RESEARCH ARTICLE



The Importance of Physical Attractiveness to the Mate Choices of Women and Their Mothers

Madeleine A. Fugère 1 · Caitlynn Chabot 1 · Kaitlyn Doucette 1 · Alita J. Cousins 1

© Springer International Publishing 2017

Abstract Prior research investigating the mate preferences of women and their parents reveals two important findings with regard to physical attractiveness. First, daughters more strongly value mate characteristics connoting genetic quality (such as physical attractiveness) than their parents. Second, both daughters and their parents report valuing characteristics other than physical attractiveness most strongly (e.g., ambition/industriousness, friendliness/kindness). However, the prior research relies solely on self-report to assess daughters' and parents' preferences. We assessed mate preferences among 61 daughter-mother pairs using an experimental design varying target men's physical attractiveness and trait profiles. We tested four hypotheses investigating whether a minimum level of physical attractiveness was a necessity to both women and their mothers and whether physical attractiveness was a more important determinant of dating desirability than trait profiles. These hypotheses were supported. Women and their mothers were strongly influenced by the physical attractiveness of the target men and preferred the attractive and moderately attractive targets. Men with the most desirable personality profiles were rated more favorably than their counterparts only when they were at least moderately attractive. Unattractive men were never rated as more desirable partners for daughters, even when they possessed the most desirable trait profiles. We conclude that a minimum level of physical attractiveness is a necessity for both women and their mothers and that when women and their parents state that other traits are more important than physical attractiveness, they assume potential mates meet a minimally acceptable standard of physical attractiveness.

Keywords Parent-offspring conflict · Physical attractiveness · Necessities versus luxuries · Mate choice · Traits

Research investigating the mate preferences of individuals and their parents consistently reveals that adult children value physical attractiveness in a mate for themselves more than their parents value attractiveness in a mate for their children. This preference for attractiveness for one's own mate appears among both male and female offspring and is consistent across cultures (see Apostolou 2008, 2011, 2015; Buunk and Solano 2010; Dubbs and Buunk 2010; Dubbs et al. 2013; Fugère et al. 2017; Perilloux et al. 2011). A similar preference for attractiveness in a mate for oneself even arises when parents evaluate potential mates for themselves and potential mates for their sons or daughters (Apostolou 2011). Most researchers propose an evolutionary explanation for the above findings; because of their greater degree of genetic relatedness to their own future offspring, individuals should value potential mates' physical attractiveness as an indicator of genetic quality more than their parents do (see Apostolou 2011, 2015; Perilloux et al. 2011). However, just because physical attractiveness is *more* important to offspring than parents, this does not necessarily mean that attractiveness is unimportant to parents. Apostolou (2015) states that "parents and children would agree that good genetic quality is important...but they would disagree on how important it is, with the latter ascribing more importance than the former" (p. 2). Parents benefit when their children choose attractive mates by gaining good genes for their grandchildren.

Published online: 10 March 2017



Madeleine A. Fugère fugerem@easternct.edu

Eastern Connecticut State University, 83 Windham Street, Willimantic, CT 06226-2295, USA

Another consistent finding emerging from research investigating the mate preferences of both parents and their adult children (especially daughters) is the self-reported unimportance of physical attractiveness relative to other characteristics. Women and their parents report that many other characteristics take precedence over physical attractiveness when considering prospective mates. For example, women and their parents valued qualities such as ambition/ industriousness and education/intelligence more than good looks (Apostolou 2011), and daughters and their parents rated traits such as kind, understanding, cooperative, and family oriented as more important than good looks (Apostolou 2015). Similarly, Perilloux et al. (2011) found that daughters ranked the attribute "attractive" fourth in importance, behind kind, intelligent, and exciting personality, while mothers ranked attractive as ninth in importance. Using an expanded list of 40 traits, Fugère et al. (2017) found that women rated 17 traits as more important than physical attractiveness and mothers rated 30 traits as more important than physical attractiveness. Furthermore, women and their mothers agreed about the traits they found more important than physical attractiveness. Daughters and mothers both valued friendliness, dependable character, emotional stability/maturity, pleasing disposition, and ambition/industriousness as more important than physical attractiveness. Daughters and their mothers also responded similarly to open-ended questions, stating that traits such as respectfulness, honesty, and trustworthiness were the most important traits in a potential romantic partner for themselves or for their daughters (Fugère et al. 2017). No mothers or daughters listed physical attractiveness as one of the most important traits.

Nearly all of the previous research assessing mate preferences among offspring and their parents relies upon self-report to assess preferred mate characteristics, including the preference for a physically attractive mate or in-law (e.g., Apostolou 2008, 2011, 2015; Buunk and Solano 2010; Dubbs and Buunk 2010; Dubbs et al. 2013; Fugère et al. 2017; Perilloux et al. 2011). One study conducted by Apostolou (2011) used a slightly different methodology in which parents and children were asked to allocate "mate points" (p. 483) to eight traits under different budget conditions ranging from 15 to 45 mate points. When mate points were limited, offspring were more likely to give up traits such as a good family background in order to obtain an attractive mate while parents were more willing to give up good looks to obtain mates with similar religious backgrounds for their children (Apostolou 2011). Although this methodology differs from traditional self-report methodology, it still reflects conscious deliberation over preferred mate characteristics.

Social psychological research reveals that conscious deliberation/self-report may not be a reliable way to assess real-life preferences, especially when it comes to physical attractiveness. For example, Sprecher (1989) found that although women believed that physical attractiveness was not as important as earning potential in a male partner, in experimental scenarios, women were strongly influenced by both men's physical attractiveness and their earning potential. Similarly, speed-dating research shows that women's dating preferences are strongly impacted by men's physical attractiveness (Eastwick and Finkel 2008; Kurzban and Weeden 2005), and women's implicit attitudes reveal that they unconsciously associate physical attractiveness with an ideal partner (Eastwick et al. 2011). The above research suggests that women may underestimate the importance of physical attractiveness to their mate preferences.

Physical attractiveness may have such a powerful effect on our real-life mate preferences because we associate attractiveness with other positive characteristics such as better personalities or life experiences (Dion et al. 1972) as well as health and fertility (Soler et al. 2003; Weeden and Sabini 2005). This tendency to expect positive characteristics from attractive targets occurs cross-culturally (Shaffer et al. 2000; Zebrowitz et al. 2012) and is more common among women than men (Levesque et al. 2006). However, Griffin and Langlois (2006) suggest that these results might better be interpreted not as an inclination for attractiveness but as a disinclination towards unattractiveness. In Dion et al.'s original research as well as Griffin and Langlois' more recent research, unattractive targets were rated less favorably than their attractive and average counterparts on almost all characteristics. Griffin and Langlois suggest that rather than attractiveness being advantageous, unattractiveness may be particularly disadvantageous. Our preference for physically attractive partners may concurrently signal the unacceptability of physically unattractive partners. In fact, in some studies, researchers asked students to consider whether a physically unattractive partner would be more unacceptable to themselves or their parents. Young men and women believed that an unattractive partner would be less acceptable to themselves rather than their parents (Buunk and Solano 2010; Dubbs et al. 2013). Physical unattractiveness may be unacceptable in a mate because it can signal susceptibility to pathogens (see Gangestad and Buss 1993; Perilloux et al. 2010).

Li et al. (2002) proposed that mate preferences are influenced by what humans perceive to be "necessities" and "luxuries" (p. 947). As explained by Li et al. (2011), "a necessity is something that is initially extremely desirable... but as more of it is acquired, diminishes in value. A luxury, in contrast, is not important when necessities are lacking, but becomes more desirable once basic needs have been met" (p. 292). The research reviewed above suggests that a minimum level of physical attractiveness in a partner (or avoiding an unattractive partner) may be a "necessity" while exceptional physical attractiveness in a partner may be a "luxury." This interpretation is supported by Li et al.'s (2002) findings; the difference in ratings between unattractive versus average



targets was large while the difference in ratings between average and above average targets was small.

The goal of the present study is to experimentally manipulate the physical attractiveness and personality trait profiles of male targets in order to explore the relative importance of these factors to women's preferences in a mate for themselves and mothers' preferences in a mate for their daughters.

Manipulation Check Hypotheses

Based upon our pretests with women, we hypothesize that both women and their mothers will rate the attractive man as most attractive, followed by the "moderately attractive," and the "unattractive" man. Based upon prior research involving the most favorable traits for a mate for oneself or one's daughter, we hypothesize that both women and their mothers will rate the "respectful" trait profile (respectful, honest, trustworthy) most positively, followed by the "friendly" trait profile (friendly, dependable, mature), and then the "pleasing" trait profile (pleasing disposition, ambitious, intelligent; see Fugère et al. 2017).

Hypothesis 1: Importance of Attractiveness to Dating Desirability

Although women self-report that physical attractiveness is more important to them in a mate for themselves than their mothers do in a mate for their daughters, if a minimum level of attractiveness is a necessity (Li et al. 2002), a mate who meets this minimum level of physical attractiveness may be equally important to women and their mothers. Therefore, regardless of the personality traits ascribed to each target, we hypothesize that women and their mothers will prefer the attractive and moderately attractive men to the unattractive man as dating partners for themselves/their daughters. However, if physical attractiveness is more important to women than their mothers, we should find an interaction with women rating the attractive and moderately attractive men as more desirable dating partners than their mothers and mothers rating the unattractive man as a more desirable dating partner than their daughters.

Hypothesis 2: Influence of Attractiveness on Personality Ratings

Consistent with the research by Dion et al. (1972) and Griffin and Langlois (2006), we hypothesize that women and their mothers will rate the attractive and moderately attractive men as having more pleasing personality traits than the unattractive target man, regardless of the personality traits actually ascribed to each man.

Hypotheses 3–4: Relative Importance of Attractiveness Versus Personality Characteristics

Although prior research shows that both women and their mothers state that they value traits such as respectfulness, honesty, trustworthiness, ambition/industriousness, education/intelligence, and friendliness/kindness more than physical attractiveness (Apostolou 2011, 2015; Fugère et al. 2017; Perilloux et al. 2011), when respondents make these ratings, they may assume that potential mates will possess a minimally acceptable level of physical attractiveness. If a minimum level of physical attractiveness is a necessity (Li et al. 2002), then we should find that women and their mothers value these traits more than physical attractiveness only when the target men evidence a minimum level of physical attractiveness (a moderate level of physical attractiveness). Therefore, our third hypothesis is that the man with the most desirable trait profile (respectful, honesty, trustworthy) should be rated more positively than the other target men only when he is attractive or moderately attractive, but not unattractive. However, if the traits are more important to women and their mothers than physical attractiveness, we should find that the men with the most desirable trait profile are rated most positively regardless of their level of physical attractiveness.

Finally, if a minimum level of physical attractiveness is a necessity (Li et al. 2002), we should find that women's and their mothers' perceptions of the physical attractiveness of the target men are stronger predictors of their dating desirability ratings than their perceptions of the personality favorability of the target men. Therefore, our fourth hypothesis is that both women's and mothers' perceptions of the target's physical attractiveness will correlate more strongly with dating desirability ratings and explain more unique variance in dating desirability ratings than their personality favorability ratings of the target men, regardless of the men's physical attractiveness level. However, if men's physical attractiveness is more important to women than to their mothers, we may find that women's dating desirability ratings are more strongly impacted by their perceptions of the target man's attractiveness while mothers' ratings are equally impacted by attractiveness and personality perceptions or even more strongly influenced by personality perceptions than attractiveness perceptions.

Method

Participants

We assessed mate preferences among 80 women (aged 15-29 years, M=18.18) and one or both parents (61 mothers aged 37-61 years, M=49.05, 31 fathers aged



31–64 years, M=51.71). Because participants were randomly assigned to one of six conditions, the number of fathers per condition was too small to analyze; therefore, fathers were excluded from the subsequent analyses. The participants were primarily Caucasian (N=59,75% for daughters, N=51,85% for mothers). Ten daughters (13%) and six mothers (10%) identified as Hispanic/Latino/Latina; four daughters (5%) identified as African American, four daughters (5%), and two mothers (3%) identified as Asian American; and two daughters (2.5%) and one mother (2%) indicated other ethnic backgrounds.

Stimuli and Measures

An instrument presenting color photographs of three male targets varying in attractiveness, each paired with one of three trait profiles, was developed by the researchers. The photographs were obtained from previous research (Cousins 2003) and were pretested among women to ensure they represented attractive, moderately attractive, and unattractive levels of attractiveness. The photographs were taken under standard lighting and distance conditions and the men presented neutral facial expressions. All three men were Caucasian with brown hair as well as a little bit of facial hair. The head and shoulders were visible in the photographs as well as a participant number for each man.

Each target photograph was paired with one of three different trait profiles: the "respectful" trait profile included the traits "respectful, trustworthy, and honest"; the "friendly" trait profile included the traits "friendly, dependable, and mature"; and the "pleasing" trait profile included the traits "pleasing disposition, ambitious, and intelligent." These traits descriptions were chosen based upon previous research to represent highly desirable, desirable, and moderately desirable traits, respectively (Fugère et al. 2017). In prior research, the traits respectful, trustworthy, and honest were most often supplied by participants and their parents in response to an open-ended question regarding the most important traits in a potential romantic partner for themselves or for their children. Therefore, in the present study, we expect the respectful trait profile to be the most desirable trait profile for both daughters and their mothers. The traits friendly, dependable, and mature were chosen from the traits which were rated very favorably by participants and their parents in prior research (see Fugère et al. 2017; average ratings ranged from 3.55 to 3.90 on a scale ranging from 0 "not at all important" to 4 "extremely important"). We expect the friendly trait profile to be rated second most favorably in the present study. Finally, the traits pleasing disposition, ambitious, and intelligent were chosen as additional positive traits, but traits which were rated significantly less favorably by participants and their parents in prior research (average ratings ranged from 3.21 to 3.35, all t values testing the differences between the more positive and less positive trait descriptions for women and their mothers were greater than 3.32, all significance levels were less than or equal to .003). All of the traits in the friendly and pleasing trait profiles were rated more favorably than the attribute "physical attractiveness" for both women and their mothers in previous research (average ratings for physical attractiveness ranged from 2.06 to 2.98, all *t* values comparing trait descriptions to physical attractiveness were greater than 2.49, all significance levels were less than or equal to .017).

Design

Men's physical attractiveness was manipulated within subjects via the photographs described above. All participants saw photographs of the attractive, moderately attractive, and unattractive target men. Each man's photograph was paired with only one of the three trait profiles (a completely within subjects design would have necessitated rating each of the three target photographs with each of the three trait profiles). The pairing of the trait profiles with the photographs was varied across six between subjects conditions (see Table 1) representing all possible combinations of attractiveness levels and trait profiles. The resulting design is a 3 (physical attractiveness level, within subjects) × 6 (trait description condition and photograph pairing, between subjects) × 2 (generation: women versus mothers) mixed design. Women rated the photographs and trait descriptions in response to three questions derived from Campbell (1999). Women were asked "how attractive do you find this person," "how favorably do you rate his personal description," and "how desirable would you find this person as a dating partner for yourself." They responded on a scale ranging from 1 (not at all attractive, favorable, desirable) to 7 (very attractive, favorable, desirable). Parents responded to the first two items with the third question altered to reflect "a dating partner for your daughter."

Procedure

This experiment was approved by the Committee on Using Human Subjects in Research. The researchers informed participants that they were studying similarities and differences in mate preferences among women and their parents. Informed consent was obtained from both women and their parents prior to their participation (consent from parents was obtained for daughters under 18 as well). Researchers recruited women from psychology courses for class credit; these women obtained one additional credit for recruiting their parents. Daughters were given questionnaires for their parents as well as envelopes and stamps if desired. Daughters brought their completed questionnaires along with their parents' questionnaires back to the researchers to receive credit. We also recruited women and their parents from a university open house. Individuals recruited at the open house received a \$10 gift



card to the university bookstore as compensation for their participation. Daughters were randomly assigned to a condition, and parents were given questionnaires reflecting the same pairing of physical attractiveness levels and trait descriptions (see Table 1). Participants were instructed to review all photographs and trait descriptions (which were all presented on one page) and then to complete all the ratings. Once the questionnaires were returned, responses from parents and daughters were assigned a matching number. Women were debriefed by the researchers and encouraged to share the debriefing materials with their parents.

Results

Manipulation Checks

Attractiveness In order to support the attractiveness manipulation, we analyzed responses to the item "how attractive do you find this person?" for both daughters and mothers. We performed a 3 (attractiveness level) × 2 (generation: daughters versus mothers) repeated measures ANOVA. Confirming the effectiveness of the attractiveness manipulation, there was a large main effect for attractiveness level; women and their mothers rated the attractive man as most attractive (M = 4.68), followed by the moderately attractive man (M = 4.25), and then the unattractive man $(M = 2.98; F(2, 120) = 86.08, p < .001, <math>\eta^2 = 0.59$). There was also a significant main effect for generation; across attractiveness levels, mothers rated the target men as more attractive (M = 4.33)

than their daughters (M = 3.61; F(1, 120) = 14.37, p < .001, $\eta^2 = 0.19$). This analysis also yielded a marginally significant interaction between attractiveness level and generation (F(2, 120) = 3.07, p = .05, $\eta^2 = 0.05$). Mothers rated the attractive (M = 4.89) and moderately attractive (M = 4.69) men more similarly while their daughters found the attractive man (M = 4.48) more attractive than the moderately attractive man (M = 3.80). Mothers also rated the unattractive man as more attractive (M = 3.43) than their daughters (M = 2.54).

Personality Profiles In order to support the personality trait profile manipulation, we analyzed responses to the item "how favorably do you rate his personal description?" for both daughters and mothers. To perform this analysis, we collapsed personality favorability ratings across the three physical attractiveness levels. We then performed a 3 (trait profile) × 2 (generation: daughters versus mothers) repeated measures ANOVA. Confirming the effectiveness of the trait profile manipulation, there was a main effect for trait profile (F (2, 120) = 6.80, p = .002, $\eta^2 = 0.10$). Women and their mothers rated the respectful profile (respectful, honest, and trustworthy) most positively (M = 5.41). However, contrary to our expectations, women and their mothers rated the other two trait profiles equivalently. The friendly profile (friendly, dependable, and mature, M = 4.99) and the pleasing profile (pleasing disposition, ambitious, and intelligent, M = 4.99) did not differ from one another, but they were both rated less positively than the respectful profile (Fs $(1, 60) \ge 9.79$, p = .003, $\eta^2 = 0.14$). The equivalent ratings on these two less desirable profiles may stem from the fact that these profiles

Table 1 Attractiveness level and trait description pairings

Condition	Attractiveness level	Trait description			
1	Attractive	Respectful, trustworthy, honest			
	Moderately attractive	Pleasing disposition, ambitious, intelligent			
	Unattractive	Friendly, dependable, mature			
2	Attractive	Pleasing disposition, ambitious, intelligen			
	Moderately attractive	Respectful, trustworthy, honest			
	Unattractive	Friendly, dependable, mature			
3	Attractive	Pleasing disposition, ambitious, intelliger			
	Moderately attractive	Friendly, dependable, mature			
	Unattractive	Respectful, trustworthy, honest			
4	Attractive	Friendly, dependable, mature			
	Moderately attractive	Pleasing disposition, ambitious, intelligent			
	Unattractive	Respectful, trustworthy, honest			
5	Attractive	Respectful, trustworthy, honest			
	Moderately attractive	Friendly, dependable, mature			
	Unattractive	Pleasing disposition, ambitious, intelligent			
6	Attractive	Friendly, dependable, mature			
	Moderately attractive	Respectful, trustworthy, honest			
	Unattractive	Pleasing disposition, ambitious, intelligent			



were paired with men of different attractiveness levels in the current study (see Hypothesis 2). Because our hypotheses concern only the most favorable trait profile, equivalence on these less favorable profiles is not problematic.

Hypothesis 1: Importance of Attractiveness to Dating Desirability

To assess Hypothesis 1, that women and their mothers would prefer the attractive and moderately attractive men to the unattractive man as dating partners for themselves/their daughters, we examined responses to the item "how desirable would you find this person as a dating partner for yourself" for women or "for your daughter" for mothers. We performed a 3 (attractiveness level) × 2 (generation: daughters versus mothers) repeated measures ANOVA. In support of Hypothesis 1, we found a strong main effect for attractiveness level; women and their mothers rated the moderately attractive man as the most desirable mate (M = 4.35), followed by the attractive man (M = 4.22), and then the unattractive man (M = 3.43); $F(2, 118) = 26.42, p < .001, \eta^2 = 0.31$). Suggesting that a minimum level of attractiveness is a necessity for both women and their mothers, for both generations, the differences between the attractive and unattractive targets as well as moderately attractive and unattractive targets were statistically significant (ts (60) \geq 2.21, ps \leq .031). Once again, there was also a significant main effect for generation, across attractiveness levels; mothers rated the target men as more desirable dating partners for their daughters (M = 4.44) than their daughters did for themselves $(M = 3.56; F(1, 118) = 18.27, p < .001, \eta^2 = 0.24).$ This analysis also yielded a marginally significant interaction between attractiveness level and generation (F (2, 118) = 2.92, p = .058, $\eta^2 = 0.05$). In this instance, women rated the attractive (M = 3.95) and moderately attractive (M = 3.90) men more similarly while their mothers discriminated more between the attractive (M = 4.48) and moderately attractive (M = 4.80) men and preferred the moderately attractive man. Mothers also rated the unattractive man as a more desirable dating partner for their daughters (M = 4.03) than their daughters did for themselves (M = 2.83).

Hypothesis 2: Influence of Attractiveness on Personality Ratings

To test Hypothesis 2, that women and their mothers would associate physical attractiveness with more positive personality characteristics, regardless of the traits ascribed to the target men, we performed a 3 (attractiveness level) × 2 (generation: daughters versus mothers) repeated measures ANOVA using the personality favorability item as the dependent measure. In support of our second hypothesis, there was a main effect for

attractiveness level; women and their mothers rated the attractive (M=5.21) and moderately attractive (M=5.34) men as having the most pleasing personalities followed by the unattractive man $(M=4.91; F(2,120)=5.30, p=.006, \eta^2=0.08)$, regardless of the trait profiles ascribed to each man. Post hoc comparisons revealed that the attractive and moderately attractive men's personalities were rated as equally positive (p=.229) while the unattractive man's personality was rated less favorably than the personality of the attractive man and the moderately attractive man $(Fs(1,60) \ge 4.42, p \le .04, \eta^2 \ge 0.07)$.

Hypotheses 3–4: Relative Importance of Attractiveness Versus Personality Characteristics

In order to assess Hypothesis 3, that the man with the respectful trait profile should be rated more positively only when he is attractive or moderately attractive, but not unattractive, we performed a 3 (attractiveness level, within subjects) × 2 (generation: daughters versus mothers, within subjects) × 6 (condition, between subjects) mixed ANOVA using dating desirability for self/daughter as the dependent measure. This analysis yielded a significant main effect for daughters versus mothers; mothers rated all men as more desirable partners for their daughters (M = 4.40) than daughters did for themselves (M = 3.54, F(1, 108) = 16.58, p < .001, $\eta^2 = 0.24$). We also found a main effect for attractiveness level; women and their mothers rated the moderately attractive man as the most desirable mate (M = 4.29), followed by the attractive man (M = 4.20), and then the unattractive man (M = 3.41; F(2, 108) = 27.52, p < .001, $\eta^2 = 0.34$). Finally, this analysis yielded a significant interaction of attractiveness level and subject condition, shown in Fig. 1. In support of Hypothesis 3, only moderately attractive men were ever rated more favorably than attractive men, in conditions 2 and 6, when paired with the respectful trait profile, and in condition 3, when paired with the friendly trait profile. Although the unattractive man was rated slightly more favorably than the moderately attractive man in condition 4, when he was paired with the respectful traits, this difference was not statistically significant.

To test Hypothesis 4, that both women's and mothers' perceptions of physical attractiveness would correlate more strongly with dating desirability ratings and explain more unique variance in dating desirability ratings than their personality favorability ratings, regardless of men's physical attractiveness level, we performed bivariate correlations as well as regression analyses using dating desirability as the dependent variable and attractiveness and personality favorability ratings as predictors. The results of these analyses are shown in Table 2. Consistent with Hypothesis 4, for women,



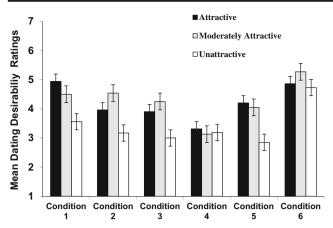


Fig. 1 Dating desirability ratings (across generations) for attractive men paired with respectful traits (*conditions 1 and 5*), moderately attractive men paired with respectful traits (*conditions 2 and 6*), and unattractive men paired with respectful traits (*conditions 3 and 4*). As predicted in hypothesis 3, only moderately attractive men were ever rated more favorably than attractive men, in conditions 2 and 6, when paired with the respectful traits, and in condition 3 when paired with the friendly traits. Although the unattractive man was rated slightly more favorably than the moderately attractive man in condition 4, when he was paired with the respectful traits, this difference was not statistically significant

in all cases, attractiveness ratings (rather than personality ratings) more strongly correlated with dating desirability ratings. Although both attractiveness and personality ratings were significant predictors of women's dating desirability ratings, attractiveness ratings were stronger independent predictors of their dating desirability ratings. For women, the squared semipartial correlations (sr²) for attractiveness ratings versus personality ratings indicate that at least twice as much of the variance in women's dating desirability ratings was

explained by attractiveness ratings versus personality ratings across all levels of physical attractiveness. However, in contrast to our predictions in Hypothesis 4, for mothers, personality ratings (rather than attractiveness ratings) more strongly correlated with dating desirability ratings for the attractive and moderately attractive targets, while the reverse was true for the unattractive target. Furthermore, although both attractiveness and personality ratings were significant predictors of dating desirability, personality ratings were stronger independent predictors of dating desirability ratings for mothers when rating both the attractive and moderately attractive targets, while the reverse was true for the unattractive target. For mothers' ratings, the squared semipartial correlations (sr²) for personality ratings explained 1.58 times more variance for the attractive target and 1.36 times more variance for the moderately attractive target. However, for the unattractive target, the squared semipartial correlations (sr²) for attractiveness ratings explained 1.13 times more variance than the personality ratings, suggesting that avoiding unattractiveness is a necessity for both women and their mothers. Although personality ratings seem to impact mothers' perceptions of dating desirability more than attractiveness ratings, recall from the test of Hypothesis 2 above that regardless of the trait profiles associated with the target photographs, the attractive and moderately attractive men were rated as having more favorable personalities than the unattractive man. Therefore, the relative importance of personality ratings to mothers may reflect both the trait profiles themselves as well as men's attractiveness levels.

Table 2 Correlations and regression analyses depicting the relative importance of physical attractiveness and personality ratings to women's and mothers' dating desirability ratings

		Dating desirability (r)	В	β	t	p	sr^2
Women's ratings							
Attractive target	Attractiveness rating	.787**	0.792	0.707	9.23	<.001	0.629
	Personality rating	.497**	0.250	0.173	2.26	.027	0.154
Moderately attractive target	Attractiveness rating	.764**	0.640	0.605	7.31	<.001	0.500
	Personality rating	.624**	0.376	0.284	3.44	.001	0.235
Unattractive target	Attractiveness rating	.681**	0.702	0.589	6.68	<.001	0.536
	Personality rating	.465**	0.245	0.222	2.51	.014	0.202
Mothers' ratings							
Attractive target	Attractiveness rating	.668**	0.420	0.357	3.97	<.001	0.299
	Personality rating	.763**	0.675	0.567	6.29	<.001	0.474
Moderately attractive target	Attractiveness rating	.777**	0.446	0.382	3.59	.001	0.250
	Personality rating	.810**	0.579	0.521	4.90	<.001	0.341
Unattractive target	Attractiveness rating	.752**	0.552	0.513	6.68	<.001	0.436
_	Personality rating	.723**	0.482	0.452	2.51	<.001	0.384

^{**}Correlation is significant at the .01 level (one-tailed)



Discussion

When attractiveness and personality characteristics are experimentally manipulated, obtaining a minimum level of physical attractiveness/avoiding unattractiveness seems to be a "necessity" (Li et al. 2002) for both women and their mothers. These finding suggest that when offspring or their parents rate physical attractiveness as less important than other traits (see Apostolou 2011, 2015; Fugère et al. 2017; Perilloux et al. 2011), respondents assume that potential mates will possess a minimally acceptable level of physical attractiveness. However, when a range of attractiveness levels is presented, physical attractiveness takes priority over other characteristics (see Li et al. 2013).

In the present study, we supported four hypotheses suggesting that a minimum level of physical attractiveness is a necessity not only in a mate whom women choose for themselves but in a mate whom mothers desire for their daughters. Hypothesis 1, that women and their mothers would prefer the attractive and moderately attractive men to the unattractive man as dating partners for themselves/their daughters was supported. Both women and their mothers rated the attractive and moderately attractive targets as more desirable dating partners for themselves/their daughters versus the unattractive target. We did not find evidence to support the notion that physical attractiveness was more important to daughters than to mothers in terms of the target men's dating desirability; instead, we found that mothers rated all men, regardless of attractiveness level, as more desirable mates for their daughters than daughters did for themselves. However, the results showing that the unattractive target man was rated as a less desirable dating partner by daughters than their mothers (as a mate for their daughters) may signal that unattractiveness is less acceptable to women than their mothers (see Buunk and Solano 2010; Dubbs et al. 2013). Additionally, although we did not test this possibility in the current study, women and their mothers may have different notions of what constitutes a minimally acceptable level of physical attractiveness, with mothers employing a less stringent standard than their daughters.

Our results indicate that a minimum level/moderate level of physical attractiveness is a necessity to both daughters and mothers, but not necessarily that above average attractiveness is *equally* important to both daughters and mothers. In fact, although women very slightly preferred the attractive man to the moderately attractive man as a dating partner for themselves, mothers preferred the moderately attractive man to the attractive man as a dating partner for their daughters. It is possible that once the necessity of attractiveness is met, women may prefer the luxury of exceptional attractiveness (see Li et al. 2011) more than their mothers do. Mothers' preference for the

moderately attractive man may also reflect the belief that attractive men are less likely to care for offspring over the long term (Gangestad and Simpson 2000).

Hypothesis 2, that women and their mothers would rate the personality characteristics of the attractive and moderately attractive men more favorably than the personality characteristics of the unattractive man, regardless of the traits actually ascribed to the target men, was also supported. These results mirror those of previous research suggesting that we expect positive characteristics from both attractive and moderately attractive others, but not unattractive others (Dion et al. 1972; Griffin and Langlois 2006). The current study also suggests that this association between attractiveness and positive traits is so strong that these positive expectations may override impressions of the traits actually ascribed to individuals. When women and their mothers rated the attractive and moderately attractive men's personalities more favorably than the unattractive man's personality, they may have been responding not only to the men's attractiveness levels but also to the expectation that attractiveness is associated with other positive qualities. This finding is important because it may help to explain why both mothers and daughters typically underestimate the importance of physical attractiveness to their mate preferences. Because of the positive association between attractiveness and pleasing personalities, it may be that we not only expect attractive others to have more favorable personality characteristics but that we also expect those with more favorable characteristics to possess at least a minimally acceptable level of physical attractiveness.

Hypothesis 3, that the target man assigned the respectful trait profile should be rated as a more desirable dating partner only when he was attractive or moderately attractive, but not unattractive, was also supported. Across generations, attractive men tended to be rated most positively when they were assigned the respectful trait profile (conditions 1 and 5), while moderately attractive men were rated most favorably when they were assigned the respectful trait profile (conditions 2 and 6) and the friendly trait profile (condition 3). The unattractive men were never rated more favorably than their more attractive counterparts, regardless of the trait profiles they were assigned. Once again, our results suggest that a minimum level of physical attractiveness is a necessity (Li et al. 2002); only when the target men were at least moderately attractive did the personality characteristics take precedence over physical attractiveness in terms of the men's dating desirability.

Finally, our fourth hypothesis was supported with regard to women and partially supported with regard to mothers. We hypothesized that women's and mothers' perceptions of men's physical attractiveness would be more strongly related to their opinions regarding men's dating desirability and explain more unique variance in dating desirability than their perceptions of men's personality characteristics. Women's dating desirability



ratings were more strongly uniquely impacted by their perceptions of the target men's attractiveness (versus personality favorability) across attractiveness levels; attractiveness explained twice as much variance as personality favorability for women. However, for mothers, the relationships were more complicated. For mothers, personality ratings more strongly predicted men's desirability as mates for their daughters for both moderately attractive and attractive men. However, for unattractive men, mothers' perceptions of attractiveness more strongly predicted men's desirability (or undesirability) as mates for their daughters than personality ratings. Although personality ratings impacted mothers' perceptions of the target men more so than daughters', personality ratings were strongly influenced by men's physical attractiveness. Once again, these results suggest that a minimum level of attractiveness is a necessity (Li et al. 2002) for both women and their mothers. These results also bolster the interpretation we suggested above that once the necessity of attractiveness is met, women may prefer the luxury of exceptional attractiveness (see Li et al. 2011) more than their mothers do.

The limitations of the present study include the small sample size, the lack of ethnic diversity, and the lack of cultural diversity. Because physical attractiveness may be more important in some cultures than others (Gangestad and Buss 1993; Gebauer et al. 2012), this research should be replicated in other cultures. Future research should also investigate the relative importance of physical attractiveness versus other traits in larger, more diverse samples. Additionally, because of the within-subject design used in the present study, the responses of women and their mothers may have been influenced by order effects and/or contrast effects. Future research should replicate these results using a between-subject design. Furthermore, in the current project, we only assessed ideal mate preferences; differences between parents and children may be amplified when offspring mate quality is low and parents and children must compromise on the traits they are able to attain in a mate for the offspring (Apostolou 2011). Apostolou's (2011) research suggests that physical attractiveness becomes more important to offspring but less important to parents when they must compromise on the traits they are able to attain in a mate for themselves or their children. An additional limitation concerns the fact that our personality characteristics were all positive. It seems intuitive that women's and mothers' perceptions of dating desirability would be more strongly impacted by personality favorability if some men were associated with unfavorable personality characteristics. Future research should explore whether physical unattractiveness or negative personality characteristics more strongly impact women's and parents' mate choices.

Some research suggests that physical attractiveness is even more important to men than women, especially when a full range of attractiveness levels are presented for consideration (see Li et al. 2013). Furthermore, Apostolou (2017) predicts

that there should be more conflict over genetic quality between sons and their parents than daughters and their parents. Future research should examine the relative importance of attractiveness versus other characteristics among men and their parents.

In summary, a minimum level of physical attractiveness seems to be essential to women in a mate for themselves and to their mothers in a mate for their daughters. Women and their parents may underestimate the importance of physical attractiveness to their mate choices or may assume a minimum level of physical attractiveness has been met when expressing their preferences. Future research should continue to experimentally assess the importance of physical attractiveness and other self-reported preferences such as the preference for an intelligent or kind mate.

Acknowledgements This research was supported by a grant from the Connecticut State University American Association of University Professors.

Compliance with Ethical Standards This experiment was approved by the Committee on Using Human Subjects in Research. Informed consent was obtained from both women and their parents prior to their participation (consent from parents was obtained for daughters under 18 as well).

References

Apostolou, M. (2008). Parent-offspring conflict over mating: the case of beauty. Evolutionary Psychology, 6(2), 303–315.

Apostolou, M. (2011). Parent-offspring conflict over mating: testing the tradeoffs hypothesis. *Evolutionary Psychology*, *9*, 470–495.

Apostolou, M. (2015). Parent–offspring conflict over mating: domains of agreement and disagreement. *Evolutionary Psychology*, *13*(3), 1–12. doi: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.

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. doi:10.1037/a0020252.

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

Cousins, A. J. (2003). Male mate guarding, female solicitation, and resistance to male mate guarding in dating couples: scale development and preliminary validation. *Dissertation Abstracts International*, 64(3-B), 1477.

Dion, K., Berscheid, E., & Walster, E. (1972). What is beautiful is good. Journal of Personality and Social Psychology, 24(3), 285–290. doi: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. doi: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. doi: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. doi: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. doi:10.1037/a0024061.
- 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
- Gangestad, S. W., & Buss, D. M. (1993). Pathogen prevalence and human mate preferences. *Ethology and Sociobiology*, 14(2), 89–96.
- 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. doi: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. doi:10.1177/ 0146167212456300.
- 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. doi:10.1521/soco.2006.24.2.187.
- Kurzban, R., & Weeden, J. (2005). HurryDate: mate preferences in action. Evolution and Human Behavior, 26(3), 227–244. doi:10.1016/j.evolhumbehav.2004.08.012.
- Levesque, M., Nave, C., & Lowe, C. (2006). Toward an understanding of gender differences in inferring sexual interest. *Psychology of Women Quarterly*, 30(2), 150–158. doi:10.1111/j.1471-6402.2006.00278.x.
- 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. doi: 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. doi: 10.1016/j.paid.2010.10.005.
- Li, N. P., Yong, J. C., Tov, W., Sng, O., Fletcher, G. J. O., Valentine, K. A., Jiang, Y. F., & Balliet, D. (2013). Mate preferences do predict attraction and choices in the early stages of mate selection. *Journal of Personality and Social Psychology*, 105, 757–776. doi:10.1037/ a0033777.
- Perilloux, H. K., Webster, G. D., & Gaulin, S. C. (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. doi: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. doi:10. 1016/j.paid.2010.09.039.
- 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. doi:10.1177/0022022100031005002.
- 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. doi:10.1016/S1090-5138(03)00013-8.
- Sprecher, S. (1989). The importance to males and females of physical attractiveness, earning potential, and expressiveness in initial attraction. *Sex Roles*, 21(9–10), 591–607. doi:10.1007/BF00289173.
- Weeden, J., & Sabini, J. (2005). Physical attractiveness and health in western societies: a review. *Psychological Bulletin*, 131(5), 635–653. doi:10.1037/0033-2909.131.5.635.
- 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. doi:10.1177/0022022111411386.

