distribution of age differences for divorced men is less similar to the overall distribution than the distribution for single men. Also, there is another difference between men and women shown in Figure 3. Between 1963 and 2003, the most common (mode) age difference for divorced men has fallen from husbands who are five years older in 1963 to husbands who are two years older in 2003. This shift suggests that divorced men may be making an additional contribution to the overall age difference profile.

Table 2 is similar to Table 1, but shows the proportion of marriages in 1963 and 2003 by combinations of marital status. It highlights the fact that there has been an almost equivalent rise in the proportion of single women marrying divorced men as for single men marrying divorced women. So in terms of weighting, the increased contribution of marriages where one member is divorced and one member is single has been similar for males and females.

Note: Age differences are calculated by subtracting the wife's age from the husband's Age differences larger than 20 years are not shown

Marital age differences and age at marriage

Previous research has shown that marital age difference varies according to a partner's age.¹³ **Figures 4a, 4b, 5a** and **5b** show this variation for marriages in 1963 and 2003. These figures are also split by sex.

Table 2		Proportion of marriages by previous marital status of bride and groom (percentages)				
C	D.J.J.	1003	2002	.u.ee 1		

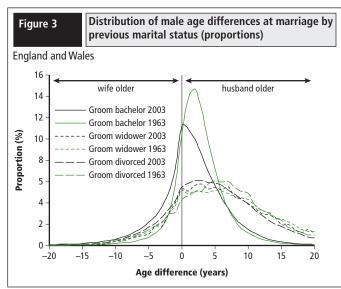
Groom	Bride	1963	2003	difference ¹
Single	Single	84.1	59.3	-24.8
Single	Widow	1.3	0.5	-0.9
Single	Divorced	3.1	10.3	7.2
Widower	Single	1.9	0.4	-1.5
Widower	Widow	2.6	0.7	-1.9
Widower	Divorced	0.9	1.2	0.3
Divorced	Single	3.6	11.0	7.4
Divorced	Widow	0.7	1.0	0.3
Divorced	Divorced	1.8	15.5	13.8

¹ Difference in percentage points between 2003 and 1963

Before looking at the distribution of age differences, it is worth considering how the distribution of marriages has changed by age at marriage. **Table 3** shows that there has been a considerable increase in the proportion of marriages at older ages between 1963 and 2003. The change reflects for the most part the combination of delays in first marriages and increases in the proportions of remarriages (see Tables 1 and 2).

Figure 4a shows the marital age difference for brides in 1963. In this year, over 84 per cent of brides were under 30. Compared with other age groups, the distributions for brides aged under 20 and between 20 and 29 are slightly skewed towards older husbands. Comparing the distributions for brides under 30 and brides over 30, the distributions are more spread for brides over 30. The standard deviation for brides aged between 20 and 29 is 4.2 years age difference whereas the equivalent figure for brides aged between 30 and 39 is 7.7 years.

Comparing Figure 4a and Figure 4b shows that for brides under 30 the 2003 distributions have smaller peak values than in 1963. Comparing 2003 with 1963, most of the distributions appear to have shifted slightly towards wives being older than their husbands, but caution should be exercised when interpreting the charts. The mean age difference has fallen for brides over 30. In 1963 it was 2.8 years for brides aged between 40 and 49, compared



Note: Age differences are calculated by subtracting the wife's age from the husband's Age differences larger than 20 years are not shown

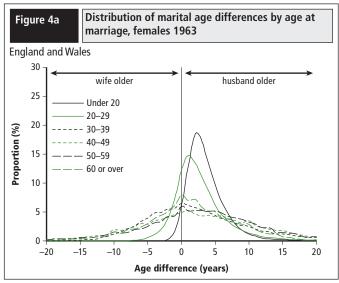
with 1.0 years in 2003. But for brides aged between 30 and 39, the mean rose from 2.8 in 1963 to 3.9 in 2003. This increase aligns with the increased proportion of marriages for brides under 30 where the husband is more than ten years older, from 8 per cent in 1963 to 28 per cent in 2003. As for 1963, comparing the distributions for brides under 30 and brides over 30, the distributions are more spread for brides over 30. The standard deviation for brides aged between 20 and 29 is 5.2 years, whereas the equivalent figure for brides aged between 30 and 39 is 6.3 years. Despite the difference, this suggests that the distributions have a more similar spread in 2003.

Table 3	Proportion of marriages by age at marriage of bride and groom (percentages)					
Age	1963		2003		difference ¹	
	Men	Women	Men	Women	Men	Women
Under 20	7.0	27.4	0.7	2.6	-6.4	-24.8
20–29	70.3	56.9	33.8	44.3	-36.5	-12.6
30–39	12.0	7.3	39.7	33.7	27.7	26.4
40-49	4.6	4.1	15.0	12.4	10.5	8.3
50-59	3.1	2.6	7.3	5.2	4.1	2.6
60 or over	2.9	1.7	3.5	1.8	0.6	0.1

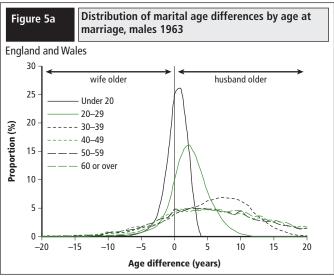
¹ Difference in percentage points between 2003 and 1963

Figure 5a shows that in 1963 grooms under 20 tend to be of a similar age to their brides, whereas those between 20 and 29 tend to be older (by approximately two or three years on average). Interestingly, there is a distinctive distribution for grooms between 30 and 39-years-old, who tend to be much older than their brides (with over 50 per cent marrying women between four to 11 years younger). By 2003 this changes, with the distribution for grooms aged 30 to 39 being more similar to those for other age groups (Figure 5b). The distributions for grooms in 2003 show the younger age groups are closer to zero age difference and have a smaller tail to the right (fewer older husbands). This pattern seems to stop once grooms are over 40.

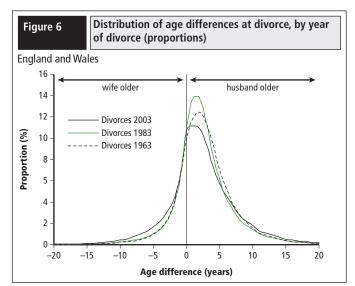
The data suggest that trends in age at marriage have affected marital age differences. The distribution of age differences for men and women who marry at older ages are more spread out (they have a larger variance). Consequently, increases in mean age at marriage over the last forty years, due to delays in first marriage and increasing remarriage, are one factor in the overall distribution of age differences becoming more varied. This change in the overall variance is also attributable to shifts in the distributions within age-groups.



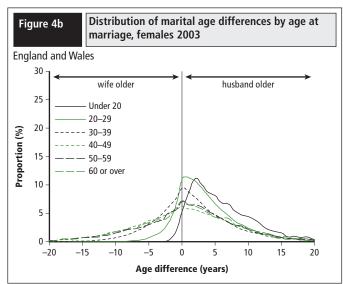
Note: Age differences are calculated by subtracting the wife's age from the husband's Age differences larger than 20 years are not shown



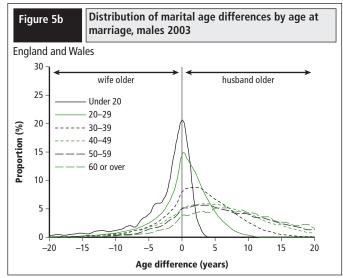
Note: Age differences are calculated by subtracting the wife's age from the husband's Age differences larger than 20 years are not shown



Note: Age differences are calculated by subtracting the wife's age from the husband's Age differences larger than 20 years are not shown



Note: Age differences are calculated by subtracting the wife's age from the husband's Age differences larger than 20 years are not shown

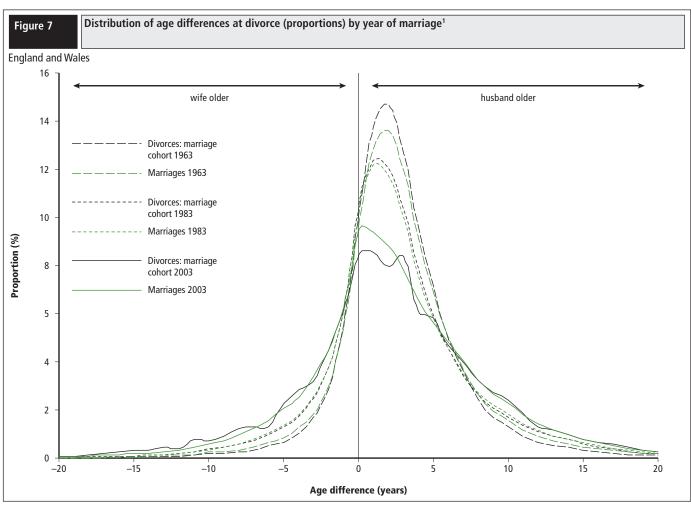


Note: Age differences are calculated by subtracting the wife's age from the husband's Age differences larger than 20 years are not shown

Age differences at divorce

For a particular couple, their age difference at divorce is the same as age difference at marriage. However, when considering the total population marrying or divorcing in a particular year, the patterns of age differences will be different because the two groups of people (the married and the divorcing) are different.

Figure 6 shows the distribution of age differences for the divorces that occurred in 1963 (32,052 divorces), 1983 (147,479) and 2003 (153,490). Unlike the equivalent chart for marriages (Figure 1), it does not suggest a straightforward transition between 1963 and 2003 because the distribution for 1963 lies in between the distributions for 1983 and 2003. The reason for this is because of the composition of divorces in the respective years, and one of the principal aspects of the composition is the duration of marriages that end in divorce.¹⁴ Duration of marriage relates to marriage cohorts. Hence, in order to understand Figure 1, it is appropriate to reorganise the data into marriage cohorts. This then allows a direct comparison with the marriages data shown previously.



Note: Age differences are calculated by subtracting the wife's age from the husband's. Age differences larger than 20 years are not shown. 1 The distributions for all marriages are also shown for 1963, 1983 and 2003

Linking age differences at marriage and divorce

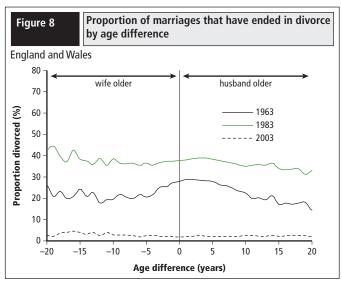
It is possible to plot the distribution of divorce age differences by the year of marriage in which the divorces occurred (marriage cohort). This is shown in Figure 7, which uses the three marriage cohorts examined previously, 1963, 1983 and 2003. The chart shows the distribution of age differences for the divorces that have taken place for the marriages that occurred in the years 1963 (94,102 divorces), 1983 (129,477) and 2003 (5,996). The chart also shows the age distributions of all marriages in each of these years (also shown in Figure 1). This allows comparison between the age distribution of all marriages and the distribution of marriages that have ended in divorce by the end of 2005. As opposed to Figure 6 (divorces by year of divorce), Figure 7 (divorces by year of marriage) suggests a transition between 1963 and 2003. The patterns are similar for both marriages (by year of marriage) and divorces (by year of marriage).

There is some existing research on age differences at divorce. Some research using survey data has shown that divorce does vary according to age difference,15 but there is other survey research that contradicts this finding.16 Research using the same method (comparing marriages and divorces by year of marriage for all registered events) has not been found. However, there is some research of registered events looking at age difference and divorce. Again, some of this suggests that age difference is an indicator of likelihood of divorce, 17 whereas other research using registration data suggests no association. 18 One other piece of comparable research used age differences of the married population and divorces in 1991 in Canada and suggested for that particular period there was a higher divorce rate for couples with a larger age difference.19

Comparisons such as those in Figure 7 show a close match between the age distribution of marrying couples and those that subsequently divorce, but may mask real differences by age disparity. Figure 8 looks at the proportion of marriages that end in divorce for each individual age difference. Looking first at marriages that occurred in 1983, the proportion of marriages that have ended in divorce varies between 31 and 44 per cent. Although it might be argued that there is a difference between older husbands and older wives for this year, the differences are not conclusive. For example, 36 per cent of marriages have ended in divorce for both husbands who are eight years older than wives and wives that are eight years older than husbands. Looking at 1963, the most obvious age difference variation appears to be the larger proportion of marriages ending in divorce where the age difference is small. It might be argued that this is to be expected given that where there is a large age difference marriages may be more likely to end due to the death of a partner. This raises the question as to whether 1983 would suggest a higher likelihood of divorce for larger age differences if mortality were taken into account. Given the variability in the results for 1983, where wives are between 10 and 20 years older than husbands, it is not possible to draw a decisive conclusion. As expected, given the small amount of time couples have been married, the proportions ending in divorce are small for marriages that took place in 2003. Nevertheless, there does not seem to be much variation between age differences.

Analysis of all marriage cohorts in England and Wales between 1963 and 2003 showed similar results to those shown in Figure 7 and Figure 8. Considering this and the evidence shown in the charts, it appears that age difference does not show a strong association with likelihood of divorce.²⁰ Despite this, it is worth considering that the conclusion will

depend upon which marriage cohort is examined. It is also possible that associations may exist when additional factors are considered such as previous marital status and age at marriage.



Note: Age differences are calculated by subtracting the wife's age from the husband's Age differences larger than 20 years are not shown

Divorces by previous marital status

Previous marital status is recorded for both individuals when a couple divorce. As with the marriage statistics shown above, it is the marital status prior to marriage. In the case of divorce statistics, it is the marital status prior to the marriage which is ending in divorce. For example, a previous marital status of divorced indicates that the divorce being recorded is not an individual's first divorce. As for marriages, it is possible to analyse divorces according to previous marital status. Similar to the last section, this is done by marriage cohort (year of marriage) as opposed to year of divorce.

Figures 9a and 9b demonstrate that the distributions by previous marital status show a similar result to those for all marital statuses combined (Figure 7). In other words, the patterns are similar for both marriages (by year of marriage) and divorces (by year of marriage). Again, this suggests that age difference is not strongly associated with

Distribution of age differences at marriage and Figure 9a divorce by previous marital status (proportions) Males – 1983 marriage cohort **England and Wales** 16 wife older husband older 14 Divorces: single 12 Marriages: single Proportion (%) Divorces: divorced 10 Marriages: divorced 8 Divorces: widowed Marriages: widowed 5 4 2 -20 -15 Age difference (years)

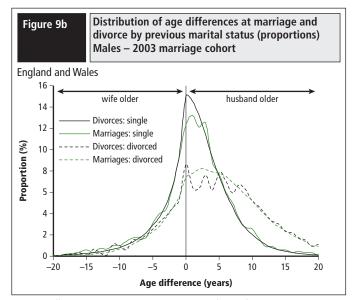
Note: Age differences are calculated by subtracting the wife's age from the husband's Age differences larger than 20 years are not shown

likelihood of divorce, even when previous marital status is taken into consideration. Although Figures 9a and 9b only show results for males, the equivalent charts for females show similar results. As such, the distribution of female divorces by year of marriage and previous marital status are similar to the distributions for female marriages (shown in Figure 2). The results are also similar for the years not shown. For example, the distribution of age differences for single males marrying in 1995 is very similar to the distribution of age differences for single males who married in 1995 and have since divorced. There is no substantial trend for the most recent marriage cohorts (such as 2003, as shown in Figure 9b). This suggests that age difference patterns do not vary for shorter durations of marriage.

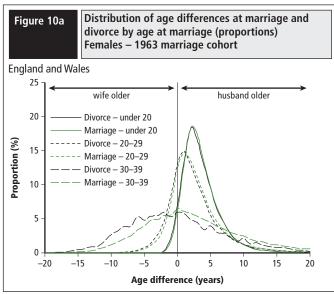
Divorces by age at marriage

The variation in marital age difference by age at marriage is shown in Figures 4a, 4b, 5a and 5b. It is possible to compare these distributions (for marriages by year of marriage and age) with those for divorces (by year of marriage and age at marriage). This comparison is shown for females in Figures 10a and 10b for 1963 and 1983 and selected age groups. Again, these charts suggest that there is very little difference between the age difference distribution for marriages (in a particular year of marriage) and divorces (occurring to those who married in the same year). Although data are not shown for males, for older age groups, or for other years, this conclusion is broadly similar for all combinations of sex, age (at marriage) and marriage cohort. There are a few exceptions to this overall conclusion. Figure 10a suggests that women who married in 1963 aged between 30 and 39 were more likely to divorce if they were older than their husbands. For women who married at those ages in 1983 (Figure 10b) the difference is not as noticeable, which suggests that more recent cohorts do not show the same pattern.

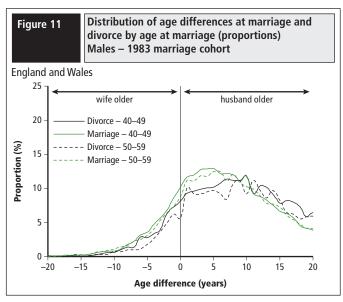
To investigate this further, Figure 11 shows similar results to Figure 10b, but for males who were married at older ages in 1983. The numbers behind the distributions are not as large. From 1983 to 2005, there have been fewer than 2,000 divorces to males who were married in 1983 aged 50 to 59 years-old. Nevertheless, this chart suggests that men may be slightly more likely to divorce if they marry above age 40 and are older than their wife by ten or more years.



Note: Age differences are calculated by subtracting the wife's age from the husband's Age differences larger than 20 years are not shown. Widowed are not shown because the number of divorces to previously widowed individuals were very small. For 2003 the distributions for marriages (by year of marriage) are identical to those shown in Figure 3.



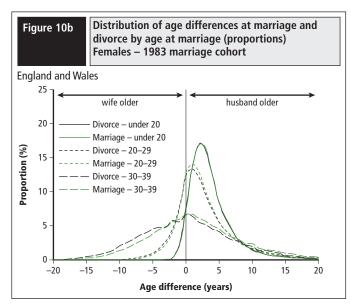
Note: Age differences are calculated by subtracting the wife's age from the husband's Age differences larger than 20 years are not shown



Note: Age differences are calculated by subtracting the wife's age from the husband's Age differences larger than 20 years are not shown

Summary and discussion

The subject of age differences at marriage has been explored at length in previous research. This article illustrates previous findings using charts of frequency distributions for selected years. It is well known that husbands tend to be older than wives and that mean age differences have tended to remain fairly stable over time. It is also known that age difference distributions exhibit a large amount of variability. It appears that the distribution of age differences is more varied for recent marriages (Figure 1). One reason for this change relates to previous marital status. Between 1963 and 2003 the proportion of marriages involving divorcees increased by over 20 percentage points, while the proportion of marriages involving single individuals decreased by approximately 18 to 19 percentage points (Tables 1 and 2). Over the same period, there has been a notable change in the age difference distributions for both single men and women between 1963 and 2003 (Figures 2 and 3). Therefore, although the larger proportion of remarriages has contributed to changing age difference distributions, another influential factor is changes to the distribution of age differences for marriages of single individuals.



Note: Age differences are calculated by subtracting the wife's age from the husband's Age differences larger than 20 years are not shown

Recent years have seen an increase in the proportion of marriages involving older individuals (Table 3). This increase in average age at marriage has affected the overall trend in marital age differences because the distribution of age differences for men and women who marry at older ages are more spread out (they have a larger variance). As well as changes in the average age at marriage, Figures 4a, 4b, 5a and 5b also show that age difference distributions have changed for particular age groups, particularly those under 30. The changes relating to age at marriage therefore relate to changes in the individual distributions and changes in the proportion of marriages within each distribution.

Having explored marital age differences, these can be compared with age differences at divorce. This comparison makes it possible to see whether people who divorce have a different profile of age differences. The results show that there are few distinctions in these profiles for particular marriage cohorts. This is illustrated by the three years shown in Figure 7. Presenting the same information in a different way, Figure 8 shows the proportion of marriages ending in divorce by age difference. There are small variations but these are not consistent across marriage cohorts. This suggests that propensity to divorce is not strongly associated with marital age difference at an aggregate level, although further research would be required to control for mortality and any other factors that may affect the risk of divorce.

Analysis of divorces by previous marital status broadly confirms the general finding. The distributions of age differences are similar for comparable marriages and divorces when disaggregated by previous marital status (Figure 9a and 9b). Analysis by age at marriage is also consistent with the general finding to an extent, although there is some evidence that individuals who marry above age 30 and are older than their spouse by more than ten years may be more likely to divorce (Figures 10a, 10b and 11). This seems more noticeable for older marriage cohorts, such as those in 1963.

Before concluding that there is no strong association between marital age differences and propensity to divorce, it is important to consider the effects of mortality. Given that older people are more likely to die, couples with larger age differences may be more exposed to death than couples who are the same age. The interaction between exposure to death and divorce is unlikely to be simple, but it is worth mentioning here in general terms. If marriages with large age differences are more likely to end due to the death of a partner (compared with couples who are of similar age) then this might mask the fact that they have an increased

probability of divorce. If all other things remain equal, an increase in deaths will reduce the population at risk of divorce, and therefore result in fewer divorces (assuming the same divorce rate). For couples with larger age differences, a decrease in divorces due to more deaths might hide an increased risk of divorce due to the age difference. It follows that the results should be treated with caution, particularly where one partner reaches an age where mortality becomes significant. However the use of almost all registered marriages and divorces between 1963 and 2005 should make the data more robust than analysis using surveys. As such, it seems reasonable to conclude that despite any popular belief to the contrary, there does not appear to be any strong association between marital age difference and probability of divorce.

Key findings

- Preliminary results suggest that there does not appear to be a strong association between marital age difference and likelihood of divorce, although other factors were not controlled for. Between 1963 and 2005, the distribution of age differences for all marriages is very similar in each year to the distribution of age differences for the subset of couples who married in the same year, but have since divorced.
- More detailed analysis that explores previous marital status (prior to the marriage in question) also suggests that marital age difference does not seem to be strongly associated with likelihood
- Analysis of age at marriage suggests that for some marriage years there may be an association between age difference and probability of divorce for individuals who marry above age 30 and are older than their spouse by more than ten years. This seems more noticeable for older marriage cohorts, such as those in 1963.

Acknowledgements

We are very grateful for the comments of all reviewers, which greatly improved ths article.

References

- Ní Bhrolcháin M (2005) The age difference at marriage in England and Wales: a century of patterns and trends, Population Trends 120, pp 7-14
 - www.statistics.gov.uk/articles/population_trends/ PT120AgeDifference.pdf
- Hancock R, Stuchbury R and Tomassini C (2003) Changes in the distribution of marital age differences in England and Wales, 1963 to 1998, Population Trends 114, pp 19-25
- www.statistics.gov.uk/downloads/theme_population/PT114.pdf
- There are many relevant studies, including the following: Ní Bhrolcháin M and Sigle-Rushton W (2005) Partner supply in Britain and the US: estimates and gender contrasts, *Population* Vol. 60, pp. 37-64
 - Ní Bhrolcháin M (2001) Flexibility in the marriage market, Population – An English Selection 13, pp 9–48
 - Lampard R (1993) Availability of marriage partners in England and Wales: a comparison of three measures, Journal of Biosocial Science 25, pp 333-350
 - Ní Bhrolcháin M (1992) Age difference asymmetry and a two-sex perspective, European Journal of Population 8, pp 23-45 Bytheway WR (1981) The variation with age of age differences at marriage, Journal of Marriage and the Family, Vol. 43, No. 4, pp. 923-927

- Goldman N, Westoff C and Hammerslough C (1984) Demography of the marriage market in the United States, Population Index 50, pp 5-25 Casterline J, Williams L and McDonald P (1986) The age difference between spouses: variations among developing countries, Population Studies 40, pp 353-374
- Presser H (1975) Age differences between spouses, American Behavioral Scientist 19, pp 190-204
- Unless otherwise stated all data refer to England and Wales. The choice of 1963 as the first year for analysis was made due to the availability of electronic records and to match the analysis in PT114.
- It should be noted that marriages and divorces recorded in England and Wales will not include all marriages and divorces to residents of England and Wales. Marriages and divorces abroad are not recorded and are missing from the data. The latest marital status projections included a variant based on marriages abroad (see link below), but there is no ideal source of information on the topic. Current information suggests that marriages abroad account for around 10% of all marriages to England & Wales residents. It should also be noted that a very small number of events will have been excluded from the analysis in this article due to missing data. www.gad.gov.uk/Demography_Data/Marital_status_ projections/2003/marriages_abroad.asp
- This is consistent with previous reports, which have calculated age difference in this way, probably because husbands have tended to be older than wives. The calculation is based upon age recorded at marriage registration. As with previous reports, it is assumed that dates of marriage occur randomly with respect to birth dates and that the age difference in years is distributed randomly between d-1 and d+1, but centred on d, where d is the age difference based on recorded age at marriage. There is no material evidence to reject this assumption.
- Ní Bhrolcháin M (2001) above
- Technically, the data on age differences are discrete and should not be presented as a linear series. Although it would be more accurate to present these data in a histogram, they have been presented in a different format in order to be able to display more than one series. It is hoped that this improves visualisation of the data.
- For direct comparison, the article in Population Trends 114 shows similar charts comparing the distribution of marital age differences by previous marital status in 1963 and 1998.
- 10 The distributions for the three years shown in Figure 1 do not capture the whole time series of changes between 1963 and 2003. However, they provide a very good summary of the general trend. The main variation is for the years between 1965 and 1971, where the most common age difference is slightly larger than in 1963 and the distribution is shifted slightly to the left (slightly fewer older husbands). Between 1973 and 1983 the distribution moves incrementally from that shown for 1963 to that shown for 1983. Between 1983 and 1996 the distribution moves incrementally from that shown for 1983 to that shown for 2003. In 1996 the distribution is very similar to the one shown for 2003, and this is also true for all years between 1996 and 2003.
- 11 Another way of showing this is as follows. In 1963, 90 per cent of marriages had an age difference between –3 (wife three years older) and 10 (husband ten years older). This is the central 90 per cent, with the remaining 10 per cent split between 5 per cent being lower (wife older by more than three years) and 5 per cent being higher (husband older by more than ten years). In 2003, the limits of this central 90 per cent of the distribution increased to -7 and 13.
- 12 Ní Bhrolcháin M (1992) above
- 13 For examples see: Ní Bhrolcháin M (2001) Flexibility in the marriage market, Population – An English Selection 13, pp 9–48 Bytheway WR (1981) The variation with age of age differences at marriage, Journal of Marriage and the Family, Vol. 43, No. 4, pp. 923-927

- 14 See ONS (2008) Proportion of Marriages Ending in Divorce, Population Trends 131, pp 28–36
- 15 Some studies of Norwegian survey data have shown that age difference has a statistically significant relationship with divorce. Tjøtta S and Vaage K (2005) Public Transfers and Marital Dissolution
 - www.econ.uib.no/pub/Sigve/PublTransfMarDissol FinalVersion.pdf Lyngstad TH (2004) The Impact of Parents' and Spouses' Education on Divorce Rates in Norway, Demographic Research, Vol. 10, Article
 - www.demographic-research.org/Volumes/Vol10/5/10-5.pdf
- 16 Survey data from the USA has shown that there is no significant correlation between age difference and divorce: Bramlett MD and Mosher WD (2002) Cohabitation, Marriage, Divorce, and Remarriage in the United States, Vital and health statistics. Series. 23, Data from the national survey of family growth, www.cdc.gov/ nchs/data/series/sr_23/sr23_022.pdf
- 17 Janssen JPG, de Graaf PM, Kalmijn M (1999) Heterogamy and divorce: an analysis of Dutch register data, 1974-1994, Bevolking en Gezin, Vol. 28, No. 1, pp. 35-57
 - "The analysis of this data set shows that several forms of heterogamy affect the divorce risk. Couples in which spouses differ in age (especially if the wife is older than her husband), couples in which husband and wife have different religions, and couples with different nationalities have higher divorce risks than homogamous couples." popindex.princeton.edu/browse/v65/n4/g.html
 - Also see, Kajita E, Iki M, Fukui M, Ogata A, Takayama S, Yamazaki K, Ooida T, Yajima T (1990) Rate of incidence of divorce in birth cohorts classified by age difference between married couples [Nippon Eiseigaku Zasshi]
 - "The cumulative divorce rate was lowest when husbands were one to four years older than wives. This tendency was quite similar in different ages and cohorts"
 - www.ncbi.nlm.nih.gov/pubmed/2255111

- 18 See Vano B (editor) (1999) Population Development in the Slovak Republic, POPIN Czech Republic Population Information "If the difference in age is not too high (the man is not older by more than 8 years or a women is not older by more than 5 years), the difference in age does not have an impact on the probability of divorce. At high age differences, also the excess male mortality should be taken into account." popin.natur.cuni.cz/html2/publications/papers/popdev99sk/divorce. pdf
- 19 Gentleman J F and E Park (1994) Age differences of married and divorcing couples, Health Reports 6(2), pp 225-239 "A model is developed that shows that divorce rates are lowest when the husband is two to ten years older than the wife or when the magnitude of their age difference is extremely large. Furthermore, the chance of divorce is much higher when the wife is older than the husband than vice versa."
- 20 When comparing the distributions of marriages and divorces, a subjective judgement is required as to what constitutes a material difference between distributions. Figure 7 appears to demonstrate no material difference between the distributions of marriages and divorces for a given year. Additionally, results for the years between 1963 and 2003 are similar to those in Figure 7. Several statistical tests were also carried out. These tests compared observed frequencies (for divorces by year of marriage) with expected frequencies (based on the distribution of frequencies from all marriages in the corresponding year). However, both the chosen non-parametric tests (Chi-Square and Kolmogorov-Smirnov) yielded significant results, chiefly due to the large "sample" size. This is a known weakness of these tests. When considering the significant results, it must be considered whether the significant difference is also a material, substantial or quantifiable difference. Of course the data here are not really samples at all, but populations of registered events.