Evolutionary Psychological Science
https://doi.org/10.1007/s40806-024-00418-y

RESEARCH ARTICLE

The Relative Importance of Attractiveness and Intelligence to the Mate Preferences and Choices of Women and Their Parents

Madeleine A. Fugère[1] · Noelle Ciccarelli[1] · Yineli Rodriguez[1] · Alita J. Cousins[1]

Received: 19 August 2024 / Revised: 1 November 2024 / Accepted: 4 November 2024

Abstract

The present study explores the relative importance of men's physical attractiveness and purported intelligence to the hypothetical mate preferences and choices of 201 daughters and 187 corresponding parents. We measured self-reported mate preferences and then varied men's physical attractiveness (more vs. less attractive) and intelligence (higher vs. lower peer intelligence rating) in a 2 × 2 independent groups design replicated across daughters and parents. Although intelligence was rated by both women and their parents as significantly more important than physical attractiveness for a long-term mate for daughters, both daughters (72.64%) and their parents (59.56%) chose the more attractive man as the best long-term partner for daughters, regardless of his purported intelligence level. Furthermore, although daughters rated a partner's attractiveness as more important than their parents did when considering a mate for daughters, daughters' and parents' choices corresponded 73.8% of the time, suggesting less conflict over mate choices than may be predicted based on self-reported ideal mate preferences. However, when higher attractiveness and higher intelligence were not paired, women were more likely to choose the more attractive man while parents were more likely to choose the more intelligent man, suggesting different trade-off preferences for women and their parents. Men's physical attractiveness may be more important to both daughters and parents than consciously realized, and daughters' and parents' mate choices may correspond more closely than their responses to rating scales might suggest.

Keywords Parent-offspring conflict · Physical attractiveness · Intelligence · Mate preferences

In most contemporary cultures, parents are involved in the mate choices of their offspring, especially their daughters' choices. Parents may choose partners for their daughters or may more subtly attempt to influence their offspring's mate decisions (Agey et al., 2021; Apostolou, 2009, 2017, 2020; Bovet et al., 2018; Regan et al., 2012). Parental influence over women's mate choices may influence human evolution, especially when parents' priorities differ from their offspring's priorities (Apostolou, 2020). Although intelligence is consistently ranked as one of the most important traits in a mate, physical attractiveness is rated as less important, especially by both daughters and parents (Fugère et al., 2017b; Li et al., 2002; Lippa, 2007; Locke et al., 2020; Perilloux et al., 2011). Furthermore, while women and their parents tend to agree about the importance of intelligence for a long-term partner for daughters (Apostolou, 2015; Fugère et al., 2017b), they disagree considerably about the importance of physical attractiveness (Apostolou, 2015; Fugère et al., 2017b, 2023; Perilloux et al., 2011). Although physical attractiveness is *rated* as less important versus other characteristics by women and their parents, we propose that a potential partner's attractiveness more strongly drives women's and parents' mate preferences and choices than consciously recognized. Furthermore, conflict among daughters and parents may be overestimated when considering ideal mate preferences rather than more constrained mate choices. Therefore, the purpose of the present study is to examine the relative importance of physical attractiveness and intelligence to the mate preferences and choices of women and their parents, when considering hypothetical mates for daughters.

✉ Madeleine A. Fugère
fugerem@easternct.edu

[1] Department of Psychology, Eastern Connecticut State University, Windham, CT, USA

Published online: 14 January 2025

The Importance of Intelligence versus Physical Attractiveness

As evolutionary theory predicts, if daughters choose a mate with good genes, both daughters and their parents will benefit from the resulting genetic quality for their children or grandchildren (Apostolou, 2015; Dubbs et al., 2013; Lefevre & Saxton, 2017). Although most researchers consider physical attractiveness to signal good genes, intelligence is both highly heritable and can also signal genetic quality (see Zhang et al., 2024). Moreover, a partner's intelligence can indicate the ability to acquire resources or the potential to invest in offspring (Chang et al., 2011). Therefore, both daughters and their parents should strongly value intelligence when considering a potential long-term partner for daughters. Additionally, if a daughter's partner is able to provide resources, this reduces the investment burden for grandparents in their grandchildren (see Chang et al., 2011).

Research assessing the self-reported mate preferences of women (Buss et al., 2001; Lippa, 2007) as well as both women and their parents (Fugère et al., 2017a, 2023; Locke et al., 2020; Perilloux et al., 2011) shows that both women and their parents agree that intelligence is a more desirable trait for a partner (for themselves or for their daughters) versus physical attractiveness. However, research suggesting that intelligence is more important than physical attractiveness often involves self-reported ideal mate preferences rather than experimental scenarios (Buss et al., 2001; Fugère et al., 2017b; Lippa, 2007; Locke et al., 2020; Perilloux et al., 2011).

Daughters and Parents Disagree about the Importance of Physical Attractiveness

Consistent with evolutionary theory, women self-report that they value physical attractiveness when evaluating partners for themselves more strongly than their parents value attractiveness when evaluating partners for their offspring (see Apostolou, 2008, 2011, 2015; Buunk & Solano, 2010; Dubbs & Buunk, 2010; Dubbs et al., 2013; Fugère et al., 2023, 2017b; Guo et al., 2017; Perilloux et al., 2011). Although both parents and grandparents benefit from offspring genetic quality, because offspring share *more* genes in common with their parents than with their grandparents, individuals should value characteristics which signal partner genetic quality more than their parents should value the same characteristics in potential in-laws (see Apostolou, 2011, 2015; 2017; Perilloux et al., 2011). In addition to daughters valuing physical attractiveness more, parents may oppose physically attractive sons-in-law because attractive men are perceived as more likely to be unfaithful to their partners or to leave their long-term relationships, potentially resulting in increased investment burdens for parents (Bovet et al., 2018; MaKellams et al., 2017; Waynforth, 2001).

Experimental research on parent-offspring conflict over mate preferences is rare, however, these experiments suggest that attractiveness is more important to daughters than to their parents. For example, Apostolou (2011) asked parents and adult children to allocate points to different traits under three different budget conditions. When mate budgets were low, and priorities were forced to be revealed, daughters allocated more of their budgets to obtain a good-looking partner while mothers allocated more points to obtain a son-in-law who was ambitious and industrious. Lefevre and Saxton (2017) found that while both women and their parents preferred more attractive partners for daughters, this preference was stronger for women than for their fathers. Similarly, Fugère et al. (2019) found that physical attractiveness was more strongly related to women's mate preferences while personality favorability was more strongly related to fathers' preferences for mates for their daughters. Because physical attractiveness inspires more disagreement among offspring and parents relative to other traits (Apostolou, 2015; Fugère et al., 2017b; Perilloux et al., 2011), research in this area is critical to understanding parent-offspring conflict over mate choices.

Physical Attractiveness is More Important than Consciously Realized

Research suggests that a partner's attractiveness is more important than we may consciously realize (Eastwick et al., 2024; Kurzban & Weeden, 2005; Luo & Zhang, 2009; Prokosch et al., 2009; Todd et al., 2007). For example, Prokosch et al. (2009) showed women videos of men performing tasks such as reading news headlines and answering questions from researchers. These men also completed a verbal intelligence measure. Although women accurately assessed men's intelligence when evaluating the video clips, women's attraction to the men was more strongly influenced by men's physical attractiveness than their intelligence levels. Similarly, in a study matching mate preferences to the perceived characteristics of one's actual mate, Eastwick et al. (2024) found that both men and women underestimated the importance of attractiveness to their mate choices, and that this tendency to underestimate the importance of attractiveness was stronger for women than for men.

We may underestimate the importance of attractiveness to our mate choices in part because of unconscious neurological processes which guide our reactions to stimuli. Research using functional magnetic resonance imaging (fMRI) by Kim et al. (2007) shows that physically attractive faces

automatically increase activity in the nucleus accumbens (an area of the brain associated with reward), even when the participants are asked to judge facial characteristics unrelated to attractiveness. The authors maintain that this immediate neurological activation sends preference information to the orbitofrontal cortex which then guides our future choices. This instantaneous reaction to physical attractiveness may cause a primacy effect, such that attractiveness information, which is immediately encoded, influences the way we interpret the subsequent information we encounter (Asch, 1946).

Research involving speed dating, a paradigm involving rapid mate choices, also suggests that attractiveness takes precedence over other characteristics (Kurzban & Weeden, 2005; Luo & Zhang, 2009; Todd et al., 2007). For example, although speed-daters rated education as more important than physical attractiveness, Kurzban and Weeden (2005) found that those same speed-daters were more likely to request future dates with individuals who were physically attractive rather than educated. Some individuals may recognize the importance of physical attractiveness. Men are more likely than women to say that physical attractiveness is important to them in a partner (Buss, 1989; Buss et al., 2001; Lippa, 2007), and Li and colleagues (2013) found that undergraduates from Singapore who rated physical attractiveness as more important for a long-term partner were also more likely to rate attractive individuals as more romantically desirable and were more likely to request dates with attractive partners.

Although we may continue to underestimate the importance of physical attractiveness, the stated importance of attractiveness to women is increasing over time. Buss et al. (2001) found that both physical attractiveness and intelligence were ranked as more important to American women in the mid-1990s versus data collected in the late 1930s. Similarly, Chang et al. (2011) found that physical attractiveness was rated as more important to Chinese women in data collected in 2008 versus 1983. Interestingly, in Chang et al.'s study, intelligence was rated as *less* important to women in the more recent data. The rising importance of physical attractiveness is consistent with Waynforth's (2001) speculation that as women have increased access to their own resources, a partner's physical attractiveness may become more prominent.

Furthermore, although attractiveness may be rated as *less* important to parents than to offspring, attractiveness is not *unimportant* to parents. When women and their parents rate physical attractiveness as less important than intelligence, they may be conveying that it is less important that a partner be *exceptionally* attractive rather than attractive *at all*. Unattractiveness may be associated with susceptibility to pathogens (Gangestad & Buss, 1993; Perilloux et al., 2010) and above average attractiveness may not convey fertility benefits beyond moderate attractiveness (Li et al., 2002). Across cultures, individuals of either moderate or above-average attractiveness are perceived to possess other positive traits such as better personalities and life experiences as well as improved health and fertility, relative to unattractive individuals (Dion et al., 1972; Shaffer et al., 2000; Soler et al., 2003; Weeden & Sabini, 2005; Zebrowitz et al., 2012). Therefore, avoiding unattractive partners may be a necessity, while finding an exceptionally attractive partner may be a luxury (Li et al., 2002).

A moderate level of physical attractiveness may be essential to both women and their parents when considering a mate for themselves or for their daughters. For example, Jonason et al. (2019) found that intelligence was important to men's and women's mate choices only when physical attractiveness was "sufficient" (p. 55). If targets weren't at least moderately attractive, their intelligence levels did not impact participants' mate preferences. Similarly, Li et al. (2002), and Griffin and Langlois (2006) found that moderately attractive and very attractive targets were rated similarly while less attractive targets were rated less favorably. Further, two studies by Fugère and colleagues (Fugère et al., 2017a, 2019) showed that both women and their parents chose moderately attractive or attractive men as the best long-term partners for daughters, but avoided less attractive men, even when those men possessed the most favorable personality characteristics. It is difficult to isolate the contributions of attractiveness and intelligence to mate choice. Individuals may assume that attractive targets are more intelligent (Dion et al., 1972) and attractive men may actually be more intelligent than their less attractive counterparts (Perrilloux et al., 2010).

Measuring Ideal Preferences May Exaggerate Conflict among Daughters and Parents

Whether attractiveness or intelligence more strongly impacts mate preferences may depend on whether participants consider an *ideal* partner or an *available* partner. When presented with a list of traits and asked to rate their importance, individuals may picture an ideal partner with many positive characteristics. However, when presented with a few constrained mate choices, we may need to make compromises to obtain the best mate from the available choices. Conroy-Beam and Buss (2016) suggest that our mate preferences guide our choices; however, available partners who possess all our preferred characteristics may not exist, therefore, we often make trade-offs where "fulfilling one preference often requires relaxing another" (p. 63).

Experimental research involving mate choices from a few constrained options shows the importance of physical attractiveness to both offspring and their parents (Bovet et al., 2018; Fugère et al., 2017a, 2019, 2023; Lefevre & Saxton, 2017). For example, Fugère and colleagues (Fugère

et al., 2017a, 2019) found that both women and their parents chose moderately attractive or attractive men as the best long-term partners for daughters, while avoiding less attractive men, even when the unattractive men supposedly possessed characteristics which were rated more favorably than attractiveness. Similarly, Fugère et al. (2023) found that although both daughters and parents *rated* the traits of ambition and intelligence as more important than physical attractiveness, both women and their parents *chose* the more attractive man as the best mate for daughters rather than the less attractive man who was described as ambitious and intelligent. Bovet et al. (2018) contend that conflict between parents and offspring may be overestimated when relying on trait ratings rather than "a single choice between different candidates with a clear trade-off" (p. 12).

When making constrained mate choices, daughters and their parents may have different trade-off preferences. According to the trade-offs hypothesis, when forced to choose, daughters may prefer partners who are attractive (signaling good genetic quality for offspring) rather than partners who have access to resources, thus potentially requiring more resource investment from grandparents for their grandchildren (Apostolou, 2011, 2017). The finding that women in choice marriages have more children than women in arranged marriages (Hasnain & Snopkowski, 2024) may reflect women's stronger preference for attractive men relative to their parents. Daughters may be more willing to trade intelligence for attractiveness in part because of increased access to their own resources (Waynforth, 2001). Many studies exploring mate preference trade-offs use a budget methodology as an alternative to gathering self-reported mate preferences (Apostolou, 2011; Li et al., 2011; Thomas et al., 2020; Waynforth, 2001). However, because this procedure requires participants to allocate their budgets to different traits, it is possible to assign the same priority to multiple traits. In the current project, we aimed to assess the relative importance of physical attractiveness and intelligence using both hypothetical mate preference measures, when it is possible to value traits equivalently, and constrained mate choices, when participants are forced to make trade-offs.

Although our ideal preferences guide our mate choices (Conroy-Beam & Buss, 2016), once we make mate choices, those choices can cause us to revise our priorities. For example, if we find a partner who is kind but not funny, moving forward we may emphasize the importance of kindness and de-emphasize the importance of a partner's sense of humor (Fletcher et al., 2000). These shifting priorities may indicate cognitive dissonance between our mate preferences and mate choices which may cause us to revise our preferences (Brehm, 1956), and, as a result, we may devalue those non-chosen characteristics or partners (Johnson & Rusbult, 1989). Devaluing the non-chosen alternative may be especially likely when making difficult decisions which involve trade-offs of valuable characteristics. For this reason, if women and their parents choose a more attractive man as the best partner for daughters, they may subsequently indicate that attractiveness is more important than intelligence or devalue the intelligence information. The reverse may occur after choosing a more intelligent partner.

The Current Experiment

In the current project, we collect both women's and parents' self-reported preferences for a long-term mate for daughters, as well as daughters' and parents' hypothetical mate choices in response to an experimental manipulation varying men's physical attractiveness and ascribed intelligence level. Although recent research has explored the relative importance of physical attractiveness and personality characteristics among women and their parents (Fugère et al., 2017a, 2019), in prior research men's attractiveness levels varied from attractive to unattractive while their personality characteristics were always favorable. One reason, then, that prior research may have found the increased importance of physical attractiveness versus personality characteristics is that the attractiveness manipulations were simply stronger than the personality manipulations. In the present study we aimed to explore the relative importance of men's physical attractiveness and intelligence to the mate preferences of daughters and their parents using experimental manipulations of similar strength. We also aimed to assess agreement and disagreement among women and their parents when evaluating potential partners for daughters across both ideal mate preferences and constrained mate choices.

Hypothesis 1: Self-Reported Mate Preferences

Consistent with prior research (Apostolou, 2011, 2015; Fugère et al., 2017b; Perilloux et al., 2011), we hypothesize that when women and their parents self-report their mate preferences, intelligence will be rated as more important than physical attractiveness by both women and their parents (H1a). Furthermore, as in prior research (Apostolou, 2008, 2011, 2015; Buunk & Solano, 2010; Dubbs & Buunk, 2010; Dubbs et al., 2013; Fugère et al., 2017b, 2023; Guo et al., 2017; Perilloux et al., 2011), we also expect that physical attractiveness will be rated as more important to women than to their parents (H1b).

Hypothesis 2: Effect of Attractiveness on Dating Desirability and Intelligence Ratings

Although women report that physical attractiveness is more important to them in a mate for themselves than their parents do in a mate for their daughters, if obtaining a partner with

an acceptable level of attractiveness/avoiding unattractiveness is a necessity (Fugère et al., 2017a; Li et al., 2002), finding a mate for daughters who meets this minimum level of physical attractiveness should be essential to both women and their parents. Therefore, we predict that both women and their parents will rate the attractive man as the more desirable dating partner for daughters versus the less attractive man (H2a). Consistent with the halo effect (Dion et al., 1972), men who are attractive are also perceived as more intelligent, and attractive men may be more intelligent than their less attractive counterparts (Perrilloux et al., 2010). Therefore, we also predict that both women and their parents will rate the attractive man's intelligence levels more favorably than the less attractive man's intelligence levels, regardless of the intelligence information provided (H2b).

Hypotheses 3–4: Relative Importance of Attractiveness versus Intelligence

Although prior research shows that both women and their parents state that they value traits such as intelligence more than physical attractiveness (Apostolou, 2011, 2015; Fugère et al., 2017b; Perilloux et al., 2011), when respondents rate hypothetical mate characteristics, they may assume that men with favorable characteristics, such as intelligence, will also possess an acceptable level of physical attractiveness. If an acceptable level of physical attractiveness is a necessity in a potential mate (Fugère et al., 2017a; Jonason et al., 2019; Li et al., 2002), we should find that women and their parents value other traits more than physical attractiveness only when the target man meets a minimally acceptable level of physical attractiveness. Therefore, we predict that the more intelligent man should be rated as a more desirable long-term partner than the other target man only when he is presented as more attractive, but not less attractive. Accordingly, we expect that the less intelligent but more attractive man should be rated as a more desirable partner for daughters than the more intelligent but less attractive man (H3). Further, if an acceptable level of physical attractiveness is a necessity in a potential mate (Fugère et al., 2017a; Li et al., 2002), both women's and their parents' ratings of men's physical attractiveness should be more strongly related to men's dating desirability ratings versus ratings of men's intelligence favorability. Therefore, we predict that both women's and parents' ratings of men's physical attractiveness will explain more unique variance in dating desirability ratings than their intelligence favorability ratings (H4).

Hypotheses 5: Mate Choice

Consistent with prior research suggesting that physical attractiveness is important to the mate choices of both women and their parents (Fugère et al., 2017a, 2019, 2023; Lefevre & Saxton, 2017), perhaps even more important than consciously realized, we hypothesize that both daughters and their parents will choose the more attractive man as the best mate for daughters, rather than the man described as intelligent (H5). Therefore, we predict that both daughters and parents will choose the more attractive man as the best mate for daughters versus the less attractive man, even when the less attractive man has the more favorable intelligence rating.

Hypothesis 6: Agreement versus Conflict in Mate Choice

We predict that women and their parents will generally agree about the choice of the best mate for daughters, in that both groups will be more likely to choose the more attractive man as the best mate for daughters versus the less attractive man. However, when women and their parents disagree, we expect daughters to choose the more attractive man and parents to choose the more intelligent man (H6). This should be especially evident in the trade-off conditions where higher intelligence and higher attractiveness are not paired.

Hypothesis 7: Reasons for Mate Choice

Consistent with self-reported preferences, we hypothesize that when intelligence and attractiveness are paired (i.e. when attractiveness and intelligence conditions are congruent, e.g. high attractiveness, high intelligence), both women and their parents will report that they chose the more attractive man based on his intelligence rather than based on his attractiveness (H7a). However, in the trade-off conditions, where higher intelligence and higher attractiveness are not paired, we predict that women will be more likely to say that they based their mate choice on attractiveness while parents will be more likely to say that they based their choice on intelligence (H7b). After making mate choices, we may revise our mate preferences to more closely match those choices (Fletcher et al., 2000; Johnson & Rusbult, 1989). Therefore, we expect that after women and their parents choose the more attractive man (versus the more intelligent man), they will devalue the intelligence information or the characteristic of intelligence, with the reverse expected after choosing the more intelligent man (H7c).

Method

Participants

Women ($N = 201$, aged 18–33, $M = 19.97$, $SD = 2.13$) and 187 parents (aged 33–65, $M = 49.78$, $SD = 6.43$) participated in this online experiment. Daughters were recruited via a social media announcement on a local forum and from a

small liberal arts university in the Northeastern U.S. Fourteen daughters did not recruit a parent, but these daughters were retained for all analyses not requiring both daughters and parents. In our recruitment materials, we encouraged daughters to ask their mothers to participate if possible (Wu et al., 2024 emphasize the influence of parents of the same gender as offspring on mate preferences). Of those who recruited a parent, most daughters recruited mothers (180 mothers, 7 fathers). Although few fathers were included in our data, previous research shows that mothers and fathers have similar mate preferences for their daughters (see Fugère et al., 2017a, 2019; Wu et al., 2024) so we retained both daughter-mother and daughter-father pairs for all analyses. Because we used photographs to vary the physical attractiveness of the targets, and because the trait of "intelligence" may be differentially desirable when applied to women versus men (Lippa, 2007) we limited data collection to women and their parents for the present study.

The participants were primarily White (daughters $N = 135$, 67.2%, parents $N = 136$, 72.7%), 28 daughters (13.9%) and 21 parents (11.2%) identified as Latinx, 25 daughters (12.4%) and 21 parents (10.4%) identified as Black or African American, four daughters (2%), and three parents (1.6%) identified as Asian or Pacific Islander and eight daughters (3.98%) and one parent (0.5%) identified as biracial. One daughter and parent (0.5%) identified as Arab and one parent (0.5%) declined to report an ethnic background. Three parents (2.67%) chose the "other" category as their ethnic background without providing further details. Restricting the analyses to White daughters improved the ratings of men's physical attractiveness, however, to retain the ethnic diversity of our sample, we conducted our analyses on the full sample.

Most daughters reported being single ($N = 120$, 59.7%) or being in a casual relationship ($N = 73$, 36.3%). Seven daughters (3.5%) reported being married, and one daughter reported being divorced (0.5%). Most daughters reported being heterosexual ($N = 125$, 62.2%), followed by bisexual ($N = 51$, 25.4%), and pansexual ($N = 3$, 1.5%). Five daughters reported being asexual (2.5%), one daughter did not answer this item (0.5%), and two daughters reported being undecided (1%). Thirteen daughters identified as lesbian or queer (6.5%). One daughter identified as demisexual (0.5%). Restricting the analyses to heterosexual, bisexual, and pansexual daughters did not significantly impact ratings of the target men's attractiveness or dating desirability, therefore, to retain the diversity of our sample with respect to sexuality, we used the full sample for hypothesis testing. Women's sexuality may be more flexible than men's (Diamond et al., 2020) and research by Williamson et al. (2021) shows that ethnic and sexual minorities are often excluded from intimate relationships research, therefore, we believed it was important to retain the diverse participants we were able to recruit for this study.

Procedure and Design

This experiment was approved by the Committee on Using Human Subjects in Research and was advertised via the university's website as a study involving similarities and differences in mate preferences among women and their parents. Volunteers contacted a research assistant who randomly assigned women and their parent to the same experimental condition in a 2 (men's physical attractiveness: more vs. less attractive) X 2 (men's intelligence: higher vs. lower peer intelligence rating) independent groups design.

Participants received an email containing links to the daughters' and parents' surveys for their assigned condition and a participation code matching daughter-parent dyads. Women and their parents completed an online informed consent form and then provided their gender, age, ethnic background, sexual orientation, and relationship status. Then participants were shown a series of 10 traits rated as important to mate selection for both parents and offspring in prior research (Apostolou, 2011; Buunk & Solano, 2010; Dubbs & Buunk, 2010; Fugère et al., 2017b; Lippa, 2007; Perrilloux et al., 2011) such as "intelligent," "physical attractiveness," "honest," and "sense of humor." The participants rated the importance of these traits when considering a long-term romantic partner for themselves or for their daughters on a 1 (not at all important) to 7 (extremely important) scale.

Participants then saw a color photograph of a target man along with peer intelligence rating information. The photographs were obtained from free-use internet sources such as Unsplash. We pretested the photographs among college-aged women and chose the photograph with the highest attractiveness rating (5.33/7) as well as the photograph with the lowest attractiveness rating (2.63/7) for inclusion in the experiment. The two photographs were of White men with brown hair and facial hair displaying neutral facial expressions. In our pretests, both men were perceived as White in ethnic background and between the ages of 23–27. Both photographs depicted the shoulders and front profile of the men. The men were wearing white t-shirts and were set in front of a dark gray background (which was adjusted using Photoshop).

In the higher peer intelligence rating condition, the women and parents then read "we asked this man's peers to rate his intelligence. This man was rated by his peers as a 5.33/7 on intelligence" while in the lower rating condition, the women and parents read "this man was rated by his peers as a 2.63/7 on intelligence." To balance the strength of the intelligence and attractiveness manipulations, the pretest ratings of the attractiveness of the photographs were used to construct the intelligence manipulation.

After seeing the first photograph and intelligence information, women and their parents were asked to rate the target man using three questions derived from prior research (Campbell, 1999). The pairs were asked "how attractive do you find this person when considering him as a long-term romantic partner for yourself," or "for your daughter," "how favorably would you rate the intelligence information provided by his peers," and "how desirable would you find this person as a long-term romantic partner for yourself" or "for your daughter?" Ratings ranged from 1 (not at all attractive, favorable, desirable) to 7 (very attractive, favorable, desirable).

Then participants were shown the photograph of the original man again along with his intelligence information (e.g. more attractive man with higher peer intelligence rating), followed by the photograph of the other target man and the opposing intelligence information (e.g. less attractive man with the lower peer intelligence rating). Daughters were then asked to select the man they thought would make the best long-term mate for themselves and parents were asked to select the man they thought would make the best long-term mate for their daughters from these two choices. The participants responded by selecting the number of the preferred man (the more attractive man was presented as #53 and the less attractive man was presented as #26) and were asked to briefly explain the reason for their mate choice in an open-ended response.

Debriefing information was presented online immediately after completion of the study. The researchers also emailed debriefing forms to the students who chose to be compensated with research credits. Women and parents who chose to receive payment for their participation received a $10 credit to their university account or a $10 gift card which was delivered to community participants in person or via the U.S. mail.

Results

Manipulation Checks

Attractiveness In our pretests among women, the attractive man was rated toward the higher end of the 1–7 scale ($M = 5.33$, $SD = 1.49$) and the less attractive man was rated toward the lower end of the scale ($M = 2.63$, $SD = 1.35$). The difference between these attractiveness conditions was significant and the effect size was large (F (1, 49) = 90.98, $p < .001$, $\eta p^2 = 0.65$). To confirm the attractiveness manipulation in the current study among daughters and parents, we analyzed responses to the item "how attractive do you find this person as a long-term romantic partner for yourself?" or "for your daughter?" using a 2 (attractiveness level) by 2 (generation: daughters vs. parents) repeated measures ANOVA. The results showed that there was a significant main effect for attractiveness level; women and their parents rated the attractive man as more attractive ($M = 4.16$, $SD = 1.62$), than the less attractive man ($M = 2.64$, $SD = 1.31$, F (1, 186) = 87.55, $p < .001$, $\eta p^2 = 0.32$). There was a significant main effect for generation; across attractiveness levels, daughters rated the target men as less attractive ($M = 3.26$, $SD = 1.74$) than their parents did ($M = 3.62$, $SD = 1.65$; F (1, 186) = 7.29, $p = .008$, $\eta p^2 = 0.04$). This main effect was qualified by a significant interaction (F (1, 186) = 14.55, $p < .001$, $\eta p^2 = 0.07$), daughters rated the attractive man ($M = 4.24$, $SD = 1.62$) as slightly more attractive than their parents did ($M = 4.08$, $SD = 1.63$) while parents rated the less attractive man ($M = 3.11$, $SD = 1.53$) more favorably than their daughters did ($M = 2.17$, $SD = 1.10$).

Intelligence The intelligence ratings assigned to the target men were constructed to correspond to the average attractiveness ratings from the pretest. The intelligent man was presented as "rated by his peers as a 5.33/7" while the less intelligent man was presented as "rated by his peers as a 2.63/7" with respect to intelligence. In our manipulation check item, 92% of women and parents correctly verified these intelligence levels. To confirm the intelligence manipulation in the current study among daughters and parents, we analyzed responses to the item "how favorably would you rate the intelligence information provided by his peers?" for daughters and parents. We performed a 2 (intelligence level) by 2 (generation: daughters vs. parents) repeated measures ANOVA. Confirming the effectiveness of the intelligence manipulation, there was a significant main effect for intelligence condition (F (1, 186) = 111.44, $p < .001$, $\eta p^2 = 0.38$). Importantly, the effect size for this manipulation was only very slightly stronger than that of the attractiveness manipulation ($\eta p^2 = 0.32$), suggesting manipulations of almost equivalent size, with the intelligence manipulation being slightly stronger than the attractiveness manipulation. Women and their parents rated the intelligent man more positively ($M = 4.04$, $SD = 1.45$) than the less intelligent man ($M = 2.48$, $SD = 1.30$). There was no significant main effect for generation (F (1, 186) = 1.62, $p = .205$) and the interaction between intelligence level and generation was also not significant (F (1, 186) = 0.026, $p = .873$).

Quantitative Results

Hypothesis 1: Self-Reported Mate Preferences To assess Hypothesis 1a, that women and their parents would both rate intelligence as more important than physical attractiveness, we performed a 2 (generation: daughters vs. parents) by 2 (trait importance ratings: intelligence vs. physical attractiveness) repeated measures ANOVA. In support of

Hypothesis 1a, we found a strong main effect for trait importance, women and their parents rated intelligence ($M = 5.27$, $SD = 1.53$) as more important than attractiveness ($M = 4.49$, $SD = 1.63$, F (1, 185) = 92.04, $p < .001$, $\eta p^2 = 0.33$). There was also a significant main effect for generation, on average, daughters rated both traits ($M = 5.03$, $SD = 1.45$) as more important than their parents did ($M = 4.73$, $SD = 1.71$). There was also a significant interaction of generation and trait importance (F (1, 185) = 12.33, $p < .001$, $\eta p^2 = 0.06$). In support of Hypothesis 1b, physical attractiveness was more important to daughters ($M = 4.75$, $SD = 1.51$) than parents ($M = 4.23$, $SD = 1.75$) while intelligence was nearly equally important to daughters ($M = 5.31$, $SD = 1.39$) and parents ($M = 5.22$, $SD = 1.67$).

Hypothesis 2: Effect of Attractiveness on Dating Desirability and Intelligence Ratings To assess Hypothesis 2a, that women and their parents would rate the attractive man as a more desirable dating partner for daughters, we examined responses to the item "how desirable would you find this person as a long-term romantic partner for yourself/for your daughter" using a 2 (attractiveness level) by 2 (generation: daughters vs. parents) mixed ANOVA. Hypothesis 2a was supported, both daughters and parents rated the attractive man as a more desirable long-term partner for daughters ($M = 3.43$, $SD = 1.62$) than the less attractive man ($M = 2.35$, $SD = 1.21$, F (1, 186) = 46.84, $p < .001$, $\eta p^2 = 0.20$). There was also a main effect for generation, parents rated both men as more desirable long-term partners for daughters ($M = 3.13$, $SD = 1.58$) than daughters rated the men as partners for themselves ($M = 2.71$, $SD = 1.55$, F (1, 186) = 10.27, $p = .002$, $\eta p^2 = 0.05$). There was also a significant interaction of generation and attractiveness, while daughters ($M = 3.45$, $SD = 1.63$) and parents ($M = 3.41$, $SD = 1.61$) rated the attractive man very similarly, daughters ($M = 1.88$, $SD = 0.92$) rated the less attractive man less favorably than their parents ($M = 2.82$, $SD = 1.50$, F (1, 186) = 12.19, $p < .001$, $\eta p^2 = 0.06$).

We also examined whether the intelligence levels of the attractive man would be rated more favorably than those attributed to the less attractive man. For this analysis we examined the responses to the item "how favorably would you rate the intelligence information provided by his peers?" for daughters and parents. We performed a 2 (intelligence level) by 2 (attractiveness level) by 2 (generation: daughters vs. parents) mixed ANOVA. Supporting Hypothesis 2b, this analysis revealed a significant effect for attractiveness level. Across conditions, the more attractive man's intelligence levels were rated more favorably ($M = 3.30$, $SD = 1.51$) than the less attractive man's intelligence levels ($M = 3.11$, $SD = 1.64$, F (1, 183) = 6.49, $p = .012$, $\eta p^2 = 0.03$) regardless of the intelligence information which was provided.

Hypotheses 3–4: Relative Importance of Attractiveness versus Intelligence To test Hypothesis 3, that the less intelligent but more attractive man should be rated as a more desirable partner for daughters than the more intelligent but less attractive man, we performed a 2 (attractiveness level, between subjects) by 2 (intelligence level, between subjects) by 2 (generation: daughters vs. parents, within-subjects) mixed ANOVA using dating desirability for self/daughter as the dependent measure. This analysis yielded a nonsignificant interaction of attractiveness level, intelligence level, and generation (F (1, 183) = 0.04, $p = .843$, $\eta p^2 < 0.01$). However, the results for daughters were consistent with our Hypothesis 3, the more attractive but less intelligent man was rated more positively by daughters ($M = 3.09$, $SD = 1.41$) than the less attractive but more intelligent man ($M = 2.07$, $SD = 0.93$, F (1, 109) = 21.72, $p < .001$, $\eta p^2 = 0.17$). The reverse pattern was true for parents, although not significant, the less attractive but more intelligent man was rated more positively ($M = 3.20$, $SD = 1.57$) than the more attractive but less intelligent man ($M = 2.91$, $SD = 1.48$, F (1, 101) = 0.88, $p = .350$, $\eta p^2 < 0.01$). As noted above, the more attractive man was rated similarly by both daughters and parents, regardless of his ascribed intelligence level. The largest differences

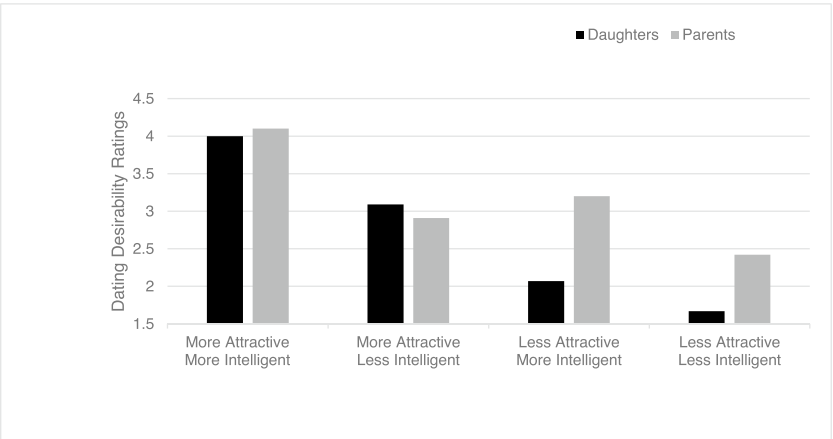

Fig. 1 Dating desirability ratings by condition for both daughters and parents

in desirability ratings emerged when daughters and parents considered the less attractive man, regardless of his intelligence level, see Fig. 1.

To test Hypothesis 4, that both women's and parents' perceptions of physical attractiveness (versus intelligence favorability) would explain more unique variance in dating desirability ratings, we performed regression analyses using dating desirability as the dependent variable and attractiveness and intelligence favorability ratings as predictors. Hypothesis 4 was supported. For women, although both physical attractiveness ($B = 0.693$, $\beta = 0.772$, $t = 21.22$, $p < .001$, $sr^2 = 0.714$) and intelligence favorability rating were significant predictors of dating desirability ($B = 0.226$, $\beta = 0.223$, $t = 6.13$, $p < .001$, $sr^2 = 0.206$) the squared semi-partial correlation (sr^2) for attractiveness ratings explained 3.46 times more variance than the intelligence favorability ratings. For parents, both physical attractiveness ($B = 0.539$, $\beta = 0.563$, $t = 12.59$, $p < .001$, $sr^2 = 0.451$) and personality favorability were significant predictors of dating desirability ($B = 0.399$, $\beta = 0.412$, $t = 9.23$, $p < .001$, $sr^2 = 0.331$) and, the squared semi-partial correlation for attractiveness explained 1.36 times more variance than the intelligence favorability ratings.

Hypotheses 5: Mate Choice We predicted that both daughters and their parents would choose the more attractive man as the best mate for daughters, rather than the more intelligent man. Consistent with Hypothesis 5, women chose the attractive man as the best mate for themselves 146 times (72.64%) and the less attractive man 55 times (27.36%). Parents chose the attractive man 109 times (59.56%) and the less attractive man 74 times (40.44%, 14 women did not recruit a parent, and 4 parents did not respond to this item, see Table 1). Although both daughters and their parents chose the attractive man as the best mate more often, choice was contingent upon generation (χ^2 (1) = 36.28, $p < .001$). While both women and their parents preferred the more attractive man, this preference was stronger for women than for parents.

Hypothesis 6: Agreement versus Conflict in Mate Preferences Because we expected both women and parents to choose the more attractive man as the best mate for daughters, we also predicted that women and their parents would make similar mate choices, with both groups being more likely to choose the more attractive man as the best mate for daughters. To test Hypothesis 6, we analyzed women's and parents' responses to the item asking women to choose the best mate for themselves and parents to choose the best mate for their daughters. In support of this hypothesis, daughters and their parents agreed about the best mate 135 times (73.8%) and disagreed about the best mate 48 times (26.2%), suggesting that agreement is much more likely than disagreement among this sample of daughters and parents (see Table 2). As stated above, both groups were more likely to choose the more attractive man as the best mate for daughters. However, as predicted, when daughters and parents disagreed, women chose the more attractive man ($n = 36$, 75%) as the best mate more often than their parents did ($n = 12$, 25%) and parents chose the more intelligent man ($n = 32$, 66.67%) more often than their daughters did ($n = 16$, 33.33%). Unsurprisingly, daughters and parents were more likely to agree when higher attractiveness and higher intelligence (and lower attractiveness and lower intelligence) corresponded ($n = 77$, 57.0%) than in the trade-off conditions when higher attractiveness and lower intelligence (and lower attractiveness and higher intelligence) corresponded ($n = 58$, 43%, χ^2 (1) = 28.34, $p < .001$). When intelligence and attractiveness did not correspond, women were more

Table 1 Frequency and percentages of daughters' and parents' choices for the best mate for daughters by condition

	Attractive man		Less attractive man	
	More intelligent	Less intelligent	More intelligent	Less intelligent
Daughters ($N = 201$)	89 (44.3%)	57 (28.4%)	54 (26.9%)	1 (0.5%)
Parents ($N = 183$)	78 (42.6%)	31 (16.9%)	69 (37.7%)	5 (2.7%)

Table 2 Frequency and percentages of agreement and disagreement among daughters and parents about the best mate for daughters by condition

	Attractive man		Less attractive man	
	More intelligent	Less intelligent	More intelligent	Less intelligent
Daughters and parents disagree ($N = 48$)				
Daughters	5 (10.4%)	31 (64.6%)	11 (22.9%)	1 (2.1%)
Parents	1 (2.1%)	11 (22.9%)	31 (64.6%)	5 (10.4%)
Daughters and parents agree ($N = 135$)				
Daughters and parents	77 (57.0%)	22 (16.3%)	36 (26.7%)	0 (0.0%)

likely to choose the more attractive but less intelligent man ($n = 57$, 28.4%) while parents were more likely to choose the more intelligent but less attractive man ($n = 69$, 37.7%%, see Table 1) suggesting different trade-off preferences for women and their parents.

Qualitative Results

Hypothesis 7: Reasons for Mate Choice Consistent with self-reported preferences, we hypothesized that when higher intelligence and higher attractiveness were paired, both women and their parents would say that they chose the more attractive man based on his intelligence rather than based on his attractiveness (H7a). To assess this hypothesis, we analyzed the open-ended responses from both daughters and mothers to the prompt: "Please briefly explain why you chose #53 or #26 as the best long-term mate for you/for your daughter." Two coders who were blind to the conditions coded responses into categories of attractiveness, intelligence, kindness, and other (*IRR* = 85% for daughters' responses and 82% for parents' responses).

Nearly all women chose the attractive man when he was also presented as intelligent (99%, $n = 91/92$ daughters). Supporting hypothesis 7a, of the 75 women who responded to this item, women most frequently referenced the man's intelligence as the reason for choosing him as the best mate (as mentioned in 62 responses), followed by attractiveness (46 responses). Many daughters' responses also demonstrated the halo effect, with 17 responses denoting that the attractive man might possess positive traits other than attractiveness and intelligence. For example, in five responses, daughters assumed that the attractive man was also kind. Mothers who viewed the intelligent and attractive man chose him as the best mate for their daughters 94% of the time ($n = 80/85$ mothers), most often referencing his intelligence as the reason for their selection (mentioned in 51 responses), followed by other reasons (26 responses), attractiveness (12 responses) and assumed kindness (9 responses). Mothers' responses ($n = 20$) also demonstrated the halo effect; mothers assumed that the attractive man had positive traits other than attractiveness and intelligence.

Examples of responses in the "attractiveness" category were, "I chose 53 solely based off looks and attractiveness" from a daughter, and "I picked the better looking one" from a mother. Example responses from a daughter and mother, respectively, in the "intelligence" category are, "I chose #53 because his intelligence rate was higher" and "Intelligence is higher." In many responses, women mentioned both attractiveness and intelligence as reasons for their choices. In these cases, the responses were categorized in both the attractiveness and intelligence categories, for example, "#53 is better looking and smarter." The next most frequent category was "other" which included idiosyncratic responses that did not fit into one of the pre-existing categories or reach the criteria for a separate category. Examples of responses in the other category included "he seems confident in himself and looks like he would be a fun person to be around" from a daughter, and "he looks like he is not a criminal" from a parent. The last category was "kindness," which included the examples, "man #53 is smiling more in his photo and seems kinder;" from a daughter and, "looks kinder" from a mother.

To assess Hypothesis 7b, that in the trade-off conditions, women would be more likely to report choosing a mate based on attractiveness and parents would report choosing a mate for their daughters based on intelligence, we analyzed the open-ended responses from both parents and mothers in the conditions where higher attractiveness and higher intelligence did not correspond. The most frequently given responses were grouped into the categories of attractiveness, intelligence, justification with other unspecified traits, and kindness. We found support for hypothesis 7b. In the trade-off conditions, women were more likely to report choosing a mate based on attractiveness and parents were more likely to report choosing a mate for their daughters based on intelligence. When higher attractiveness and higher intelligence did not correspond, 51% of women ($n = 57/111$ daughters) chose the more attractive man as the best mate for themselves with attractiveness as the most common response (mentioned in 34 responses). Women's responses in the trade-off conditions also demonstrated the halo effect, where 11 women assumed that the attractive man possessed other positive traits that compensated for his lack of intelligence. In these responses, women most often assumed that the attractive man was kind (mentioned in five responses) or that he had other positive personality characteristics (six responses). The 49% of daughters who chose the less attractive man with higher intelligence ($n = 54/111$ daughters) most frequently said they had chosen him for his intelligence (34 responses) with few women providing additional assumed qualities for the man as reason for their decision (only one daughter assumed that the more intelligent man had additional positive qualities).

Further supporting this hypothesis, when higher attractiveness and higher intelligence were not paired, mothers ($n = 103$ mothers) chose the less attractive man higher in intelligence as the best mate for daughters 68% of the time ($n = 67/98$, five mothers did not respond to this item) often citing his intelligence as the most important reason for their decision (as mentioned in 44 responses; four of these mothers clarified that they thought the intelligence would ensure the man was successful and could provide for daughters), in addition to mentioning other reasons (9 responses), and attractiveness (6 responses). The 32% of parents who chose the more attractive but less intelligent man reported making their decisions based on other assumed positive traits

indicating the halo effect (as mentioned in 11 responses, four of which specifically mentioned they thought he was kind), and the attractiveness of the man (mentioned in 11 responses).

To assess Hypothesis 7c, that after women and their parents chose the more attractive man (versus the more intelligent man), they would devalue the intelligence information or the characteristic of intelligence, with the reverse expected after choosing the more intelligent man, we examined responses for evidence of devaluing either the intelligence information/the characteristic of intelligence or the attractiveness information/the characteristic of attractiveness. An example of a response devaluing intelligence after choosing the more attractive man includes "Although intelligence is definitely extremely important, there are many things that each partner can bring to the table in a long-term relationship." An example of a response coded as devaluing attractiveness when participants chose the more intelligent man included, "I do think man #53 was more attractive but intelligence is more important to me than looks." We found partial support for hypothesis 7c. When higher intelligence and higher attractiveness were not paired and women chose more attractive man ($n = 57$), 16% of women (mentioned in 9 responses) devalued the importance of intelligence after making their choice. When women chose the more intelligent, less attractive man ($n = 54$), 15% of women (9 responses) devalued the importance of attractiveness in their choice. When parents chose the more attractive, less intelligent man, ($n = 31$), only two responses (6%) devalued the importance of intelligence in their choice. For example, one parent stated "The only information I have is how attractive he is. I think 53 is the better looking young man, I have nothing else to go on and would not take the IQ opinion of her peers." When parents chose the more intelligent man over the man who was more attractive, ($n = 69$), 13% devalued the importance of attractiveness in their response. For example, one parent stated that they chose the less attractive man because "physical attractiveness should not be the reasoning as to why you choose a long-term mate."

Discussion

Although both women and their parents rated the characteristic of intelligence as significantly more important than physical attractiveness for a long-term mate for daughters, both women and their parents most often chose the more attractive man as the best long-term partner for daughters, regardless of his purported intelligence level. Furthermore, both women's and parents' perceptions of physical attractiveness (versus intelligence favorability) explained more unique variance in dating desirability ratings, suggesting that attractiveness is more important to women's and parents' mate preferences and choices than consciously realized. Finally, although women self-reported that they valued men's attractiveness in a partner for themselves more than their parents valued the same trait in a partner for daughters, daughters and parents agreed about their mate choices almost 74% of the time, suggesting that assessing constrained mate choices leads to less disagreement among daughters and parents than examining differences in ideal mate preference trait ratings.

The finding that women and their parents rated the characteristic of intelligence as more important than physical attractiveness replicates previous findings using self-reported ratings to assess mate preferences (Buss et al., 2001; Fugère et al., 2017b, 2023; Lippa, 2007; Locke et al., 2020; Perilloux et al., 2011). However, despite some evidence showing that mate preferences are correlated with actual mate choices (Conroy-Beam & Buss, 2016; Eastwick et al., 2024; Li et al., 2013) the difference between self-reported trait preference ratings and hypothetical (Fugère et al., 2023; Waynforth, 2001) or actual mate choices (Eastwick & Finkel, 2008; Kurzban & Weeden, 2005; Luo & Zhang, 2009) in the current research project as well as in previous research suggests that using differences in self-reported trait preference ratings to evaluate parent-offspring conflict over mate choices is untenable. Assessing mate choices from a few possible hypothetical options more closely replicates the mating decisions women and their parents actually make. Future research should employ more mate choice dependent measures in order to more accurately evaluate individuals' and parents' mate preferences as well as the degree of agreement/disagreement among offspring and parents.

Our first hypothesis (H1a) was supported, intelligence was rated as a more important feature for a long-term partner than physical attractiveness by both women and their parents. This finding is consistent with prior research (Apostolou, 2011, 2015; Fugère et al., 2017b, 2023; Perilloux et al., 2011). Further, when evaluating similarity among parents and offspring rather than differences, past research shows nearly equivalent importance ratings for the trait of intelligence among daughters and their mothers (Fugère et al., 2017b). In the present study, intelligence was nearly equally important to women and their parents. Intelligence may signal a mate's genetic quality (see Zhang et al., 2024) as well as the ability to secure resources or the potential to invest in future offspring (Chang et al., 2011). Further, intelligence may be more important to both women and parents who prioritize higher education, and much of our sample was recruited from a university setting. Although intelligence was rated as more important than attractiveness in the mate preferences measures, attractiveness was the stronger driver of dating desirability following the experimental manipulation, and both women and their parents were more likely to choose the more attractive man as the best mate for daughters. This difference may be driven by the

unconscious or subconscious preference for attractiveness (Eastwick et al., 2011; Kim et al., 2007) or by the different processes which participants may use to evaluate ideal mate preferences versus more narrowly defined mate choices. Hypothesis 1b was also supported. Attractiveness was rated as more important to women than their parents (Apostolou, 2008, 2011, 2015; Buunk & Solano, 2010; Dubbs & Buunk, 2010; Dubbs et al., 2013; Fugère et al., 2017b, 2023; Guo et al., 2017; Perilloux et al., 2011). Attractiveness can signal genetic quality and thus should be more important to women because of daughters' stronger genetic relationship to their own offspring versus their parents' (Apostolou, 2011, 2015, 2017; Perilloux et al., 2011).

Hypothesis 2a was also supported. Both women and their parents rated the more attractive man as the more desirable partner for daughters versus the less attractive man, regardless of the men's ascribed intelligence levels. Although daughters and their parents rated the attractive man similarly, parents rated the less attractive man more favorably than their daughters did. As reviewed above, this finding is also consistent with evolutionary theory, due to the stronger genetic overlap of parents and children versus grandparents and grandchildren. Consistent with the halo effect (Dion et al., 1972), Hypothesis 2b was also supported. Across conditions, the more attractive man's intelligence was rated more favorably than the less attractive man's intelligence, regardless of the peer intelligence ratings which were provided. This finding may reflect the expectation that attractive individuals will also possess other positive traits, or it may support research which shows that attractive men are more intelligent than their less attractive peers (Perilloux et al., 2010). Interestingly, there was no corresponding halo effect for intelligence; intelligent men were not rated as more attractive than their less intelligent peers, nor did participants expect the intelligent men to possess other positive traits in their open-ended responses. Because we obtained men's photographs from free-use internet sources, we were not able to gather information about the actual intelligence levels of the men shown in the photographs. It is possible that the more attractive man actually was more intelligent than the less attractive man. Some research indicates that participants can estimate men's intelligence from facial photographs (Kleisner et al., 2014).

Although the proposed interaction did not reach statistical significance, our results were consistent with Hypothesis 3. The more attractive but less intelligent man was rated more positively by daughters while the less attractive but more intelligent man was rated more positively by parents. This effect may be driven by parents valuing intelligence as a signal of resources (thus reducing investment responsibilities for grandparents, see Chang et al., 2011) or by parents being opposed to more attractive sons-in-law who may be more likely to leave their relationships (Bovet et al., 2018; Ma-Kellams et al., 2017; Waynforth, 2001). Interestingly, the more attractive man was rated similarly by both daughters and parents, regardless of his ascribed intelligence level. The largest differences in mate desirability ratings emerged when daughters and parents considered the less attractive man, regardless of his intelligence level. When intelligence and attractiveness were not paired, women and their parents may have different trade-off preferences with daughters favoring attractiveness and compromising on traits relating to their mate's potential to acquire resources (perhaps, in part, because women have increased access to their own resources, see Waynforth, 2001), and parents preferring a less attractive mate with better resources for their daughters (Apostolou, 2011, 2017).

Hypothesis 4 was supported, both women's and parents' perceptions of physical attractiveness (versus intelligence favorability) explained more unique variance in dating desirability ratings. For women, this effect was stronger than for parents. Consistent with prior research (Fugère et al., 2017a; Li et al., 2002), this finding suggests that a minimal level of attractiveness is a necessity for both women and their parents (although women and their parents may have different notions of what constitutes a minimally acceptable level of attractiveness). These findings also suggest that attractiveness is a stronger driver of mate choices than intelligence, regardless of self-reported hypothetical preferences.

Consistent with prior research suggesting that physical attractiveness is important to the mate choices of both women and their parents (Fugère et al., 2017a, 2019, 2023), Hypothesis 5 was supported. Both women and their parents chose the more attractive man as the best mate for daughters more often than the less attractive man, regardless of the men's intelligence levels. This result is consistent with evolutionary theory which suggests that choosing an attractive mate benefits both daughters and parents by ensuring higher genetic quality for offspring and grandchildren (Apostolou, 2015; Dubbs et al., 2013; Lefevre & Saxton, 2017). Although both daughters and their parents chose the attractive man as the best mate most often, this preference was stronger for women than for their parents. When making mate choices among constrained options, both women and their parents may be influenced by contrast effects (Kenrick & Gutierres, 1980), causing the more attractive man to seem even better-looking when compared with the less attractive man. These contrast effects may drive some of the different results when comparing mate preferences to mate choices. Differences between mate preferences and mate choices may also arise because of the inability to rate targets equivalently in the mate choice measures.

Hypothesis 6 was also supported, daughters and parents agreed about their mate choices almost 74% of the time. Most research assessing mate preferences emphasizes differences among parents and offspring and often does not

include similarity analyses. One study by Fugère et al. (2017b) analyzed similarities among parent-offspring pairs and found that daughters and mothers valued many traits similarly such as intelligence, ambition, good health, education, mutual love, and liking children. Future research should consider the possibility of agreement among individuals of different generations rather than focusing strictly on differences between generations. Our findings with regard to mate choice agreement are inconsistent with previous research by Agey et al. (2021) who found that across different cultures, when parents chose mates for their offspring, they made different choices than offspring would make for themselves. Our findings may diverge from prior research because in our sample parents may not expect to choose mates for their daughters and therefore may have been more likely to mirror the choices they expected their daughters to make. Furthermore, as Apostolou (2009) describes, both offspring and parents prefer partners for offspring who are acceptable to one another, and parents' approval of one's partner is associated with better relationship outcomes (Sinclair et al., 2014). In our open-ended responses, some parents indicated that they wanted to support the choices they believed their daughters would make.

In the current study, although daughters and mothers valued intelligence similarly, daughters valued attractiveness with an average of 4.75 while parents valued attractiveness with an average rating of 4.23 on a seven-point scale. It is possible that even this relatively large difference (in comparison to ratings of other traits) may not be large enough to cause parents and offspring to make different mate choices, especially when the number of possible mate choices is constrained. Alternatively, parents and offspring may make more similar mate choices when offspring mate quality is high (Apostolou, 2011, 2020; Bovet et al., 2018). If the women in our sample had higher mate values themselves, that might also lessen conflict with their parents over hypothetical mate selection.

As predicted, when daughters and parents disagreed, women chose the more attractive man as the best mate for themselves more often than their parents chose him for their daughters. Similarly, parents chose the more intelligent man as the best mate for their daughters more often than their daughters chose him for themselves. Unsurprisingly, daughters and parents were more likely to agree when higher attractiveness and higher intelligence were paired than when they were assigned to one of the trade-off conditions. In these trade-off conditions, women were more likely to choose the more attractive but less intelligent man while parents were more likely to choose the more intelligent but less attractive man, evidencing different trade-off preferences for women and their parents. This finding is consistent with evolutionary theory and the desire of daughters to secure better genes for their offspring while emphasizing the importance of intelligence to parents which may indicate a partner's ability to invest in their daughter and her offspring (Apostolou, 2011, 2017).

Hypothesis 7a was also supported. Consistent with self-reported mate preferences, when higher intelligence and higher attractiveness were paired, both women and their parents most often stated that they had made their mate choices based on intelligence rather than attractiveness. The open-ended responses also evidenced the halo effect, both daughters' and parents' reasons for choosing the more attractive man included that they expected the more attractive man to possess other positive traits such as kindness. In contrast, when daughters and parents chose the less attractive man, their open-ended responses were less likely to include the likelihood that the man possessed other positive traits. In support of Hypothesis 7b, in the trade-off conditions, women were more likely to say that they had based their mate choices on attractiveness while parents were more likely to say that they had based their mate choices for daughters on intelligence, supporting the trade-offs hypothesis (Apostolou, 2011, 2017). In support of Hypothesis 7c, and consistent with the predictions of cognitive dissonance theory (Brehm, 1956; Festinger & Carlsmith, 1959), we also found evidence suggesting that both women and their parents devalued the intelligence information after choosing the more attractive man as the best mate and devalued the characteristic of attractiveness after choosing the more intelligent man as the best mate for daughters. Future research should examine whether self-reported ideal mate preferences change when they are made before or after mate choices.

Limitations and Future Directions

Although in our pretests among women, the more attractive man was rated more positively, in the current project, daughters rated the attractive man with an average rating of 4.24 on a 1 to 7 scale suggesting that women found the more attractive man moderately attractive but not extremely attractive. Women and their parents may be less likely to agree about their mate choices when daughters choose an extremely attractive partner due to the potential for extremely attractive men to find alternate mates, leave their long-term relationships, and abandon care for their offspring (Bovet et al., 2018; Gangestad & Simpson, 2000; Ma-Kellams et al., 2017; Waynforth, 2001). Future research should examine daughter-parent conflict when daughters choose extremely attractive partners.

Generalizing the findings of the current project beyond the men shown in the photographs may be difficult because (due to our desire to match the strength of the attractiveness and intelligence manipulations) we used one photograph to represent the "more attractive" and the "less attractive" categories. It is possible that the effects we found were not due

to men's attractiveness per se, but to other features of the photographs. For example, the more attractive man may have also appeared to be more intelligent. However, across multiple studies we have used different photographs of different men to represent the more and less attractive categories (see Fugère et al., 2019, 2023), which supports our interpretation that men's physical attractiveness drives the results in the current study as well.

Although assessing constrained mate choices may match the mate selection process more strongly than assessing ideal mate preferences, our participants generally took only a few minutes to evaluate the options and to choose "the best long-term mate." Realistically, the process of choosing a long-term mate unfolds over a period of months or even years. The longer we know one another, the more accurately we may perceive a partner's intelligence (Letzring et al., 2006) and the less importance we may place on physical attractiveness (Hunt et al., 2015). Furthermore, because the attractiveness information was conveyed via photographs (and thus verifiable to participants) while the intelligence information was conveyed via text summarizing peer evaluations (and thus not verifiable to participants), the attractiveness information may have been weighted more heavily. However, the procedure daughters in our study experienced may be similar to viewing men's profiles on a dating app, where profiles typically feature photographs along with a short (and potentially unreliable) bio. The procedure our parents experienced may be similar to receiving a photo from their daughter of her current partner along with a brief verbal description of his qualities.

Some of our dependent measures may have been interpreted in different ways by participants. The item assessing "how attractive do you find this person when considering him as a long-term romantic partner?" may have been interpreted as assessing dating desirability rather than attractiveness. Similarly, the item assessing "how favorably would you rate the intelligence information provided by his peers?" might have been interpreted as "do you think this person is intelligent?" or "do you think his peers rated his intelligence favorably?" Future research may incorporate more objective measures of intelligence, such as standardized IQ scores rather than peer ratings of intelligence. Alternately, both physical attractiveness and intelligence could be conveyed via videos (e.g., Prokosch et al., 2009) so that participants could be exposed to both pieces of information in the same format.

Both the traits of intelligence and attractiveness may signal the presence of other traits. For example, participants may have assumed that the attractive man also possessed a better personality or was more successful, healthy, or fertile (see Dion et al., 1972; Perrilloux et al.,2010; Shaffer et al., 2000; Soler et al., 2003; Weeden & Sabini, 2005; Zebrowitz et al., 2012) which outweighed his lower intelligence rating when attractiveness and intelligence were not paired. Support for this idea was provided by participants in their open-ended responses. Some participants mentioned that while the attractive man may not be intelligent, he might still be successful, and many participants mentioned that they viewed the attractive man as healthier than the less attractive man. Further, prior research suggests that daughters may associate attractiveness with intelligence (Perrilloux et al., 2010), which could have counteracted the assigned intelligence ratings of the men, especially when making quick dating decisions (see Kurzban & Weeden, 2005). Future research should examine the additional traits participants assume individuals possess based on their photographs to identify which traits most strongly affect mate choice trade-offs.

Our sample was not particularly diverse with regard to gender, age, ethnic, cultural, or sexual minority diversity, which limits the generalizability of our findings. Primarily comprised of college-aged female students from a small university in the Northeastern U.S. and their mothers, this lack of diversity may restrict the applicability of our findings across cultural contexts. For example, Buunk and Solano (2010) found that older offspring experienced more conflict with their parents over their mate choices than younger offspring. Because women's fertility is strongly linked to their age (Buss, 1989), daughters may experience more conflict with their parents over potential partners as they age. Further, Apostolou (2017) suggests that men and their parents might disagree more about the attractiveness of their partners than women and their parents, and intelligence might be differentially important to women seeking a male mate versus men seeking a female mate (Lippa, 2007). Future research should examine the importance of intelligence and attractiveness to the mate choices of men and their parents. Over 25% of our sample of daughters identified as bisexual, however, we only provided men as mate choices. Furthermore, when participants rated the importance of traits for a long-term mate, they were not instructed to consider only male partners. Future research may evaluate mate-choice conflict in families in which daughters prefer female mates or partners with other gender orientations.

Prior research suggests more similarity among parents' and offspring's mate preferences in more collectivistic cultures (Guo et al., 2017) and the importance of intelligence may vary across cultures. For example, Lippa (2007) found that the importance of intelligence varies with the gender equality of a culture; societies endorsing more egalitarian gender roles also tend to prioritize intelligence. Other research shows that the importance of physical attractiveness varies across cultures as well (Gangestad & Buss, 1993; Gebauer et al., 2012). Future research should explore the relative importance of intelligence and attractiveness in diverse cultures.

Finally, our results with regard to women's mate choices and preferences may have been influenced by variation in women's menstrual cycles. Gildersleeve et al. (2014) found that women showed a stronger preference for symmetry and masculinity when in the most fertile portion of their menstrual cycle. Both symmetry and masculinity may be related to women's perceptions of men's attractiveness. However, in prior research, these preferences were stronger when women considered short-term rather than long-term partners.

Conclusion

Using experimental methods with nearly equivalently-sized manipulations of men's physical attractiveness and intelligence levels, we have shown that even though both daughters and parents rated intelligence as more important than physical attractiveness when considering a partner for daughters, when asked to choose the best long-term mate for daughters, both daughters and parents chose the more attractive man. Moreover, both women's and parents' ratings of physical attractiveness (versus intelligence favorability) explained more unique variance in perceptions of men's dating desirability. These findings suggest that physical attractiveness is more important to the mate preferences and choices of both daughters and parents than consciously realized, as might be the case when making hypothetical survey ratings of trait importance. Further, although daughters rated men's physical attractiveness as more important than their parents did, in this sample, most daughters and parents agreed about the best mate for daughters. This research highlights the importance of using experimental methods and constrained mate choices to assess daughter-parent agreement/disagreement over mate choices.

Author Contributions The first two authors contributed to the study conception and design. Material preparation, data collection, and analyses were performed by Madeleine A. Fugère, Noelle Ciccarelli, and Yineli Rodriguez. The first draft of the manuscript was written by Madeleine A. Fugère, Noelle Ciccarelli, and Yineli Rodriguez. Alita J. Cousins reviewed and edited the manuscript. All authors commented on previous versions of the manuscript and approved the final manuscript.

Funding This research was funded by a grant from Connecticut State University AAUP.

Data Availability Data is available upon request from the corresponding author or via ORCID: 0000-0001-5012-1044

Declarations

Ethics Approval This experiment was approved by the Committee on Using Human Subjects in Research at Eastern Connecticut State University Protocol # 2218.

Informed Consent Informed consent was obtained from all individuals who participated in the study.

Consent to Publish N/A.

Conflicts of Interest On behalf of all authors, the corresponding author states that there are no conflicts of interest, no financial interests, and no competing interests to declare that are relevant to the content of this article.

References

Agey, Morris, A., Chandy, M., & Gaulin, S. J. C. (2021). Arranged marriage often subverts offspring mate choice: An HRAF-based study. *American Anthropologist, 123*(4), 861–878. https://doi.org/10.1111/aman.13656

Apostolou, M. (2008). Parent-offspring conflict over mating: The case of beauty. *Evolutionary Psychology, 6*(2), 303–315. https://doi.org/10.1177/147470490800600207

Apostolou, M. (2009). Parental in-law and individual mate choice co-evolution: Do parents and offspring prefer in-laws and spouses who are acceptable by each other? *Journal of Social Evolutionary and Cultural Psychology, 3*(3), 201–215. https://doi.org/10.1037/h0099322

Apostolou, M. (2011). Parent-offspring conflict over mating: Testing the tradeoffs hypothesis. *Evolutionary Psychology, 9*, 470–495. https://doi.org/10.1177/147470491100900401

Apostolou, M. (2015). Parent–offspring conflict over mating: Domains of agreement and disagreement. *Evolutionary Psychology, 13*(3), 1–12. https://doi.org/10.1177/1474704915604561

Apostolou, M. (2017). The nature of parent-offspring conflict over mating: From differences in genetic relatedness to disagreement over mate choice. *Evolutionary Psychological Science, 3*(1), 62–71. https://doi.org/10.1007/s40806-016-0066-4

Apostolou, M. (2020). Parent-offspring conflict. In T. K. Shackelford, & V. A. Weekes-Shackelford (Eds.), *Handbook of Evolutionary psychology* (pp. 155–169). Sage.

Asch, S. (1946). Forming impressions of personality. *The Journal of Abnormal and Social Psychology, 41*(3), 258–290. https://doi.org/10.1037/h0055756

Bovet, J., Raiber, E., Ren, W., Wang, C., & Seabright, P. (2018). Parent–offspring conflict over mate choice: An experimental study in China. *British Journal of Psychology*. https://doi.org/10.1111/bjop.12319

Brehm, J. (1956). Postdecision changes in the desirability of alternatives. *The Journal of Abnormal and Social Psychology, 52*(3), 384–389. https://doi.org/10.1037/h0041006

Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences, 12*(1), 1–49. https://doi.org/10.1017/S0140525X00023992

Buss, D. M., Shackelford, T. K., Kirkpatrick, L. A., & Larsen, R. J. (2001). A half century of mate preferences: The cultural evolution of values. *Journal of Marriage and Family, 63*(2), 491–503.

Buunk, A. P., & Solano, A. C. (2010). Conflicting preferences of parents and offspring over criteria for a mate: A study in Argentina. *Journal of Family Psychology, 24*(4), 391–399. https://doi.org/10.1037/a0020252

Campbell, W. K. (1999). Narcissism and romantic attraction. *Journal of Personality and Social Psychology, 77*(6), 1254–1270. https://doi.org/10.1037/0022-3514.77.6.1254

Chang, L., Wang, Y., Shackelford, T. K., & Buss, D. M. (2011). Chinese mate preferences: Cultural evolution and continuity across

a quarter of a century. *Personality and Individual Differences, 50*(5), 678–683. https://doi.org/10.1016/j.paid.2010.12.016

Conroy-Beam, D., & Buss, D. M. (2016). Do mate preferences influence actual mating decisions? Evidence from computer simulations and three studies of mated couples. *Journal of Personality and Social Psychology, 111*(1), 53. https://doi.org/10.1037/pspi0000054

Diamond, L. M., Alley, J., Dickenson, J., & Blair, K. L. (2020). Who counts as sexually fluid? Comparing four different types of sexual fluidity in women. *Archives of Sexual Behavior, 49*(7), 2389–2403. https://doi.org/10.1007/s10508-019-01565-1

Dion, K., Berscheid, E., & Walster, E. (1972). What is beautiful is good. *Journal of Personality and Social Psychology, 24*(3), 285–290. https://doi.org/10.1037/h0033731

Dubbs, S. L., & Buunk, A. P. (2010). Sex differences in parental preferences over a child's mate choice: A daughter's perspective. *Journal of Social and Personal Relationships, 27*(8), 1051–1059. https://doi.org/10.1177/0265407510378666

Dubbs, S. L., Buunk, A. P., & Taniguchi, H. (2013). Parent-offspring conflict in Japan and parental influence across six cultures. *Japanese Psychological Research, 55*(3), 241–253. https://doi.org/10.1111/jpr.12003

Eastwick, P. W., & Finkel, E. J. (2008). Sex differences in mate preferences revisited: Do people know what they initially desire in a romantic partner? *Journal of Personality and Social Psychology, 94*(2), 245–264. https://doi.org/10.1037/0022-3514.94.2.245

Eastwick, P. W., Eagly, A. H., Finkel, E. J., & Johnson, S. E. (2011). Implicit and explicit preferences for physical attractiveness in a romantic partner: A double dissociation in predictive validity. *Journal of Personality and Social Psychology, 101*(5), 993–1011. https://doi.org/10.1037/a0024061

Eastwick, P. W., Sparks, J., Finkel, E. J., Meza, E. M., Adamkovič, M., Adu, P., Ai, T., Akintola, A. A., Al-Shawaf, L., Apriliawati, D., Arriaga, P., Aubert-Teillaud, B., Baník, G., Barzykowski, K., Batres, C., Baucom, K. J., Beaulieu, E. Z., Behnke, M., Butcher, N., Charles, D. Y., ... Coles, N. A. (2024 - forthcoming). A worldwide test of the predictive validity of ideal partner preference-matching. *Journal of Personality and Social Psychology*.

Festinger, L., & Carlsmith, J. (1959). Cognitive consequences of forced compliance. *Journal of Abnormal and Social Psychology, 58*(2), 203–210. https://doi.org/10.1037/h0041593

Fletcher, G. O., Simpson, J. A., & Thomas, G. (2000). Ideals, perceptions, and evaluations in early relationship development. *Journal of Personality and Social Psychology, 79*(6), 933–940. https://doi.org/10.1037/0022-3514.79.6.933

Fugère, M. A., Chabot, C., Doucette, K., & Cousins, A. J. (2017). The importance of physical attractiveness to the mate choices of women and their mothers. *Evolutionary Psychological Science, 3*(3), 243–252. https://doi.org/10.1007/s40806-017-0092-x

Fugère, M. A., Doucette, K., Chabot, C., & Cousins, A. J. (2017). Similarities and differences in mate preferences among parents and their adult children. *Personality and Individual Differences, 111*, 80–85. https://doi.org/10.1016/j.paid.2017.01.057

Fugère, M. A., Madden, S., & Cousins, A. J. (2019). The relative importance of physical attractiveness and personality characteristics to the mate choices of women and their fathers. *Evolutionary Psychological Science, 5*, 394–404. https://doi.org/10.1007/s40806-019-00195-z

Fugère, M. A., Ciccarelli, N. C., & Cousins, A. J. (2023). The importance of physical attractiveness and ambition/intelligence to the mate choices of women and their parents. *Evolutionary Behavioral Sciences*. https://doi.org/10.1037/ebs0000325

Gangestad, S. W., & Buss, D. M. (1993). Pathogen prevalence and human mate preferences. *Ethology and Sociobiology, 14*(2), 89–96. https://doi.org/10.1016/0162-3095(93)90009-7

Gangestad, S. W., & Simpson, J. A. (2000). The evolution of human mating: Trade-offs and strategic pluralism. *Behavioral and Brain Sciences, 23*(4), 573–644. https://doi.org/10.1017/S0140525X0000337X

Gebauer, J. E., Leary, M. R., & Neberich, W. (2012). Big two personality and big three mate preferences: Similarity attracts, but country-level mate preferences crucially matter. *Personality and Social Psychology Bulletin, 38*(12), 1579–1593. https://doi.org/10.1177/0146167212456300

Gildersleeve, K., Haselton, M. G., & Fales, M. R. (2014). Do women's mate preferences change across the ovulatory cycle? A meta-analytic review. *Psychological Bulletin*, *140*(5), 1205.

Griffin, A. M., & Langlois, J. H. (2006). Stereotype directionality and attractiveness stereotyping: Is beauty good or is ugly bad? *Social Cognition, 24*(2), 187–206. https://doi.org/10.1521/soco.2006.24.2.187

Guo, Q., Li, Y., & Yu, S. (2017). In-law and mate preferences in Chinese society and the role of traditional cultural values. *Evolutionary Psychology, 15*(3). https://doi.org/10.1177/1474704917730518

Hasnain, A. M., & Snopkowski, K. (2024). Maternal investment in arranged and self-choice marriages: A test of the reproductive compensation and differential allocation hypothesis in humans. *Evolution and Human Behavior, 45*(1), 99–110. https://doi.org/10.1016/j.evolhumbehav.2023.11.004

Hunt, L. L., Eastwick, P. W., & Finkel, E. J. (2015). Leveling the playing field: Longer acquaintance predicts reduced assortative mating on attractiveness. *Psychological Science, 26*(7), 1046–1053. https://doi.org/10.1177/0956797615579273

Johnson, D. J., & Rusbult, C. E. (1989). Resisting temptation: Devaluation of alternative partners as a means of maintaining commitment in close relationships. *Journal of Personality and Social Psychology, 57*(6), 967–980. https://doi.org/10.1037/0022-3514.57.6.967

Jonason, P. K., Marsh, K., Dib, O., Plush, D., Doszpot, M., Fung, E., ... & Di Pietro, K. (2019). Is smart sexy? Examining the role of relative intelligence in mate preferences. *Personality and Individual Differences*, *139*, 53–59. https://doi.org/10.1016/j.paid.2018.11.009

Kenrick, D., & Gutierres, S. (1980). Contrast effects and judgments of physical attractiveness: When beauty becomes a social problem. *Journal of Personality and Social Psychology, 38*(1), 131–140. https://doi.org/10.1037/0022-3514.38.1.131

Kim, H., Adolphs, R., O'Doherty, J. P., & Shimojo, S. (2007). Temporal isolation of neural processes underlying face preference decisions. *Proceedings of the National Academy of Sciences, 104*(46), 18253–18258. https://doi.org/10.1073/pnas.070310110

Kleisner, K., Chvátalová, V., & Flegr, J. (2014). Perceived intelligence is associated with measured intelligence in men but not women. *Plos One, 9*(3). https://doi.org/10.1371/journal.pone.0081237

Kurzban, R., & Weeden, J. (2005). HurryDate: Mate preferences in action. *Evolution and Human Behavior, 26*(3), 227–244. https://doi.org/10.1016/j.evolhumbehav.2004.08.012

Lefevre, C. E., & Saxton, T. K. (2017). Parental preferences for the facial traits of their offspring's partners can enhance parental inclusive fitness. *Evolution and Human Behavior, 38*(4), 546–551. https://doi.org/10.1016/j.evolhumbehav.2017.01.006

Letzring, T. D., Wells, S. M., & Funder, D. C. (2006). Information quantity and quality affect the realistic accuracy of personality judgment. *Journal of Personality and Social Psychology, 91*(1), 111–123. https://doi.org/10.1037/0022-3514.91.1.111

Li, N. P., Bailey, J. M., Kenrick, D. T., & Linsenmeier, J. W. (2002). The necessities and luxuries of mate preferences: Testing the tradeoffs. *Journal of Personality and Social Psychology, 82*(6), 947–955. https://doi.org/10.1037/0022-3514.82.6.947

Li, N. P., Valentine, K. A., & Patel, L. (2011). Mate preferences in the US and Singapore: A cross-cultural test of the mate preference

priority model. *Personality and Individual Differences, 50*(2), 291–294. https://doi.org/10.1016/j.paid.2010.10.005

Li, N. P., Yong, J. C., Tov, W., Sng, O., Fletcher, G. J., Valentine, K. A., ... & Balliet, D. (2013). Mate preferences do predict attraction and choices in the early stages of mate selection. *Journal of Personality and Social Psychology*, *105*(5), 757.

Lippa, R. A. (2007). The preferred traits of mates in a cross-national study of heterosexual and homosexual men and women: An examination of biological and cultural influences. *Archives of Sexual Behavior, 36*(2), 193–208. https://doi.org/10.1007/s10508-006-9151-2

Locke, K. D., Mastor, K. A., MacDonald, G., Barni, D., Morio, H., Reyes, J. A. S., ... & Ortiz, F. A. (2020). Young adults' partner preferences and parents' in-law preferences across generations, genders, and nations. *European Journal of Social Psychology*, *50*(5), 903–920. https://doi.org/10.1002/ejsp.2662

Luo, S., & Zhang, G. (2009). What leads to romantic attraction: Similarity, reciprocity, security, or beauty? Evidence from a speed-dating study. *Journal of Personality, 77*(4), 933–964. https://doi.org/10.1111/j.1467-6494.2009.00570.x

Ma-Kellams, C., Wang, M. C., & Cardiel, H. (2017). Attractiveness and relationship longevity: Beauty is not what it is cracked up to be. *Personal Relationships, 24*(1), 146–161. https://doi.org/10.1111/pere.12173

Perilloux, H. K., Webster, G. D., & Gaulin, S. J. (2010). Signals of genetic quality and maternal investment capacity: The dynamic effects of fluctuating asymmetry and waist-to-hip ratio on men's ratings of women's attractiveness. *Social Psychological and Personality Science, 1*(1), 34–42. https://doi.org/10.1177/1948550609349514

Perilloux, C., Fleischman, D. S., & Buss, D. M. (2011). Meet the parents: Parent-offspring convergence and divergence in mate preferences. *Personality and Individual Differences, 50*(2), 253–258. https://doi.org/10.1016/j.paid.2010.09.039

Prokosch, M. D., Coss, R. G., Scheib, J. E., & Blozis, S. A. (2009). Intelligence and mate choice: Intelligent men are always appealing. *Evolution and Human Behavior, 30*(1), 11–20. https://doi.org/10.1016/j.evolhumbehav.2008.07.004

Regan, P. C., Lakhanpal, S., & Anguiano, C. (2012). Relationship outcomes in indian-american love-based and arranged marriages. *Psychological Reports, 110*(3), 915–924. https://doi.org/10.2466/21.02.07.PR0.110.3.915-924

Shaffer, D. R., Crepaz, N., & Sun, C. (2000). Physical attractiveness stereotyping in cross-cultural perspective: Similarities and differences between americans and Taiwanese. *Journal of Cross-Cultural Psychology, 31*(5), 557–582. https://doi.org/10.1177/0022022100031005002

Sinclair, H. C., Hood, K. B., & Wright, B. L. (2014). Revisiting the Romeo and Juliet effect (Driscoll, Davis, & Lipetz, 1972): Reexamining the links between social network opinions and romantic relationship outcomes. Social Psychology, 45(3), 170–178. https://doi.org/10.1027/1864-9335/a000181

Soler, C., Núñez, M., Gutiérrez, R., Núñez, J., Medina, P., Sancho, M., et al. (2003). Facial attractiveness in men provides clues to semen quality. *Evolution and Human Behavior, 24*(3), 199–207. https://doi.org/10.1016/S1090-5138(03)00013-8

Thomas, A. G., Jonason, P. K., Blackburn, J. D., Kennair, L. E. O., Lowe, R., Malouff, J., ... & Li, N. P. (2020). Mate preference priorities in the East and West: A cross-cultural test of the mate preference priority model. *Journal of Personality*, *88*(3), 606–620. https://doi.org/10.1111/jopy.12514

Todd, P. M., Penke, L., Fasolo, B., & Lenton, A. P. (2007). Different cognitive processes underlie human mate choices and mate preferences. *Proceedings of the National Academy of Sciences of The United States of America*, *104*(38), 15011–15016. https://doi.org/10.1073/pnas.0705290104

Waynforth, D. (2001). Mate choice trade-offs and women's preference for physically attractive men. *Human Nature: An Interdisciplinary Biosocial Perspective, 12*(3), 207–219. https://doi.org/10.1007/s12110-001-1007-9

Weeden, J., & Sabini, J. (2005). Physical attractiveness and health in western societies: A review. *Psychological Bulletin, 131*(5), 635–653. https://doi.org/10.1037/0033-2909.131.5.635

Williamson, H. C., Bornstein, J. X., Cantu, V., Ciftci, O., Farnish, K. A., & Schouweiler, M. T. (2021). How diverse are the samples used to study intimate relationships? A systematic review. *Journal of Social and Personal Relationships, 39*(4), 1087–1109. https://doi.org/10.1177/02654075211053849

Wu, W., Qian, X., & Wang, Y. (2024). Discrepancies in mate preferences among Chinese families between fathers, mothers, and children: A latent profile analysis. *Archives of Sexual Behavior, 53*, 3239–3254. https://doi.org/10.1007/s10508-024-02926-1

Zebrowitz, L. A., Wang, R., Bronstad, P., Eisenberg, D., Undurraga, E., Reyes-García, V., & Godoy, R. (2012). First impressions from faces among U.S. and culturally isolated tsimane' people in the Bolivian rainforest. *Journal of Cross-Cultural Psychology, 43*(1), 119–134. https://doi.org/10.1177/0022022111411386

Zhang, L. R., Lam, K. K. L., & Chen, W. W. (2024). Parent–child discrepancies in mate preferences: A three-level meta-analysis. *Journal of Family Theory and Review, 1–29*, 1. https://doi.org/10.1111/jftr.12588