Age Differences Between Spouses in a Brazilian Marriage Sample

Emma Otta
Departamento de Psicologia Experimental, Instituto de Psicologia, Universidade de São Paulo, São Paulo, Brazil

Renato da Silva Queiroz
Departamento de Antropologia, Faculdade de Filosofia, Letras e Ciências Humanas, Universidade de São Paulo, São Paulo, Brazil

Lucila de Sousa Campos
Departamento de Psicologia Experimental, Universidade de São Paulo, São Paulo, Brazil

Monika Weronika Dowbor da Silva
Departamento de Antropologia, Universidade de São Paulo, São Paulo, Brazil

Mariana Telles Silveira
Departamento de Psicologia Experimental, Universidade de São Paulo, São Paulo, Brazil

Age differences between spouses were investigated in a Brazilian marriage sample. A study was made of 3,000 announcements of forthcoming marriages sampled from the newspaper *Diario de Noticias de São Paulo*, in September and October 1996. These announcements published in newspapers are a legal requirement for marriage. Men married women younger than themselves, and this tendency became more pronounced over the lifespan. There was only one exception: young men <20 years old married older partners. Young women married men older than themselves, but this tendency became less pronounced over the lifespan. Age differences between spouses violate the similarity-attraction rule, one of the strongest general principles of mate selection, but fit well with an evolutionary model.   © 1999 Elsevier Science Inc.

KEY WORDS: Age at marriage; Mate selection; Reproductive strategies; Sex differences.

Age differences between mates are supposed to reflect sex differences in human reproductive strategies. Females invest bodily resources in their children through pregnancy and lactation, whereas males contribute indirect resources. Unlike female fertility, which decreases with age, male fertility is not strongly age dependent, and income tends to increase with age. Because primary reproductive constraints are different for male and female, mate selection criteria should be different (Buss 1988; Daly and Wilson 1983; Symons 1979). Males should look for females at their optimal reproductive stage, and females should look for high-status males.

Kenrick and Keefe (1992) analyzed 1,189 marriages that took place in Seattle, Washington, and Phoenix, Arizona, U.S.A., in 1986. They also analyzed a sample of 100 marriages that took place in Phoenix in 1923, and a sample of 1,511 marriages that took place between 1913 and 1939 in Poro, a small Philippine island, with an economy based on fishing and agriculture. Their results are largely consistent with the evolutionary model. As the age of grooms increased, the average age gap by which they were older than their brides also increased, whereas brides of all ages married men who averaged slightly older than themselves.

However, the importance of sociocultural differences in mate choice cannot be neglected. Buss (1989, 1994) examined self-reported preferences of age differences between self and mate in 37 cultures. Zambia, Nigeria, and Colombia were three countries in which males preferred the largest difference between self and mate: 7.38, 6.45, and 4.45 years younger, respectively. Finland, The Netherlands, and the U.S.A. were three countries in which males preferred the smallest age difference between self and mate: 0.38, 1.01, and 1.65 years, respectively. Less pronounced differences were found across countries for females. In Zambia, Nigeria, and Colombia, females preferred slightly older mates than in Finland, The Netherlands, and the U.S.A.: 4.14, 4.90, 4.51 versus 2.83, 2.72, and 2.54 years older, respectively. Glenn (1989) also posits that the age discrepancy between mates is smaller in developed countries than in underdeveloped ones.

In addition to cross-cultural diversity, some changes over time have been documented. In the U.S.A., marriages in which the bride was older than the groom increased from 16% in the 1970s to 22% in the 1980s (Byrne and Kelley 1992; Dupré 1992). Comparing actual age differences in marriage between 1923 and 1986 in Phoenix, it is notable that a steeper decrease (more negative slope) was found over the male's lifespan in 1923 than in 1986 (Kenrick and Keefe 1992). Better nourishment, work conditions, and health care, plus lower birth rates, cosmetics, and plastic surgery have all combined to give modern women in developed countries a more youthful appearance. Perceived age, not chronological age, is likely to be the important variable (Alley 1992). Furthermore, life expectancy is higher in developed than in underdeveloped countries. Lengthened schooling, intensive competitive job markets, and increasingly symmetric gender relationships are other factors that can influence mate choice criteria in developed countries.

The main purpose of the present study was to investigate a sample of 3,000 Brazilian marriages, contributing to an extension of the cross-cultural databases on age differences between mates and to the evaluation of the sociobiological explana-

tion versus sociocultural explanations. Our sample was restricted to formal marriages. We know that there is an impressive number of informal unions, but the available data are not reliable.

METHODS

A study was made of 3,000 announcements of forthcoming marriages sampled from 11 issues of the Brazilian newspaper *Diário de Noticias de São Paulo*, from September to October 1996. This newspaper publishes announcements sent by all registry offices of the city of São Paulo, and the publication is a legal requirement for marriage. We collected data from 15 registry offices, chosen randomly (using a table of random numbers). These 15 registry offices represent the downtown area and the four geographic areas of the city (South, East, North, and West). We sampled from different areas in order to avoid bias, because the population is not uniformly distributed in the city with respect to demographic structure or social class. Using all announcements published in a single newspaper, we would run the risk of oversampling certain areas of the city and undersampling others.

RESULTS

Marriage ages were classified into five categories: (a) <20 years, (b) 20–29 years, (c) 30–39 years, (d) 40–49 years, and (e) 50 and above. We first examined brides' ages as a function of age of groom and then looked at the reverse. Figure 1 shows that women <20 years of age were much more likely to marry than men of the same age. Less than 15 years of age, there was one bride, but no groom. After age 20, grooms outnumbered brides.

An analysis of variance was conducted using a factorial design, with sex and age at marriage (five categories) as independent variables and partner's age minus focal individual's age as the dependent variable. The sex versus Age at Marriage interaction was significant, $F(4, 5990) = 19.42, p < .001$. Two sets of univariate analyses were run separately for men and women to further examine the overall interac-

Figure 1.   Distributions of male (shaded bars) and female (white bars) marital ages.
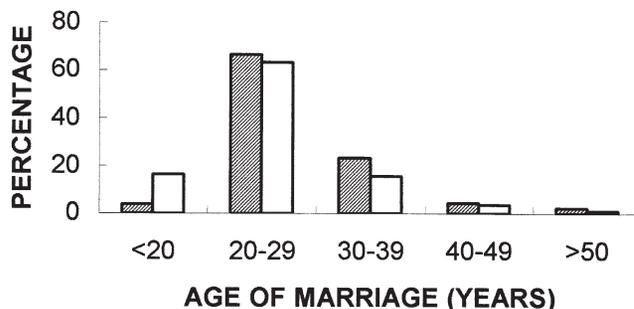
tion effect. Modified LSD (least significant difference) (Bonferroni) test with significance level .05 was used. For men, the age difference between spouse and self was statistically significant across all age groups. For women, there were only significant differences across the lower age groups (<20 years × 20–29 years × 30–39 years) but not across the higher age groups (30–39 years × 40–49 years × >50 years.)

Figure 2 shows age differences between the partner and the focal individual across age groups as a function of sex. A positive difference indicates that the partner was older than the focal individual. As a rule, men married younger women, and this tendency became more pronounced over the lifespan. There was only one exception: young men <20 years married older partners. Young women married men older than themselves, but this tendency became less pronounced over the lifespan. From their 30s onward, women tended to marry men near their own age.

DISCUSSION

On the whole, our results regarding the distributions of male and female marital ages were remarkably similar to previous findings of Kenrick and Keefe (1992). The early marriage ratio favorable to young females both in Seattle and in São Paulo is consistent with the sexual bimaturism typical of our species: women mature 2 to 3 years earlier than men (van den Berghe 1992). The late marriage ratio unfavorable to older females can also be explained by evolutionary biology. Women are progressively less represented in marriage statistics as they become older, their fertility declines, and pregnancy becomes risky (Menken and Larsen 1986; Resnik 1986), whereas men do not undergo menopause and their fertility does not decline steeply with age, despite decrements in physical health and virility.

Examining statistics taken from the 1989 United Nations Demographic Yearbook (see Kenrick and Keefe 1992), we noted great geographic variation in sex rations of persons marrying before the age of 20, ranging from 3.6 women per man in Fiji (Oceania) to 25.0 in Mauritius (Africa), but little variation in the sex ratio of persons marrying after the age of 50, ranging from 0.3 to 0.4 women per man.

Figure 2.   Average age differences in marriage plotted according to husband's (◆) and wife's (■) ages. PAMFIA = partner's age minus focal individual's age.
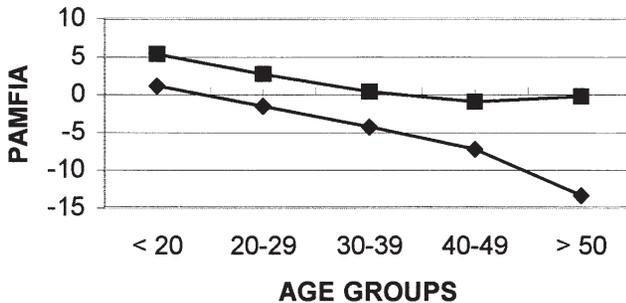
When we analyzed the age difference between spouses as a function of the man's age, the curves plotted with data collected in São Paulo in 1996 were impressively similar to those presented by Kenrick and Keefe (1992) for Seattle and Phoenix in 1986. Men married younger women and the older the men the more pronounced the age difference, a result consistent with the proposition that men prefer women at their optimal reproductive stage. Only young men <20 years married women older than themselves, and this exception could also be explained by such a preference, as teenage girls exhibit what Menken and Larsen (1986) call adolescent subfecundity.

When the woman's age is treated as the independent variable, however, the pattern of results in our study differs from that found by Kenrick and Keefe (1992). Women from Seattle and Phoenix married older men, and this tendency remained fairly constant over the lifespan. Although Brazilian women <30 years behaved similarly, those >30 years tended to marry men closer to their own age. Women do not look for men of optimal reproductive age, and this may explain the differences found in cross-cultural comparisons.

REFERENCES

Alley, T.R. Perceived age, physical attractiveness and sex differences in preferred mates' ages. *Behavioral and Brain Sciences* 15:92, 1992.

Buss, D.M. Sex difference in human mate preferences: evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences* 12:1–49, 1989.

Buss, D.M. The evolution of human intrasexual competition: tactics of mate attraction. *Journal of Personality and Social Psychology* 54:616–628, 1988.

Buss, D.M. The strategies of human mating. *American Scientist* 82:238–249, 1994.

Byrne, D., and Kelley, K. Differential age preferences: the need to test evolutionary versus alternative conceptualizations. *Behavioral and Brain Sciences* 15:96, 1992.

Daly, M., and Wilson, M. *Sex, Evolution, and Behavior (2nd ed.)*. Boston: Willard Grant Press, 1983.

Dupré, J. Arbitrariness and bias in evolutionary speculation. *Behavioral and Brain Sciences* 15:98–99, 1992.

Glenn, N.D. Intersocial variation in the mate preferences of males and females. *Behavioral and Brain Sciences* 12:21–23, 1989.

Kenrick, D.T., and Keefe, R.C. Age preferences in mates reflect sex differences in human reproductive strategies. *Behavioral and Brain Sciences* 15:75–133, 1992.

Menken, J., and Larsen, U. Fertility rates and aging. In *Aging, Reproduction, and the Climacteric*, L. Mastroianni, Jr. and C.A. Paulsen (Eds.). New York: Plenum Press, 1986, pp. 147–165.

Resnik, R. Age related changes in gestation and pregnancy outcome. In *Aging, Reproduction, and the Climacteric*, L. Mastroianni, Jr. and C.A. Paulsen (Eds.). New York: Plenum Press, 1986, pp. 167–175.

Symons, D. *Evolution of Human Sexuality*. New York: Oxford University Press, 1979.

van den Berghe, P.L. Wanting and getting ain't the same. *Behavioral and Brain Sciences* 15:116–117, 1992.