



No gender differences in attraction to young partners: A study of 4500 blind dates

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In mixed-gender couples, men are older than women on average. Scholars and laypeople presume that this arrangement reflects mirrored preferences such that men desire younger partners and women desire older partners. Nevertheless, relevant published data on in-person romantic evaluations—that is, studies where adults interact in person and report their initial attraction to each other—are nearly nonexistent. We examined the association of a partner's age with romantic desire ($N = 9,084$ dyadic reports) among $N = 6,262$ blind daters who used a matchmaking service in hopes of finding a long-term partner. Preregistered tests revealed that people were (slightly) attracted to younger partners on average—and this association did not differ by gender. Conclusions were identical if we examined a) age difference from one's own age, and b) a dataset limited to women 40-and-under and mixed-gender dates. Furthermore, participant's self-reported "upper-age limits" played no meaningful role: Participants had a modest preference for youth overall, but it did not matter whether the partner's age fell below or above this personal maximum. We discuss the implications of the nonexistent initial-attraction gender difference for the age difference in mixed-gender couples.

close relationships | attraction | mate preferences | age differences | gender

Perhaps the most commonly studied gender difference in the domain of human mating is the fact that men tend to be older than women in mixed-gender couples (1–3). Across 232 countries and areas of the world, the age of first marriage according to UN data is about 4 y older for men than women (4). This difference is also large enough to be plainly visible: A casual observer of married mixed-gender couples in the United States would surely notice that couples in which the man is two or more years older than the woman are far more common than couples in which the woman is two or more years older than the man (50% vs. 14%; ref. 5).

Researchers and laypeople alike believe that this age gap flows from a mirrored preference such that men prefer mates who are younger and women prefer mates who are older. People's stated preferences certainly reflect this pattern: When asked on questionnaires, men generally express a preference for a partner who is a few years younger than themselves, and women generally express a preference for a partner who is a few years older (6–11). Personal advertisements and other public statements of preferences exhibit this gender difference, too (12–16).

Gender-Differentiated Preferences and Initial Attraction

How exactly do these preferences impact the formation of couples? It would seem logical that age preferences play a role early in the relationship formation process by shaping the extent to which potential partners are initially attracted to each other. But despite decades of research on gender-differentiated mate preferences, there is surprisingly little published evidence on this point.

Online dating and personal ad studies hint at this possibility by showing, for example, that men preferentially send messages to younger women, and women preferentially message older men (17, 18). Such studies showcase how people attempt to shape their pool of potential mates, but online dating studies virtually never capture attraction during or after an initial face-to-face impression. This missing outcome is a meaningful limitation of the existing literature, because some gender differences become notably smaller or disappear completely once people meet in person. For example, online dating greatly exaggerates the gender difference in overall selectivity: In face-to-face speed-dating settings, men say "yes" to a second date ~1.5 times more often than women (~50% vs. ~35%; refs. 19 and 20). But when swiping partners online, men swipe "yes" ~10 times more often than women (~50% vs. ~5%; ref. 21). Also, once mixed-gender pairs have actually met (rather than merely seeing a photo or a dating profile), there appears to be no meaningful

Significance

This study examined whether people were attracted to older or younger partners. The sample was a set of $N = 6,262$ middle-aged adults who signed up for a matchmaking service in the hopes of finding a long-term partner. After a blind date, participants were slightly more attracted to younger partners—and this trend was equally true for men and women. This preference for youth among women was surprising, because in mixed-gender couples, men tend to be older than women, and women say they prefer older partners. There may be a meaningful mismatch between what women say they prefer and what they actually prefer, at least in a first-date setting.

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Competing interest statement: K.A. is the CEO of, a Board Member of, and owns stock in Tawkify, the company that provided the data.

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gender difference in the (moderate-to-large) association of the partner's physical attractiveness with attraction, nor is there a gender difference in the (modest) association of the partner's earning potential with attraction (22, 23).

In principle, speed-dating studies could illuminate how a partner's age affects initial attraction. However, many speed-dating studies draw from college student populations, and there are theoretical reasons to expect that young men would not show the typical preference for younger women (i.e., they may even prefer slightly older women; ref. 14). To our knowledge, there is only a single published attraction study with a noncollege student sample that reports the association of a partner's age with attraction separately for men and women (20). This large ($N = 10,526$) study of speed-dating adults ($M_{\text{age}} = 33$) found that both men and women were attracted to younger partners. Indeed, the effect of a partner's age on attraction was exactly the same magnitude for both genders (i.e., $r = -0.19$). Importantly, these same participants reported the typical gender-differentiated preferences in the abstract: In a survey portion of the speed-dating website, the women reported that their acceptable range of partner ages was about 3 y older than the men's (15). In other words, these women said that they wanted older partners, but in real life, they (like the men) gravitated toward the younger ones.

Despite the somewhat shocking lack-of-a-gender difference in Kurzban and Weeden (20), there are two reasons why this study did not overturn the conventional wisdom on gender-differentiated preferences for age. First, these participants had selected into particular speed-dating events that featured different ranges of ages. Therefore, it is possible that participants acted upon their age preferences upstream of meeting any partners (i.e., women with a very strong preference for older partners could have chosen events containing much older men), which freed up women to be more flexible with their preferences once they actually met partners in person (24). Second, some have argued that speed-dating activates a short-term mating mindset (25). We think this argument is misguided and irreconcilable with the available evidence (26), but those who believe it could argue that women's preferences for younger men in Kurzban and Weeden (20) are not so strange given that women say that they are more likely to consider younger men when thinking about short-term partners (7). Therefore, to see whether a partner's age actually predicts attraction differently for men and women, it would be essential to see what middle-aged adults do a) in a real-life romantic setting that does not offer the opportunity to preselect on partner age and b) when they are unambiguously receptive to a long-term partner.

The Current Research

A matchmaking service, Tawkify, provided data from $N = 6,262$ people who were set up on $N = 4,542$ blind dates for a total of $N = 9,084$ total reports; many people went on more than one date (see details below). (The first three authors consulted with this company on their questionnaire items and shared our findings with them, but we received no monetary compensation, and they had no influence on our scientific data-analytic or publication decisions.) This service is specifically geared toward helping people find long-term romantic partners, and it caters to people of a wide variety of ages. (The participants were as young as 22 and as old as 85, although the majority were middle aged.) After these blind dates, both participants filled out a questionnaire about how they felt about their date.

These data also afforded an opportunity to test a unique individual differences hypothesis about age preferences. Participants reported before the date whether they had an upper age limit for

a romantic partner. But sometimes, matchmakers found that within the available pool, partners who seemed otherwise promising for the participant were outside the participant's reported age range preference, and so, the matchmaker set participants up with dates who exceeded this upper limit. This feature of the dataset allowed us to test whether people's personal age-difference preferences functioned as a threshold: Would participants be especially unattracted to partners who exceeded their upper limit, and/or would the association of age with romantic desire change above this limit? It is well established that individual differences in preferences tend to exhibit very weak effect sizes when treated as "weights." In other words, participant's stated preferences for a given trait (e.g., "I want a considerate partner") do not appreciably moderate the extent to which that same trait inspires the participant's attraction to that partner (23). However, no studies to our knowledge have examined whether individual differences in romantic preferences function as thresholds instead.

Methods

Participants. Between October of 2023 and January of 2024, a popular US-based matchmaking company, Tawkify, facilitated dates for $N = 6,262$ participants; $n = 4,286$ of them went on one date, $n = 1,330$ went on two dates, $n = 493$ went on three dates, $n = 117$ went on four dates, $n = 26$ went on five dates, $n = 9$ went on six dates, and $n = 1$ went on seven dates. The total number of dates was $N = 4,542$ consisting of $N = 9,084$ total reports. These 6,262 participants were $M = 46.8$ y old ($SD = 11.6$). In terms of gender identity, $n = 3163$ identified as male, $n = 3070$ as female, $n = 8$ genderqueer, $n = 5$ trans woman, and $n = 4$ trans man. In terms of relationship status, $n = 3,037$ identified as single, $n = 2,677$ as divorced, $n = 292$ as widowed, $n = 94$ as dating, $n = 91$ as separated, $n = 54$ as "divorce in progress," and $n = 5$ as other. In terms of race/ethnicity, $n = 4,365$ identified as white, $n = 532$ as Black, $n = 514$ more than one race/ethnicity, $n = 287$ as Asian, $n = 247$ as Hispanic, $n = 209$ as South Asian, $n = 59$ as Middle Eastern, $n = 37$ as "other" or declined to respond, $n = 11$ as Pacific Islander, and $n = 1$ as American Indian. In this dataset, $n = 4,525$ participants were "members" of the matchmaking service and $n = 1,737$ were "clients." (During this period, members paid a yearly fee of ~\$100 to be included in a pool of possible dates for the clients; clients paid a larger sum and are set up on dates with a guaranteed number of different partners.)

Materials.

Own age. Participants reported their birthday as part of the signup process, which included a criminal and violent crime check; any prospective participant who lied about their age would have failed the check and been ineligible for the service. We calculated their age in years on the day they went on the date, always rounding down to the nearest whole number (which is colloquially how people describe their age in the United States). In this sample, the women were 3.5 y younger than the men on average, although the female and male distributions overlapped considerably: women $M = 45.0$ ($SD = 11.3$), men $M = 48.5$ ($SD = 11.6$), $t(6,231) = 11.80$, $P < 0.001$, $d = 0.30$.

Maximum age limit. Participants also reported the maximum age they were seeking in a match as part of the signup process. Mimicking the ubiquitous gender difference in stated preferences for age, there was a medium-sized gender difference on this variable, with women reporting a maximum age of $M = 53.7$ ($SD = 10.9$) and men reporting a maximum age of $M = 48.0$ ($SD = 11.2$), $t(6,230) = 17.19$, $P < 0.001$, $d = 0.44$. Participants' dates tended to be younger than their personal maximum, $M = -4.4$, $SD = 5.1$; nevertheless, about 15% of dates were older than this maximum. Given that the maximum age limit gender difference (5.7 y) is larger than the actual age-gender difference (3.5 y) in the sample, it comes as little surprise that there was also a gender difference on the partner's age relative to the maximum age limit, such that men's dates were closer to (but still younger than) their personal maximum ($M = -3.5$, $SD = 4.8$) than women's dates ($M = -5.4$, $SD = 5.1$), $t(9,014) = 17.89$, $P < 0.001$, $d = 0.38$.

Romantic desire (dependent measures). After each date, participants completed a follow-up survey that contained three different romantic desire-dependent measures.

Romantic attraction. Participants completed three items on a scale from 1 (strongly disagree) to 5 (strongly agree): "I enjoyed spending time with my date," "I was attracted to my date," and "My date seemed like a great romantic partner for me." These items were averaged together ($M = 3.23, SD = 1.07, \alpha = 0.90$).

Overall rating. Participants completed a five-point rating system about their overall date experience: 1 = awful, 2 = bad, 3 = fine, 4 = good, 5 = wonderful. Participants knew that this rating provided direct feedback to the matchmaker him/herself, and they would be asked to provide additional critical feedback if they selected "awful" or "bad" ($M = 3.93, SD = 0.90$).

Second date decision. Participants responded "yes" (coded 1) or "no" (coded 0) to the question: "Would you be interested in or have you already had a second date with? If you both say 'yes' we will exchange your phone numbers" ($M = 0.58, SD = 0.49$).

These three dependent measures were preregistered separately and analyzed separately throughout. Naturally, they correlated highly ($r = 0.78$ for romantic attraction and overall rating; $r = 0.73$ for romantic attraction and second date decision, $r = 0.58$ for overall rating and second date decision). For this reason, we averaged them together in some analyses ($\alpha = 0.84$) for clarity.

This research was reviewed by the UC Davis IRB (protocol 1997121-1) and received the determination "not human subjects research." Participants did not provide informed consent because these data were collected by Tawkify as a part of the natural process of providing (and receiving feedback on) a service for their customers.

Procedure. Prospective participants who were interested in signing up for the matchmaking service, Tawkify, first filled out a brief screening questionnaire on the service's website. The company then followed up with responders who appeared to be real people (i.e., not likely a bot, the participant lived in the United States). These people could apply to become a "member" or a "client." Members became viewable by matchmakers to potentially get matched with a client; clients were guaranteed a certain number of dates.

Matchmakers used clients' reported preferences, discussions with clients, and their intuition to set clients up on dates with either members or other clients. Participants learned minimal information about the date beforehand via a system-generated email. This email included a few of the dates' interests, whether they had kids (and if so, approximately how old and how many), and the date's approximate age (e.g., "early 40s"). The company also arranged the location and timing of the date. Approximately 82% of the dates were in-person ($M_{\text{length}} = 2.1 \text{ h}, SD = 0.9$), 17% were over zoom ($M_{\text{length}} = 1.0 \text{ h}, SD = 0.5$), and the remaining 1% took place via another form of communication. In-person dates tended to be in common "dating" venues (e.g., bars, restaurants) that were reasonably easy for both participants to get to.

The matchmakers had access to participants' ages and their maximum age limits, but on 15% ($n = 1,357$ out of 9,084) of dates, matchmakers found that the participant could be matched with available partners who were at least 1 y above their stated maximum. As is typical in blind date situations, it was up to the participants themselves whether they disclosed their precise ages (or their upper age limits) to each other.

Results

Preregistered Analyses. We preregistered the analyses in this section at https://osf.io/rkm2d/?view_only=a0fe91dae0464077af7772e6890a8151 before we joined the background variable data

(containing gender, the partner's age, and the maximum age limits) and the date-level data (containing the dependent measures). Data and code can also be found at the link above.

Multilevel analysis strategy. There are multilevel considerations in this dataset, because some participants went on multiple dates, and every participant who reported on a partner was also reported on by that partner. To account for these forms of nonindependence, all analyses on the entire sample included a random effect of the intercept (β_0) for the participant (i.e., the person making the DV judgment), the partner (i.e., the person the judgment is about), and the dyad. Specifically, we used the code (1 | participant_ID) + (1 | partner_ID) + (1 | dyad_ID) in the lme4 package (27). When analyzing results for men and women separately, we removed (1 | dyad_ID) (i.e., 96.3% of dates were between a man and a woman and so in the separate analyses for men and women, dyads were almost always represented once). We used logistic regression for the second date decision (binary) variable.

Simple associations with the partner's age. We first examined the association of the partner's age with the participant's romantic desire using the following regression equation:

$$\text{Desire} = \beta_0 + \beta_1 \text{Partner Age} + \epsilon, \quad [1]$$

We preregistered that we would calculate β_1 on the whole sample and for men and women separately. (We also preregistered that we would add the PartnerAge^2 term to this equation and include it in the model if it were significant, but it was not significant for any of the DVs or the 3-DV average, $ps > 0.267$).

Table 1 illustrates how the overall effects for age across the three dependent measures were small and negative in all three cases. These trends were true for both men and women, and the gender differences were extremely small (and gender difference interactions nonsignificant in three out of four cases); for context, it would take $N = 19,630$ to detect the overall gender difference of $q = 0.04$ with 80% power. In other words, both men and women slightly preferred younger partners, and the magnitude of this preference was essentially identical.

Discontinuous regressions with the partner's age. We next examined the association of the partner's age with the participant's romantic desire using a discontinuous regression analysis. This approach (adapted from refs. 30 and 31) includes parameters that test for whether—at a theoretically meaningful x-axis value—there is a significant "cliff" in the slope of x predicting y (i.e., *elevation differential*, ref. 31) or whether the slope of x on y significantly changes above this threshold (*slope differential*, ref. 31). In this case, we are calculating the slope of the difference between the partner's age and the participant's self-reported age limit (negative numbers mean that the partner is below the limit), and the meaningful x axis value is the point at which the partner's age exceeds the participant's upper limit.

Table 1. Associations of partner's age with romantic desire, full sample

Dependent measure	All Ps	Men	Women	Gender differences	
	Partner age β_1	Partner age β_1	Partner age β_1	q	p
Romantic attraction	-0.08***	-0.07***	-0.04*	0.03	0.139
Overall rating	-0.07***	-0.05***	-0.03*	0.02	0.411
Second date decision	-0.02***	-0.03***	-0.01	0.02	0.043
Romantic desire (3-DV average)	-0.08***	-0.07***	-0.03*	0.04	0.115

Note: β_1 (Eq. 1) is standardized and can be interpreted like r [0.10 = small, 0.30 = medium, 0.50 = large; Cohen (28)]. Second date decision odds ratios were converted to r using the tool provided by Lenhard and Lenhard (29). Effect size q for the gender difference refers to the difference between the Men β_1 and Women β_1 , and has an effect size interpretation similar to r (Cohen, 1992). P value for the gender differences refers to the interaction term between parameter β_1 and gender when the interaction was added (along with the gender main effect) to Eq. 1. * $P < 0.05$, *** $P < 0.001$.

$$\text{Desire} = \beta_0 + \beta_1 \text{PartnerAgeLimitDiff} + \beta_2 \text{OverLimit} + \beta_3 \text{PartnerAgeLimitDiff} \times \text{OverLimit} + \epsilon, \quad [2]$$

In this equation, PartnerAgeLimitDiff refers to the partner's age minus the participant's maximum age limit (i.e., negative numbers reflect number of years that the partner is below the participant's upper limit), and OverLimit refers to whether the partner is (coded 1) or is not (coded 0) above the participant's maximum age limit. Therefore, β_1 refers to the effect of the partner's age on desire for ages below the maximum age limit (i.e., when the partner's age is below the limit, OverLimit is coded 0 so β_2 and β_3 make no contribution). β_2 refers to the immediate drop (or rise) associated with dating a partner above the maximum age limit (i.e., elevation differential, akin to a "cliff" implied by the threshold logic embedded in the age limit question), and β_3 refers to the change in the slope of age above the maximum age limit (i.e., slope differential; partners might be penalized especially harshly as their age increases above the limit). We had no a priori assumptions about whether threshold (β_2) or slope (β_3) effects were more likely; either or both would be meaningful. (Eleven participants reported a max age limit of 99, which we interpreted to mean "no limit" and we treated their responses as missing for this analysis.) Again, we preregistered that we would calculate β_1 , β_2 , and β_3 on the whole sample, and for men and women separately.

Table 2 illustrates once again that the effects for age relative to participant's personal age limit (β_1) were small and negative across the three dependent measures, and these trends emerged for both men and women. None of the β_1 , β_2 , or β_3 parameters differed significantly by gender in any of the 16 analyses. Intriguingly, none of the β_2 or β_3 parameters was significant either. That is, participants did not rate their partners any differently depending on whether the partner was below or above their personal maximum age limit (β_2), nor did the slope of the partner's age meaningfully change for partners who were above this limit (β_3). Rather, the extent to which participants rated younger partners (slightly) more positively was similar regardless of whether those partners were above vs. below the participants' personal maximum.

Fig. 1 is a scatterplot depicting this discontinuous regression for the romantic desire 3-DV average for x axis values ranging from -15 (i.e., the partner was 15 y below the participant's personal maximum) to 4 (i.e., the partner was 4 y older than the personal maximum), which reflects almost all of the dates in the sample (only 4% of x axis values fell outside this range, and all values were included in the models used to generate Table 2). Partners' precise ages (measured using their birthday) were used to create these x axis values, but note that partners had to be at least a full year older than the participant's maximum age limit to

be considered "above the limit." Other than the small-to-medium main effect difference between men and women on the dependent measure (with men experiencing more desire than women did), $t(8,992) = -7.91, P < 0.001, d = 0.29$, men and women show the same small negative slope for the partner's age and no effects of the maximum age limit.

Non-Preregistered Analyses.

Discontinuous regressions using age difference between partner and participant. We also examined the association of the age difference between the participant and the partner with romantic desire using the following discontinuous regression analysis:

$$\text{Desire} = \beta_0 + \beta_1 \text{PartnerAgeDiff} + \beta_2 \text{PartnerOlder} + \beta_3 \text{PartnerAgeDiff} \times \text{PartnerOlder} + \epsilon, \quad [3]$$

This approach follows a similar logic to Eq. 2, but now the theoretically meaningful x axis value is when the partner's age exceeds the participant's age. In this equation, PartnerAgeDiff refers to the partner's age minus the participant's own age (i.e., negative numbers reflect number of years that the partner is younger than the participant), and PartnerOlder refers to whether the partner is (coded 1) or is not (coded 0) older than the participant. Therefore, β_1 refers to the effect of the partner's age on desire for ages below the participant's own age, β_2 refers to the immediate drop (or rise) associated with dating a partner who is at least 1 y older, and β_3 refers to the change in the slope of age for partners above one's own age.

Table 3 illustrates once again that the effects for age relative to participant's own age (β_1) were small and negative across the three dependent measures, and these trends were true for both men and women. Again, none of the β_1 , β_2 , or β_3 parameters differed significantly by gender in any of the 16 analyses. Intriguingly, none of the β_2 parameters were significant, and occasionally, the β_3 parameters were positive for men (i.e., men liked women who were much rather than a little older than they were).

Fig. 2 is a scatterplot depicting this discontinuous regression for the romantic desire 3-DV average for the x axis value ranging from -12 (i.e., the partner was 12 y younger) to 12 (i.e., the partner was 12 y older). However, regression lines for men and women are not graphed along the same regions of the x axis, because women were set up with younger partners on only about 25% of the dates. (Only ~2% of dates were between women and a partner who was 7 or more years younger, whereas 25% of dates were between a man and a partner who was 7 or more years younger.) Note how these decisions by the matchmakers—which are predicated in the widespread assumption that women desire older men in the scholarly and lay communities alike—create a

Table 2. No effects for maximum age limit (β_2 and β_3) or gender differences, full sample

Dependent measure	Partner age (slope below limit) β_1			Age limit (threshold) β_2			Partner age (change above limit) β_3			Gender differences p		
	All Ps	Men	Women	All Ps	Men	Women	All Ps	Men	Women	β_1	β_2	β_3
Romantic attraction	-0.07***	-0.12***	-0.08***	-0.01	0.00	-0.06	-0.01	0.00	0.02	0.134	0.228	0.717
Overall rating	-0.03**	-0.09***	-0.05***	-0.02	0.02	-0.09	0.00	-0.02	0.05	0.534	0.147	0.165
Second date decision	-0.04***	-0.05***	-0.04***	-0.02	-0.03	-0.02	0.00	0.01	0.00	0.277	0.863	0.844
Romantic desire (3-DV average)	-0.06***	-0.11***	-0.07***	-0.02	-0.01	-0.07	0.00	0.00	0.03	0.242	0.299	0.513

Note: β s (Eq. 2) are standardized and can be interpreted like r (0.10 = small, 0.30 = medium, 0.50 = large; Cohen, 1992). Second date decision odds ratios were converted to r using the tool provided by Lenhard and Lenhard (2022). P values for the gender differences refer to the interaction terms between the parameter and gender when all gender interactions were added (along with the gender main effect) to Eq. 2. ** $P < 0.01$, *** $P < 0.001$.

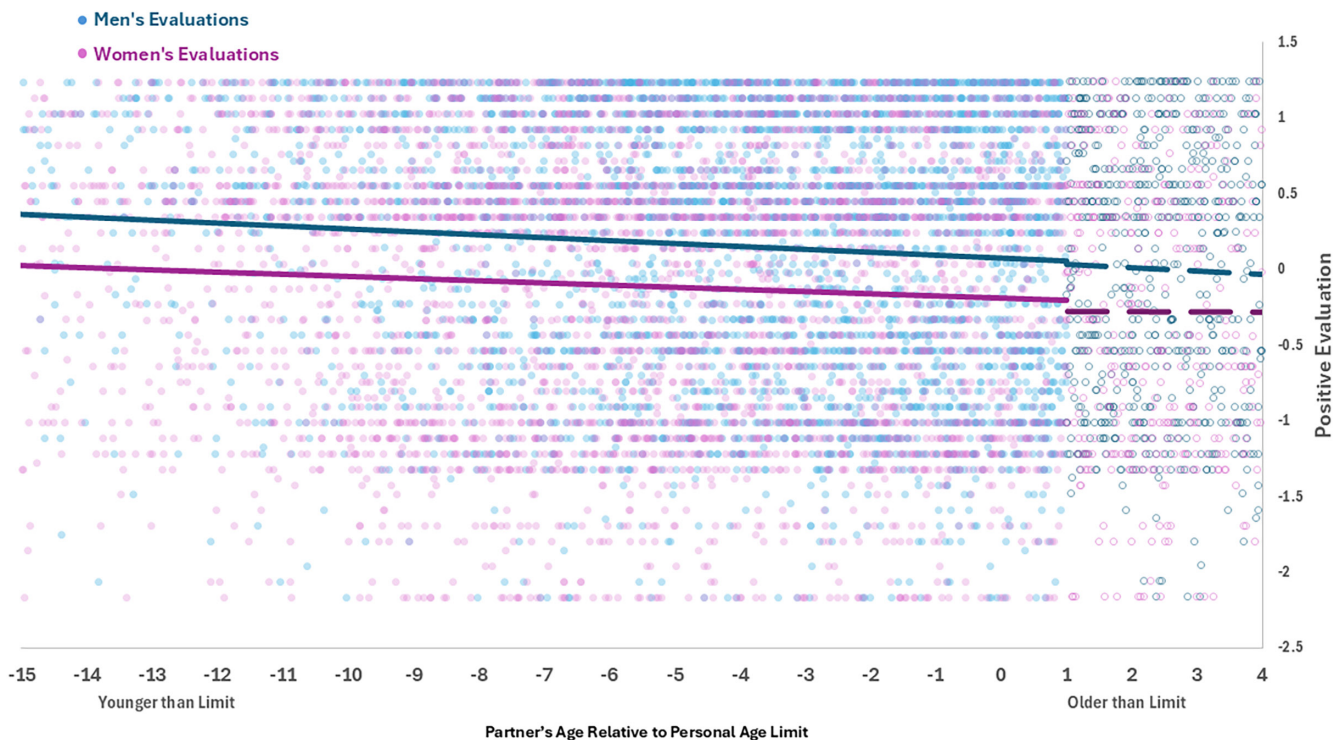


Fig. 1. Discontinuous regression of romantic desire on partner's age. Note: Regression lines are depicted for men's (blue) and women's (purple) evaluations separately, depending on whether the partner was below (filled circles, solid lines) or above (open circles, dashed lines) the participant's personal age limit. x axis value of zero means that the partner is the same age as the participants' maximum. y axis is an average of the three standardized DVs.

Simpson's paradox: The slope of age in the full sample (Table 3) is larger in magnitude than the slope for men or women alone. This paradox emerges because a) men tended to be set up on dates with younger partners more often than women were (i.e., there are more blue dots on the left side of the figure), and (b) men generally experienced more romantic desire than women did (i.e., the blue dots are higher in the figure). Other than these two main effects of gender, men and women both preferred partners who were younger than themselves, and their slopes leveled out for partners who were older than them.

As noted in the *Method* section, men were ~3.5 y older than women in the full sample. This same gap was evident in both the mixed-gender couples who said "yes" to each other, women $M = 45.5$ ($SD = 11.2$), men $M = 48.9$ ($SD = 11.4$), $t(3,081) = 35.80$, $P < 0.001$, $d = 0.64$, and the couples who did *not* say "yes" to each other, women $M = 45.6$ ($SD = 11.4$), men $M = 48.8$ ($SD = 11.6$), $t(5,661) = 48.36$, $P < 0.001$, $d = 0.64$. In other words, men's and women's identical preferences for younger partners in this sample

nevertheless resulted in a ~3.5-y age gap in the mutually yessing couples because this age difference was built into the pool from the start.

Examining only dates between women aged 40 or under and men (of any age). One could argue that the lack of gender differences documented in our preregistered analyses was a function of the fact that many of the women in our sample would not have been of reproductive age in ancestral contexts, and also some (small) portion of the dates were not between men and women. Therefore, we recalculated Tables 1 and 2 but restricted the dataset to only the $n = 3,526$ reports that derived from dates between women aged 40 or under and men (of any age).

Results did not differ appreciably from the full sample analyses. Table 4 findings were similar to Table 1, except that this time, no association was significant for men alone or women alone (which is again suggestive of a Simpson's paradox such that women are younger than men and men are more amorous than women). Table 5 findings were similar to Table 2, and again, none of the

Table 3. Associations of partner's age difference with romantic desire, full sample

Dependent measure	Partner age (slope below own age) β_1			Partner older (threshold) β_2			Partner age (change above own age) β_3			Gender differences p		
	All Ps	Men	Women	All Ps	Men	Women	All Ps	Men	Women	β_1	β_2	β_3
Romantic attraction	-0.11***	-0.05***	-0.03	-0.03	-0.05	0.00	0.04*	0.05*	0.03	0.968	0.869	0.456
Overall rating	-0.08***	-0.04*	0.00	-0.03	-0.01	-0.01	0.04	0.03	0.03	0.862	0.265	0.940
Second date decision	-0.03***	-0.03***	-0.02*	0.01	-0.03	0.02	0.04***	0.04*	0.03	0.615	0.860	0.743
Romantic desire (3-DV average)	-0.09***	-0.05***	-0.02	-0.02	-0.04	0.00	0.05**	0.05*	0.04	0.982	0.692	0.577

Note: β s (Eq. 3) are standardized and can be interpreted like r (0.10 = small, 0.30 = medium, 0.50 = large; Cohen, 1992). Second date decision odds ratios were converted to r using the tool provided by Lenhard and Lenhard (2022). P values for the gender differences refer to the interaction terms between the parameter and gender when all gender interactions were added (along with the gender main effect) to Eq. 3. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

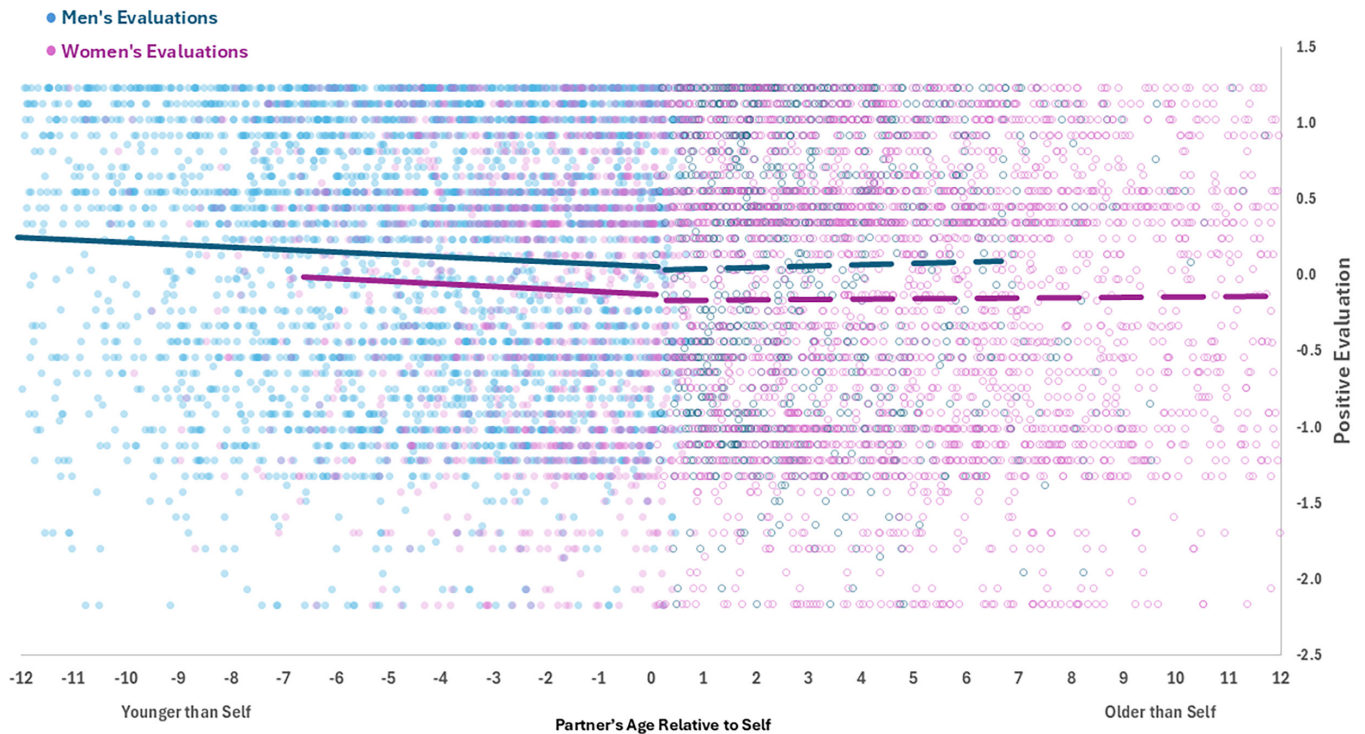


Fig. 2. Discontinuous regression of romantic desire on partner's age relative to the self. Note: Regression lines are depicted for men's (blue) and women's (purple) evaluations separately, depending on whether the partner was below (filled circles, solid lines) or above (open circles, dashed lines) the participant's own age. x axis value of zero means that the partner is the same age as the participant. y axis is an average of the three standardized DVs.

β_1 , β_2 , or β_3 parameters differed significantly by gender in any of the 16 analyses.

Plausible moderators. It is possible that pursuing young partners is a luxury for these women because many of their dates would have had high incomes (the median annual income for both the men and women in this sample was \$150,000). In other words, perhaps these women's preference for youth would be reduced when dating the lower-earning partners, who are more representative of the broader population of partners? We tested whether the income of the partners moderated any of the women's β s in Tables 1–3 (the basic age effects, the age limit effects, and the age difference effects). Out of 28 analyses, the moderational effect of the partner's income was never significant, average $\beta = 0.00$, $ps > 0.180$.

It is also possible that pursuing young partners is a luxury for these women because many of them had high incomes, in which case, the preference for youth would be reduced for the (more representative) lower-earning women. Therefore, we also tested whether women's *own* incomes moderated any of the women's β s in Tables 1–3. Out of 28 analyses, the average β was -0.01 , and only one moderational analysis was significant: The PartnerOlder

β_2 effect for the Overall Rating DV in Table 3 was more positive for women with *higher* incomes, $P = 0.039$, which is the opposite of the predicted effect. In summary, there was very little evidence that income—either their dates' or their own—moderated these women's (slight) preference for youth.

Table 2 revealed no evidence that participants' maximum age limits functioned as thresholds. However, it is possible that these preferences instead function as weights, which is the typical way that researchers test whether individual differences in preferences for single attributes in isolation have predictive validity (23). In other words, a participant who says "I don't want to date someone over 50" may not be especially repelled by a partner who is 51 (vs. 49), but it is possible that this person would be *generally* less attracted to older partners relative to someone who says "I don't want to date someone over 60." To test this possibility, we examined whether participants' maximum age limit (as a continuous variable) moderated the effect of the partner's age on the three DVs and the aggregated DV (i.e., four analyses). None of these moderational tests were significant, average $\beta = 0.01$, $ps > 0.315$. In other words, the maximum age limits reported by participants do not seem to function as thresholds or weights.

Table 4. Associations of partner's age with romantic desire, women ≤ 40 sample

Dependent measure	All Ps	Men	Women	Gender differences	
	Partner age β_1	Partner age β_1	Partner age β_1	q	p
Romantic attraction	-0.09^{***}	-0.01	-0.02	-0.01	0.139
Overall rating	-0.07^{***}	0.02	-0.00	-0.02	0.747
Second date decision	-0.01	-0.02	0.01	0.03	0.143
Romantic desire (3-DV average)	-0.08^{***}	-0.01	0.00	0.01	0.581

Note: β_1 (Eq. 1) is standardized and can be interpreted like r (0.10 = small, 0.30 = medium, 0.50 = large; Cohen, 1992). Second date decision odds ratios were converted to r using the tool provided by Lenhard and Lenhard (2022). Effect size q for the gender difference refers to the difference between the Men β_1 and Women β_1 , and has an effect size interpretation similar to r (negative qs are the opposite of the predicted direction; Cohen, 1992). P value for the gender differences refers to the interaction term between parameter β_1 and gender when the interaction was added (along with the gender main effect) to Eq. 1. $^{***}P < 0.001$.

Table 5. No effects for maximum age limit (β_2 and β_3) or gender differences, women ≤ 40 sample

Dependent measure	Partner age (slope below limit)			Partner age (change above limit) β_3						Gender differences p		
	β_1			Age limit (threshold) β_2			All Ps	Men	Women	β_1	β_2	β_3
	All Ps	Men	Women	All Ps	Men	Women	All Ps	Men	Women			
Romantic attraction	-0.10***	-0.14***	-0.13***	0.08	0.10	0.03	-0.07	-0.10	0.00	0.770	0.692	0.338
Overall rating	-0.05**	-0.09**	-0.08***	-0.05	0.00	-0.14	0.03	-0.01	0.11	0.769	0.877	0.202
Second date decision	-0.05**	-0.05***	-0.08***	0.04	0.02	0.06	-0.04	-0.04	-0.03	0.528	0.388	0.805
Romantic desire (3-DV average)	-0.09***	-0.12***	-0.12***	0.04	0.06	-0.02	-0.04	-0.07	0.03	0.677	0.718	0.336

Note: β s (Eq. 2) are standardized and can be interpreted like r (0.10 = small, 0.30 = medium, 0.50 = large; Cohen, 1992). Second-date decision odds ratios were converted to r using the tool provided by Lenhard and Lenhard (2022). P values for the gender differences refer to the interaction terms between the parameter and gender when all gender interactions were added (along with the gender main effect) to Eq. 2. *** $P < 0.01$, ** $P < 0.001$.

Discussion

This study is the first to examine the association of a partner's age with romantic desire in a blind date setting in a middle-aged population seeking long-term partners. Youth was appealing in the full sample, although this effect was small. But perhaps shockingly, the appeal of youth did not show any meaningful gender differences, and this was true whether we examined the basic effect of age, the effect of the age difference between self and partner, and when we limited the dataset to pairings of men with women 40 and under. It was also true whether the DVs were evaluative rating scales (i.e., romantic attraction and overall rating) or the binary decision to go on a second date.

Men self-reported an upper limit for a partner's age that was younger than women's self-reported upper limit, echoing a common gender difference in preferred partner age (6, 14). However, these self-reported upper limits appeared to make no difference whatsoever: People were generally attracted to younger partners, but it did not matter whether the partner was below or above each participant's personal maximum. Therefore, it is possible that women matched with men who were 3.5 y older (on average) not because they were attracted to older men, but merely because they had been *set up with* men who were 3.5 y older (on average) and their stated preference played no role.

These findings could be unique to this sample. First, not everyone is willing to trust a matchmaker with their love lives, so it is possible that the women in our sample are romantic risk-takers who are willing to move beyond culturally and historically normative dating mores. Second, it is possible that the older men in our sample had other unappealing traits (rather than age per se) that caused the women to be less attracted to them. Finally, it is also possible that modern technology and changing norms produce preferences and choices that mismatch ancestral inclinations (32).

Nevertheless, we find it fruitful and thought-provoking to take these data at face value, especially when considered alongside the Kurzban and Weeden (20) data. These two datasets (which sum up to 16,788 people rating many, many thousands of potential partners shortly after an initial blind-date or speed-date) suggest that, in initial attraction settings with strangers, women are attracted to *younger* men—to the same extent that men are attracted to younger women. Assuming these findings are true and replicable, how do we reconcile them with the fact that, in mixed-gender long-term couples, men tend to be older than women? There are many (non-mutually exclusive) possibilities.

First, we did not capture actual relationship formation in this study. It is possible that women are initially attracted to young men, but somewhere between an initial date and relationship formation, these older-woman/younger-man pairings are

especially likely to wither as the liabilities of men's youth come to the fore. Relatedly, people's abstract preferences might be overwhelmed on a first date; when people are trying to make a good impression, they may even be especially amenable to flattery from partners who seem dissimilar or who do not fit their stated ideals (33, 34). Also, it is possible that a woman's older age is more strongly associated with dating breakup than a man's older age, but this explanation does not seem especially likely given that a) the (small and negative) association of age with relationship quality is highly similar for men and women (35) and that b) relationship quality is the strongest known predictor of breakup (36).

A second possibility is that relationship formation with respect to age is driven by men's preferences, not women's. This framing is consistent with the way that historians often think about the age gap, which was much larger in periods that afforded women less control over their romantic choices (3). It also consistent with data showing that the age gap in mixed-gender couples is larger in gender-unequal countries (37).

A third possibility is that this study tells us something important about the preferences of women with means and/or who are successful professionals. Now, it bears repeating that income did not moderate any of these findings. Nevertheless, none of these women were likely to be monetarily dependent on men, and social role theory (38) predicts that gender differences in preferences linked to ambition and earning potential will erode as a society moves closer to gender equality. So when these women encountered younger men whom they desired on their blind dates, perhaps they were happy to overlook the lower level of career advancement among these men. In other words, it is plausible that women's power and standing in society influences what they *actually* like (i.e., their revealed preference for younger men) more powerfully than it influences what they *say* they like (i.e., their lingering stated preference for older men).

An intriguing fourth possibility is that a given person's dating pool—like the pool in this sample—is already stacked with a male–female age difference at the outset. Consider that adolescent girls go through puberty 1 to 2 y earlier than boys (39). So from a young age, as people are starting to date and learning about their preferences, many boys may not be considered (by themselves or by others) to be in the “dating pool” yet.* On the flipside, older women may be especially likely to lose interest in dating and take themselves out of the pool, perhaps because they do not relish the idea of caring for an ailing partner (40). These two forces would

*This pattern could also explain how women come to *think* they prefer older men: When they first became interested in dating at a young age, many girls would have discovered that many of their same-aged peers were still (undate-able) prepubescent boys.

create a shift such that women generally find that the pool of available single men shades a little older than them, and vice versa. Future research that examines exactly how people determine who is or is not in their pool of eligible dating partners could help illuminate this process more completely.

These findings are surprising. Nevertheless, this is the only dataset of its kind, the sample size is very large, and the main analyses were

preregistered. Along with the overlooked lack-of-a-gender-difference in Kurzban and Weeden (20), these findings suggest that men *and women* find youth (a little) appealing in initial attraction settings—whether they know it or not.

Data, Materials, and Software Availability. All study data are included in the article and/or *SI Appendix*.

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