Age Limits: Men’s and Women’s Youngest and Oldest Considered and Actual Sex Partners

Jan Antfolk

Abstract
Whereas women of all ages prefer slightly older sexual partners, men—regardless of their age—have a preference for women in their 20s. Earlier research has suggested that this difference between the sexes’ age preferences is resolved according to women’s preferences. This research has not, however, sufficiently considered that the age range of considered partners might change over the life span. Here we investigated the age limits (youngest and oldest) of considered and actual sex partners in a population-based sample of 2,655 adults (aged 18-50 years). Over the investigated age span, women reported a narrower age range than men and women tended to prefer slightly older men. We also show that men’s age range widens as they get older: While they continue to consider sex with young women, men also consider sex with women their own age or older. Contrary to earlier suggestions, men’s sexual activity thus reflects also their own age range, although their potential interest in younger women is not likely converted into sexual activity. Compared to homosexual men, bisexual and heterosexual men were more unlikely to convert young preferences into actual behavior, supporting female-choice theory.

Keywords
age preferences, sexual behavior, mate preferences, sex differences, female choice

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In several studies men’s and women’s sexual age preferences (i.e., the preferred age of a potential partner) and/or the age of actual sex partners have been investigated. In their seminal paper, Kenrick and Keefe (1992) showed that men’s and women’s sexual age preferences have different developmental trajectories. As a person grows older, the person’s sexual age preferences tend to change, and, as a general rule, the age of desirable partners also increases. The magnitude of this increase differs between the sexes. For women, a year’s increase in her own age is relatively closely matched to a similar increase in the desired partners’ age. Women tend to prefer partners who are similar to or somewhat older than they themselves are (e.g., Kenrick & Keefe, 1992). Men, on the other hand, clearly age faster than their desired partners, and a year’s increase in his own age is accompanied by a smaller increase in the desired partner’s age (e.g., Antfolk et al., 2015). Young men (aged < 20 years) are interested in somewhat older partners than themselves (Antfolk et al., 2015; Kenrick, Gabrieldis, Keefe, & Cornelius, 1996). Generally speaking, earlier studies suggest that heterosexual men—irrespective of their own age—are attracted to women in their 20s and that very few men are exclusively interested in very young or very old women (e.g., Santtila et al., 2015; Tripodi et al., 2015). This pattern has been demonstrated in modern Western and non-Western cultures (Buss, 1989; Buunk, Dijkstra, Kenrick, & Wrantjes, 2001; Sohn, 2016; Souza, Conroy-Beam, & Buss, 2016) and is accompanied by some indirect evidence from hunter-gatherer societies (e.g., Early & Peters, 2000; Marlowe, 2004) and pre-industrial societies (e.g., Drige & Lundh, 2009). Studies have used various measures, including surveys (Antfolk et al., 2015;
Buss, 1989; Kenrick et al., 1996), dating advertisements (Dunn, Brinton, & Clark, 2010; Hayes, 1995; Pawlowski & Dunbar, 1999), marriage announcements (Otta, da Silva Queiroz, de Sousa Campos, Dowbor Da Silva, & Telles Silveira, 1999), online chat rooms (Bergen, Antfolk, Jern, Alanko, & Santtila, 2013), and by investigating earnings by prostitutes (Sohn, 2016). In this context, it is also important to separate between studies investigating sexual interest, actual sexual behavior, or age disparity in long-term relationships. Age disparity in long-term relationships is likely a compromise between both women’s and men’s interests (although the relative weight of these two interests likely differ across cultural contexts). This is also true for sexual behavior. Sex, in most cases, necessitates that the sexual interest of two individuals overlap. For example, studies looking at marriage announcements will be informative regarding age disparity in relationships and provide only limited information regarding differences in sexual interest. For example, Buunk, Dijkstra, Kenrick, and Wrantjes (2001) showed that men prefer older partners for short-term versus long-term mating, suggesting that age preferences depend on the amount of involvement. A similar finding was later presented in a study by Young, Crittelli, and Keith (2005).

Heterosexual women’s sexual interest in slightly older men has been explained as reflecting the human bi-maturation process, by which females mature earlier than males (van den Berghe, 1992), and/or as a trade-off between the increased social dominance and the decrease in remaining life span in older men (Antfolk et al., 2015). That heterosexual men’s sexual age preferences is focused at women in their 20s has been explained as the evolutionary consequence of this age being associated with high female fecundity and peak copulation to conception ratios (Sozou & Hartshorne, 2012; Tietze, 1957; Wood, 1989). The risk for miscarriages and chromosomal abnormalities in the offspring also becomes approximately 10 times higher in 40-year-old mothers compared to 25-year-old mothers (Hecht & Hook, 1996; Heffner, 2004), and this increase is paired with an increased risk of neuropsychiatric disorders such as autism in offspring (Sherton, Tancred, & Hertz-Picciotto, 2010).

A female partner’s age is thus associated with men’s probability of producing offspring (and this offspring being healthy), and men who prefer sex with relatively old women would thus have left relatively few allele copies to future generations. To the extent these alleles are associated with sexual age preferences, such preferences would become decreasingly rare in the population (e.g., Kenrick & Keefe, 1992).

What about sexual age preferences in homosexual (vs. heterosexual) men and women? Studies on this topic suggest that age preferences in homosexual individuals are largely similar to those of heterosexual individuals. Like their heterosexual counterparts, homosexual men show a tendency to be sexually interested in young men and homosexual women show a tendency to be interested in women in their own age range (Hayes, 1995; Kenrick, Keefe, Bryan, Barr, & Brown, 1995; Silverthorne & Quinsey, 2000). These findings have been taken to support the modularity hypothesis of sexual orientation. The modularity hypothesis (e.g., Symons, 1979) explains homosexuality as different from heterosexuality only with respect to the sex of the desired partner and suggests that homosexual and heterosexual individuals show similar patterns regarding other aspects of sexual psychology. Thus, no differences in age preferences would be expected based on sexual orientation alone. Very little is known about age preferences in bisexuals. A study by Adam (2000) suggests, however, that both homosexual men and bisexual men display the same interest in young partners as heterosexual men do.

Another, related observation is that both heterosexual men’s and heterosexual women’s actual sexual behavior is predicted by women’s sexual age preferences, and much less by men’s sexual age preferences (Kenrick & Keefe, 1992). This finding has been explained as a function of female choice. Parental investment theory (Trivers, 1972) predicts that women are choosier than men with respect to the characteristics of a potential sexual partner. The reason for this is that women invest more than men in pregnancy, child birth, and nurturing a child and therefore invest more energy in the case of a pregnancy—a very possible consequence of sex (Trivers, 1972). If female choosiness explains the discrepancy between heterosexual men’s preferences and actual behavior, a different pattern ought to emerge in homosexual and heterosexual men. Homosexual men seek to mate mainly with other men, and, if these men are less choosy than women, homosexual men’s sexual interest would more likely be converted into actual behavior. Hence, in the context of sexual interest, no large differences in age preferences is expected, but in the context of sexual behavior, homosexual men are expected to have younger sexual partners compared to heterosexual men.

One limitation in previous research is that scholars have focused on either the most desirable age of partners or a more abstract “mean age preference.” This approach has at least two limitations: it does not appropriately consider the range of an individual’s age preferences, as it assumes that the upper age limit and the lower age limit change similarly over the life span. Neglecting to look at the upper and lower limits separately may therefore bias the results and lead to wrongful conclusions. More specifically, this approach may lead to overlooking the possibility that men’s age preferences widen over the years and that heterosexual men therefore also are sexually interested in the (older) women they tend to have sex with.

The Current Study

In the current study, the aim was to expand on earlier findings on sexual age preferences by investigating the age limits representing the youngest and oldest individuals that men and women could consider having sex with. We expected (i) both women’s youngest and oldest considered
sex partners to be strongly and positively associated with their own age. For men, we expected the oldest considered sex partners would be strongly positively associated with their own age, but that the youngest considered partners would show a weaker association with their own age. In other words, we expected men to throughout their life maintain an interest in young women while also becoming interested in older and older women. We also aimed to (ii) replicate the finding that actual sexual behavior in heterosexual men and heterosexual women is more closely predicted by women’s interests compared to men’s interests. Moreover, we aimed to investigate the effects of sexual orientation on age-related sexual interest and sexual activity. In line with previous literature, we expected that (iii) sexual orientation (within one sex) would not be strongly associated with the age of considered partners. As a further test of the female choice theory, we, however, also aimed to test the expectation that (iv) actual sexual behavior would not be as strongly associated with the age of considered partners in heterosexual men as it is in homosexual men. We also explored age preferences in bisexual men and women.

Method

Participants

Our final sample included observations from 2,676 individuals. Of these individuals, 878 were male and 1,798 were female. Female participants \((M = 33.35, SD = 8.85)\) were slightly younger than male participants \((M = 36.01, SD = 8.46)\), \(t(2,674) = 7.40, p < .001\). All participants included in the analyses were between 18 and 50 years old (see Figure 3 in Appendix for frequencies of participants across age and sex). Data were obtained from the Finn-Kin data collection (Albrecht et al., 2014), which contains a population-based sample of people living in Finland. This data collection was the result of inviting a randomized sample of individuals aged 18–49 to participate in an online survey of sex and family-related topics. Invitations were sent out, obtaining addresses from the central Population Registry of Finland that keeps information about all individuals residing in Finland. Due to differences in response rates, more women than men participated in the survey. (For more details on this data collection, see Albrecht et al., 2014.)

Measures

Participants’ age. Participants reported their age using a drop-down menu with answer options between 18 and 99 years of age.

Sexual orientation. To categorize individuals as homosexual, bisexual, or heterosexual, we summed the responses to two variables measuring sexual behavior with or sexual interest in individuals of the same and opposite sexes. The reason to sum responses across both actual behavior and interest was that behavior is not always the result of interest. By summing variables, both interest and behavior could be considered and given equal weight. Thus, the responses to the two questions “if there was a scale from heterosexual to homosexual, regarding sexual behavior/erotic attraction” where would you place yourself on this scale” were summed. Individuals with the sum value 2 (lowest possible value) were coded as “heterosexual” \((n = 1,604)\). Individuals with values 3 and 4 were coded as “bisexual” \((n = 900)\), and individuals with values above 4 were coded as “homosexual” \((n = 171)\).

The age of the youngest and oldest considered sex partner. Participants reported the age of the youngest and oldest considered sex partner using a drop-down menu (answer options ranged between 0 and 99) to answer the following questions: “With how young a person could you consider having sex?” and “With how old a person could you consider having sex?”

The age of the youngest and oldest actual sex partner. Participants reported the age of the youngest and oldest sex partner they had during the last 5 years. They used a drop-down menu (answer options ranged between 0 and 99) to answer the following questions: “With how young a person have you had sex during the last 5 years?” and “With how old a person have you had sex during the last 5 years?” (see Appendix for Swedish versions of the questions).

Statistical Analyses

We first expected the variables of interest for possible outliers. Because our data included some extreme values (e.g., observations above 99 or younger than 10 years of age), we removed these observations \((3.1\%, n = 86)\) from the data file. We decided to also include young teenagers to capture possible hebephilic interest. Although some observations remained outside the 95% confidence intervals of the mean, we considered it possible that these observations were true observations of the natural variation in age preferences (e.g., young respondents displaying interest in young teenagers or old respondents displaying an interest in older individuals) and chose to keep them in the data file. The very low number of such extreme observations would also not affect our main findings in any major way. We also removed participants who reported being older \((0.4\%, n = 11)\) than the actual age limits for the sampling frame (i.e., above 50 years old [50-year-olds were included, because some individuals who was 49 years old at the time of sampling could have turned 50 before responding]). Thus, the original sample size \((n = 2,773)\) was reduced into its current size.

Results

Descriptive Results

A one-way analysis of variance (ANOVA) showed that female participants differed in age across the groups of sexual orientation, \(F(2) = 48.42, p < .001\). Also male participants differed in age across groups of sexual orientation, \(F(2) = 28.81, p < .001\).
Table 1. Mean Age and Standard Deviation of Participant Age and Youngest and Oldest Considered and Actual Partners by Participant Sex and Sexual Orientation.

| Participants | Considered Partners | Actual Partners |
|--------------|--------------------|-----------------|
|              | Mean Age           | Youngest         | Oldest | Youngest | Oldest |
| Sex          |                    |                  |        |          |       |
| Female       | Heterosexual       | 35.03 (8.98)     | 27.44 (7.24) | 46.19 (11.09) | 33.24 (10.04) | 37.73 (9.44) |
|              | Bisexual           | 32.01 (8.38)     | 23.82 (5.55) | 45.22 (10.58) | 29.32 (9.13)  | 35.77 (9.33)  |
|              | Homosexual         | 28.50 (7.38)     | 21.86 (4.89) | 43.47 (10.72) | 25.45 (8.18)  | 32.78 (9.02)  |
| Male         | Heterosexual       | 37.25 (8.11)     | 21.38 (5.25) | 49.21 (10.64) | 31.05 (8.71)  | 36.55 (8.79)  |
|              | Bisexual           | 32.78 (8.40)     | 19.46 (3.58) | 48.93 (11.60) | 25.95 (8.47)  | 33.14 (9.96)  |
|              | Homosexual         | 31.03 (8.64)     | 18.61 (2.55) | 45.00 (11.47) | 24.45 (6.68)  | 36.39 (11.47) |

Note. Values represent mean age and its standard deviation (within parenthesis).

One-way ANOVAs also showed significant differences between groups of sexual orientation in female participants for youngest, $F(2) = 88.84$, $p < .001$, and oldest, $F(2) = 4.48$, $p < .05$, considered sex partners as well as for youngest, $F(2) = 60.27$, $p < .001$, and oldest, $F(2) = 21.25$, $p < .001$, sex partners. For male participants, there was a significant difference between the groups of sexual orientation for youngest, $F(2) = 15.59$, $p < .001$, but not oldest, $F(2) = 2.35$, $p = .096$, considered sex partners. For youngest, $F(2) = 32.82$, $p < .001$, and oldest, $F(2) = 10.50$, $p < .001$, actual partners, the differences were again significant (Table 1).

The Association Between Participant Age and the Age of Considered Sex Partners

We then inspected the distribution of data across participant age. This was first done by calculating the probability (proportion of participants of a given age considering sex with a partner of a certain age/number of participants of that given age) that a partner would be included in the range of considered partners, while accounting for both the participants’ and the partners’ ages. For heterosexual male and female participants, the distribution is visualized in Figure 1.

The relatively larger green area on the right panel compared to the left panel in Figure 1 indicated that heterosexual female participants were, on average, more likely to not consider sex with men of certain ages than vice versa. Indeed, the probability that female participants of a certain age could consider sex with men of a certain age was below .33 in 36.5% of the included ages and above .66 in only 44.4% of the included ages. The probability that heterosexual male participants of a certain age could consider sex with women of a certain age was below .33 in only 12.9% of the included ages and above .66 in as much as 68.0% of the included ages.

Considered and Actual Sex Partners by Participant Sex, Age, and Sexual Orientation

To investigate the associations between participant age and the age of concerning considered and actual sex partners, we conducted a set of linear regressions. Here we conducted separate regressions for the three groups of sexual orientation within both male and female participants. All associations were positive, and all but two associations were statistically significant (see Table 2 and Figure 2).

The age of the youngest considered sex partner increased with the age of the participant in all groups apart from homosexual male participants. In homosexual male participants, the age of the youngest considered sex partner remained the same across the measured life span. A comparison of confidence intervals revealed that in bisexual and heterosexual male participants, the age-related incline for age of the youngest considered sex partner was steeper than in homosexual male participants. At the same time, the age-related incline in all male groups was not as steep as in the female groups. Within female participants, there were no noteworthy differences between groups of sexual orientation.

The age of the oldest considered sex partner increased with the age of the participant in all groups. Although the age-related incline differed statistically between heterosexual and bisexual male participants (slightly more horizontal) and heterosexual and bisexual female participants (slightly more vertical), the difference was small. No other differences were observed.

Female participants’ youngest and oldest considered sex partners were strongly and positively associated with their own age. For male participants, the age of the oldest considered sex partners was strongly positively associated with their own age. In the case of youngest considered partners, a weaker association with participant age was found.

The age of the youngest actual sex partner also increased with the age of the participant in all groups. Although there were some small differences in the age-related incline between male and female participants, the incline was similar in all groups apart from homosexual men. Homosexual men showed a less steep age-related incline than any other group. This suggests that among male participants, sexual behavior was most likely to reflect a preference for young partners in the homosexual group.

The age-related incline for oldest actual sex partner was strong in all participant groups and no noteworthy differences were found.
Female Choice: Converting Interest Into Behavior

As a final test of female choice, we tested whether homosexual men would be more likely than heterosexual male participants to show a high correlation between the age of the youngest considered sex partner and their youngest actual sex partner. We investigated this by first calculating the partial correlation between youngest considered sex partner and youngest actual sex partner while controlling for own age. The partial correlation between youngest imagined age and youngest actual partner was weaker in heterosexual male participants \( (r = .224, p < .001) \) and bisexual male participants \( (r = .205, p < .01) \) than in homosexual male participants \( (r = .540, p < .01) \).
Discussion

In the current study, we investigated the youngest and oldest considered age for a sex partner and the youngest and oldest age of a recent actual sex partner. Our population-based sample of 2,655 individuals included both male and female participants. Participants of both sexes were grouped as heterosexual, bisexual, and homosexual.

We expected to find patterns similar to previous studies showing that women’s youngest and oldest considered sex partners are strongly associated with their own age. For men, however, we expected that only the oldest considered age would be strongly associated with their own age, but that the youngest considered age would show a weaker association with their own age.

In line with earlier studies, we found that the sexual age preferences change as a person ages, and that this change is different between men and women. The major difference between male and female participants related to the age of the youngest considered sex partner. In female participants, the youngest considered sex partner aged with an average of 4.5 months each year. In male participants this number was lower and the youngest considered sex partner aged with only 2 months each year. Due to different starting points, this means that the youngest considered age of a sex partner differed by as much as 11 years between 50 years old male and female participants. With respect to the oldest considered age of a sex partner, there were only small differences between the sexes. When taking the upper age limit into account, it becomes clear that men’s sexual preferences also can explain men’s sexual activity. Indeed, very few male participants reported having sex with individuals they would consider too old. This means that a comparison of men’s and women’s age preferences and sexual behavior does not, as such, lend conclusive support to the notion that heterosexual men’s sexual behavior is restricted by female choice.

Figure 2. Youngest and oldest considered and actual sex partners by participant age, sex, and sexual orientation. Partners’ ages are presented on the Y-axis and the participant’s age is presented on the X-axis. The black line is the reference line (Y = X).
We also investigated the effects of sexual orientation (heterosexual vs. homosexual) on sexual age preferences and sexual activity. We expected homosexual and heterosexual individuals within one sex to have similar age preferences. Indeed, the age limits were very similar between groups of sexual orientation within both sexes. We also investigated whether actual sexual behavior with young partners correlated more strongly with an interest in young individuals in homosexual male participants than in heterosexual male participants. Homosexual male participants reported a closer match between behavior and preferences than heterosexual male participants. This strongly suggests that women’s sexual interest constrain men’s behavior on the heterosexual mating market.

Bisexual male and female participants reported similar preferences as heterosexual male and female participants. Before drawing any conclusions based on these patterns, it is important to note that the operational definition of “bisexual” included also individuals reporting low levels of sexual interest in same-sex individuals. These individuals might consider themselves heterosexual or “curious” and might differ from individuals who more precisely fit the term “bisexual.” Given the lack of research on age preferences in bisexual individuals, the results of the current provide novel, but tentative, information.

The current study was conducted in Finland, a modern, industrialized society high in gender equality (World Economic Forum, 2015). Studies have shown that populations with high gender equality tend to be low in sexual dimorphism (e.g., Manning, Fink, & Trivers, 2014). In the current context of age preferences, this could mean that on average the difference between men and women is smaller than in other, less equal, populations. At the same time, there is evidence of women maturing earlier in more industrialized (vs. less industrialized) societies (Parent et al., 2003). This would also mean that Finnish women tend to show physical signs of maturation at a relatively young age. This could mean that Finnish men, on average, are interested in slightly younger women than men are in less industrialized and less gender equal societies. With this in mind, cross-cultural data on the development of age preferences across the life span could elucidate potential variability over different social contexts.

The current study focused on sexual interest. Romantic interest or preferences for long-term partners were not measured. This is important to consider, because reproduction in most cases occur within the stability of a long-term pair bond (e.g., Gray & Garcia, 2013). This means that the choice of a long-term partner is likely a more important evolutionary factor to consider when uncovering the selection pressure on age-related sexual preferences.

A final thing to consider is that age is only one of many characteristics evaluated in a potential partner. In fact, age is likely not very important in itself but acts as a proxy for several other important factors. These factors include, for example, remaining life span, fertility (in women), health, and status. Age also affects other aspects of sexuality. For example, sexual desire decreases as humans grow older and more so in women compared to men (e.g., DeLamater & Sill, 2004). This age-related sex discrepancy in sexual desire in older men and women (compared to young men and women), with sexual desire being higher in men compared to women, could drive men to “strategically” widen their age limits as they grow older.

**Limitations of the Current Study**

One limitation in our study is a possible skewing of data regarding youngest actual partner for our youngest respondents. Given that the mean age of first intercourse in Finland is approximately 17.5 years for both sexes (Johansson et al., 2013), respondents below 22 years of age are likely to report that their youngest partner during the last 5 years was, on average, 17 years old. These observations, however, represent the true limit and do not invalidate our conclusions.

It is also important to note that we did not include men or women older than 50 years of age in the current study. Although there is relatively little data on age preferences in older age-groups, we predict that the difference between ages continues to grow as men and women age. Nevertheless, this prediction is not tested in the current study, and we hope future studies are designed to test this claim.

**Conclusions and Future Directions**

The results of this study indicate that men’s and women’s sexual age preferences develop differently. As women grow older, age limits regarding both younger and older sex partners follow their own aging. As men grow older, they become interested in older individuals but maintain an interest in younger individuals. Homosexual men are more likely than heterosexual men to convert a preference for young individuals into actual sexual behavior, supporting female-choice theory.

We also found that homosexual male participants differed from other male participants regarding the youngest considered age. Although this difference was small, this collateral finding could suggest that men interested in women self-modulate their preferences to better fit the interest of their potential female partners. This finding is tentative and studies designed to test this hypothesis are necessary before any conclusions can be drawn. Although participants’ own age explained a large proportion of the variance in age preferences and sexual behavior, we note that an interesting aspect remains unexplored: Between-individual variation (while controlling for age differences) in understanding the differences in both preferences and behavior have not received a lot of attention in the literature.
Appendix

Measures and Questions in Swedish

Sexual orientation.
1. [När det gäller sexuellt beteende] Om det skulle finnas en skala från heterosexuell till homosexuell, var skulle du placera dig själv?
2. [När det gäller erotisk attraktion] Om det skulle finnas en skala från heterosexuell till homosexuell, var skulle du placera dig själv?

The age of the youngest and oldest considered and actual sex partner.
1. Vilken är den yngsta åldern på en person du kan tänka dig ha sex med?
2. Vilken är den äldsta åldern på en person du kan tänka dig ha sex med?
3. Vilken var den yngsta åldern på personen du har haft sex med under de senaste 5 åren?
4. Vilken var den äldsta åldern på personen du har haft sex med under de senaste 5 åren?

Figure 3. Participant age by sex. Red stacks represent female respondents and blue stacks represent male respondents.

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