

Relationships between age of females and attraction to the Dark Triad personality



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ABSTRACT

The current study extended previous literature that had investigated the attractiveness of the Dark Triad (DT) personality to youthful women (Carter, Campbell, & Muncer, 2014), by comparing responses between two age groups. Participants ($N = 1001$ females) consisted of undergraduate students and women sampled from various North American communities. Participants read descriptions of male personalities and rated their attractiveness. Descriptions of male characters were designed to portray a combination of high scores on the Dark Triad traits (Machiavellianism, narcissism, and sub-clinical psychopathy), and results were compared to ratings on a low-scoring DT personality. Results were generally supportive of the hypotheses, such that younger women were more attracted to the Dark Triad traits than were older women; older women also rated the low-scoring DT personality as significantly more attractive than did younger women. However, inconsistent with previous literature, younger women rated the low-scoring DT personality as significantly more favorable than the high-scoring DT personality. Further, the participants' level of fertility did not significantly influence attractiveness ratings. The current study's findings may deepen understanding of the ways in which mating strategies change with age, as well as the qualities that women desire in a mate, in order to improve mating success.

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1. Introduction

Previous literature has investigated the attractiveness of a male Dark Triad personality to younger females (Carter, Campbell, & Muncer, 2014a; Carter, Campbell, & Muncer, 2014b), however minimal research has examined the changes which occur in women's preferences for men while they are both pre- and post-menopausal. The goal of this study is to explore the hypothesis that women 50 years of age and older—the average onset age for menopause (Frommer, 1965)—will rate high-scoring male Dark Triad personalities as less attractive, compared to the ratings of younger, pre-menopausal women. That is, younger females should indicate higher overall attraction levels to character depictions that are highly indicative of the Dark Triad personality traits when compared to older women, who are typically more mature, less fertile, and may also possibly be lower in the Dark Triad themselves. Previous research has indicated that individuals may associate certain physical appearances, such as facial features, with distinct personality traits (Paunonen, Ewan, Earthy, Lefave, & Goldberg, 1999; Albright, Kenny, & Malloy, 1988), which may lead to biased or inaccurate judgments. Consequently, this study evaluated women's attraction to the Dark Triad personality traits, independent of physical appearance, in order to minimize bias in attractiveness ratings.

The Dark Triad (DT) refers to a constellation of traits which include psychopathy, Machiavellianism, and narcissism. Psychopathy is characterized by antisocial behavior, impulsivity, and a lack of empathy, and is associated with deceitfulness and feigned charm (Hare, 2003). Machiavellianism is typified by extraversion, insincerity, and manipulation, and a tendency towards promiscuity (McHoskey, 2001). Narcissism refers to a grandiose view of the self and a sense of entitlement and dominance (Raskin & Terry, 1988), and is associated with intra-sexual competitive behavior, as well as short-term mating strategies (Carter et al., 2014a, 2014b).

Jonason et al. (2012) found that the Dark Triad traits were positively correlated with a preference for short-term mating strategies, and negatively correlated with tendencies towards more seriously defined romantic relationships. Here, the phrase “short-term mating” will refer to non-committed relationships which are primarily sexual in nature, as well as casual sexual interactions (e.g., ‘one night stands’; Gott & Hinchliff, 2003; Jonason, Luevano, & Adams, 2012).

Extensive research has investigated the changes that occur in the attributes which women find attractive throughout their menstrual cycle. Such changes include a preference for typically masculine facial features and intra-sexual competitive behavior at the peak of fertility, and an absence of these preferences in less fertile phases of the menstrual cycle (Cantu et al., 2014; Gangestad, Thornhill, & Garver-Apgar, 2005; Gangestad, Simpson, Cousins, Garver-Apgar, & Christensen, 2004; Gangestad & Thornhill, 1998). It is suggested that heterosexual women in the peak of their fertility are attracted to masculinity, which

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is positively correlated with high levels of testosterone (Pound, Penton-Voak, & Surridge, 2009). Testosterone is, in turn, associated with risk-taking, anti-social behavior, and a type of dominance that acts to gain status (Guo, Booth, Granger, Mazur, & Kivlighan, 2006)—behaviors associated with the DT personality (Carter et al., 2014a).

Therefore, it is contended that women who are in the peak of their life's fertility, in their youth, are more likely to be attracted to the qualities of an enhanced DT personality than are less fertile women. However, these preferences for aspects of masculinity have been found not to be significant in contraceptive pill-using women (Gangestad & Thornhill, 1998). Furthermore, the preferences of women—who did not use contraceptive pills that function by altering hormone levels—were correlated with probability of their conception (Gangestad & Thornhill, 1998).

The difference between younger and older women's libido is another potential factor affecting how attractive women tend to rate men. A study conducted by Graziottin (2000), for example, suggested that there is a post-menopausal decline in sexual desire, and casual, short-term mating has also been linked with the DT traits (Jonason et al., 2009; Jonason & Webster, 2010); therefore, it has been proposed that older women are less likely to be attracted to the qualities of a DT personality because, in part, they are unlikely to be interested in casual sex (Gott & Hinchliff, 2003).

Short-term mating has been linked with the DT personality (Jonason et al., 2009; Jonason & Webster, 2010), however our hypothesis is not that younger women desire more short-term, sexual relationships and older women prefer more long-term, committed relationships; rather, we propose that younger women are more likely to be attracted to the Dark Triad, and older women less likely to be attracted to the DT personality.

2. Method

2.1. Participants

Participants ($N = 1150$) consisted of female University undergraduates and other North American citizens who were recruited through Western University, Canada, CrowdFlower, flyers posted on community bulletin boards, and newspaper advertisements. Participants enrolled in an introductory psychology course received course credit for their participation. Participants who did not complete the study for course credit were entered into a draw to win one of ten 50-dollar prizes as compensation, or were compensated 50 cents via CrowdFlower. Participants were eligible to participate if they were heterosexual females who were at least 18 years of age and fluent in English. Previous similar studies that our lab has conducted have found no important effects related to the different methods of recruitment.

Data collection took place online. As participants accessed the survey through a link, they were directed to one of two conditions on Fluid Survey—a character description of a male persona that was either representative of a high-scoring or a low-scoring DT personality (see Table 1).

2.2. Materials

A 6-point Likert scale was generated to assess female attraction levels to the male DT characters. Participant agreement to the statement, "I find this individual very attractive", was measured from 1 (*Strongly Disagree*) to 6 (*Strongly Agree*). These character descriptions were developed by the first author and were modeled after Carter et al. (2014a), who used both descriptions and photographs. In order to avoid potential bias, the descriptions used in the current study did not include a photograph or indication of physical appearance.

Additional scales assessed the willingness of women to engage in hypothetical interactions (a short-term, sexual affair vs. a long-term, committed relationship) with the character with which they were

Table 1

Character descriptions of males scoring high or low on the Dark Triad.

High-scoring DT personality

I definitely enjoy getting acquainted with various women within my community; they hold this alluring vulnerability that piques my interest. I like when people ask me about my accomplishments and myself; it's always nice when people value and admire you and what you do. In a relationship, I tend to take the role of the decision-maker, especially when deciding where to take a lady on an extravagant date (I like to be impulsive when it comes to my relationships). When I am asked for my opinion, I don't think there's anything wrong with bending the truth a little bit in certain situations if the end justifies it; it's not something I tend to feel guilty about; besides, everyone lies. I don't think anyone would be hurt or upset in the long run. I don't see it as an especially moral issue — it's just a case of getting the best possible result out of all situations. Maybe one of the reasons I've been successful with women and in the majority of other areas of my life, is that I seem to be good at persuading others round to my way of thinking, and that I seek to praise them, and their abilities. Sometimes I feel like I can twirl the world around my finger.

Low-scoring DT personality

I definitely enjoy getting acquainted with various women within my community; they carry this alluring fortitude that piques my interest. I like asking people about their accomplishments and themselves; it's always nice admiring what others are capable of. In a relationship, I tend to let the lady take the role of the decision-maker, especially when deciding what to do on a low-key date (I like the stability and comfort that seems to go hand in hand with my relationships). When I am asked for my opinion, I give my honest answer, even knowing that maybe they were looking for a different one, because it would be morally wrong not to. I would feel guilty knowing I had not been honest with them, even if it means they are angry with me for a while (but I deserve that). Maybe one of the reasons I've steered clear of any type of leadership position in my career or taken a chance at women that might be out of my league, is that I don't seem to be good at persuading others round to my way of thinking, and I find it a little cringe-worthy to indulge in excessive flattery; I usually only give compliments if I think a co-worker or a woman truly earned them. The world may not be wrapped around my finger, but I am an honest and caring man.

presented. Participants responded on a 6-point Likert scale which ranged from 1 (*Not at all*) to 6 (*Very much so*).

A final 6-point scale was used as a manipulation check after the study, where participants were asked to rate the characters on each of the Big 5 and DT traits. Participants lastly indicated their position in their menstrual cycle and fertility status.

2.3. Procedure

Participants were presented with a link to the study via e-mail or alternatively accessed the link through the university's participation pool. The link was randomly redirected to one of the two conditions, where participants read a description of a male who was high or low in the DT traits. Before reading the description participants were presented with a letter of information and informed consent was obtained.

Subsequent to reading the character description, participants were asked to rate the character on the attractiveness rating scale, and completed the other scales mentioned previously. Finally, they were presented with a debriefing form. The entire study took approximately 30 min to complete.

3. Results

Of the 1150 participants that initially took part in the survey, 149 were deleted from the analyses due to incomplete data. The sample sizes within the two conditions varied depending on the items that were responded to, because a number of participants answered some of the survey questions, while leaving others blank.

Independent samples *t*-tests revealed that the high-scoring DT character was rated as significantly higher than the low-scoring DT character in Machiavellianism ($t_{939} = 26.89, p < .001, \eta^2 = .44$), narcissism ($t_{973} = 20.34, p < .001, \eta^2 = .30$), and psychopathy ($t_{981} = 8.94, p < .001, \eta^2 = .08$), as well as higher in extraversion ($t_{969} = 4.30, p < .001, \eta^2 = .02$). Consistent with previous

research (Carter et al., 2014a), the low-scoring DT character was rated as significantly higher than the high-scoring DT character in openness to experience ($t_{956} = -9.69, p < .001, \eta^2 = .09$), conscientiousness ($t_{970} = -6.72, p < .001, \eta^2 = .04$), and agreeableness ($t_{953} = -4.30, p < .001, \eta^2 = .02$). Neuroticism ratings did not differ significantly between the DT characters ($t_{978} = 0.97, ns$). This manipulation check demonstrated that both characters were perceived as intended.

Univariate correlational analyses revealed that both long-term, committed relationships ($r = 0.59, p < .01$) and short-term, sexual affairs ($r = 0.55, p < .01$) were significantly positively correlated with attractiveness ratings of the high-scoring DT character. A similar pattern of correlations were revealed for the low-scoring DT characters; both long-term, committed relationships ($r = 0.55, p < .01$) and short-term, sexual affairs ($r = 0.19, p < .01$) were significantly positively correlated with attractiveness ratings.

As predicted, greater attraction towards either DT personality predicted higher desirability ratings for theoretical short- and long-term relationships. No significant correlation was found between age and attractiveness ratings of the Dark Triad personality ($r = -0.06, ns$), or attractiveness ratings of the low-scoring DT personality ($r = 0.05, ns$). Age was significantly negatively correlated with engagement in short-term, sexual affairs with the high-scoring DT character ($r = -0.20, p < .01$). However, this relationship was not found with the low-scoring DT personality ($r = 0.05, ns$). Therefore, consistent with previous literature (Gott & Hinchliff, 2003), older participants were reportedly less likely to engage in a short-term, sexual affair with a high-scoring DT personality (Rauthmann & Kolar, 2013). Finally, as expected, fertility status yielded a significant negative relationship with age ($r = -0.31, p < .01$). Thus, an increase in age was accepted as a viable predictor of personal identification of reduced fertility.

A completely randomized factorial (CRF) analysis of variance (ANOVA) was conducted to see whether higher fertility levels of participants were related to increased attractiveness ratings of the high-scoring DT character ($N = 512$) when compared to the low-scoring DT character ($N = 489$). Similarly, the CRF was employed to examine whether lower fertility levels of participants were related to decreased indication of attractiveness of the high-scoring DT character. The independent variables consisted of character type and self-reported fertility level (i.e., *menopausal, menstrual phase, luteal phase* and *follicular phase, or ovulation*); the dependent variable was the perceived attractiveness of the character.

As shown in Fig. 1, the ANOVA produced a significant main effect of character type, such that participants' attractiveness ratings varied depending on the character's personality type, $F(1, 993) = 67.87, p < .001, \eta^2 = .07$. There was no significant main effect of fertility $F(3, 993) = 1.25, ns$, nor was there a significant interaction between the effect of fertility and character type on attractiveness ratings, $F(3, 993) = 1.46, ns$. Thus, these results failed to support both the

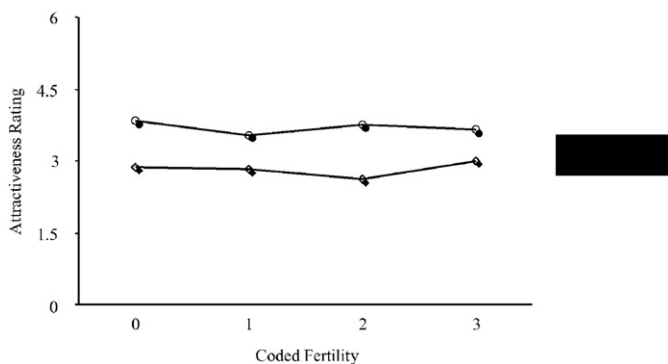


Fig. 1. Attractiveness ratings of high-scoring DT and low-scoring DT characters in relation to participants' fertility level.

hypothesis and previous research that reported varying fertility levels to influence character attractiveness ratings in predictable ways (Gangestad et al., 2005, 2004; Gangestad & Thornhill, 1998). However, it should be noted that the power for the interaction effect of Fertility \times Character (.388) was quite small.

A second CRF ANOVA was employed to investigate the relationship between age and character type and the effects on perceived attractiveness. Thus, age was treated as an independent variable, where females who were above 50 years of age were coded as a 1 (*older*) and females who were 50 years of age or younger were coded as a 2 (*younger*). This distinction was made based on findings which have indicated that the average onset age for menopause is about 50 years (Frommer, 1965). This analysis included 97 older participants and 403 younger participants who rated the high-scoring DT character, as well as 80 older and 399 younger participants who rated the low-scoring DT character. This ANOVA yielded a significant Age \times Character interaction effect, $F(1, 975) = 5.80, p < .05, \eta^2 = .006$ (see Fig. 2). The interaction indicated that attractiveness ratings varied depending on which character was being evaluated, and on the age of the participant conducting the evaluation, such that older women were less attracted to the high-scoring DT character than were younger women, and were more attracted to the low-scoring DT character than were younger women.

An independent samples *t*-test was employed to assess whether the attractiveness ratings of the old and young participants differed significantly within each character. It was revealed that there was a significant difference in attractiveness ratings of the Dark Triad characters between young ($N = 403$) and old ($N = 97$) participants, $t(498) = -2.21, p < .05, \eta^2 = .01$, however, attractiveness ratings of the low-scoring DT character by young ($N = 399$) and old ($N = 80$) participants did not differ significantly, $t(127) = 1.36, ns$. Thus, the difference between the two age groups' preference for one personality type over the other was more distinct with the high-scoring DT character than the low-scoring DT character.

4. Discussion

The results of the current study were supportive of the hypothesis that a significant interaction effect would be found between the variables of age and character, such that older women would rate the high-scoring DT character as less favorable than younger women, and additionally that older women would rate the low-scoring DT character as more favorable than younger, more fertile women. However, contrary to the prediction that participants' fertility level would influence attractiveness ratings of the characters, a significant interaction effect of fertility level and character type was not found. Thus, the fertility level of older versus younger women did not influence the level of attraction experienced towards either character; this contrasts with previous research which concluded that women's menstrual cycles reportedly influenced attraction to more masculine characteristics,

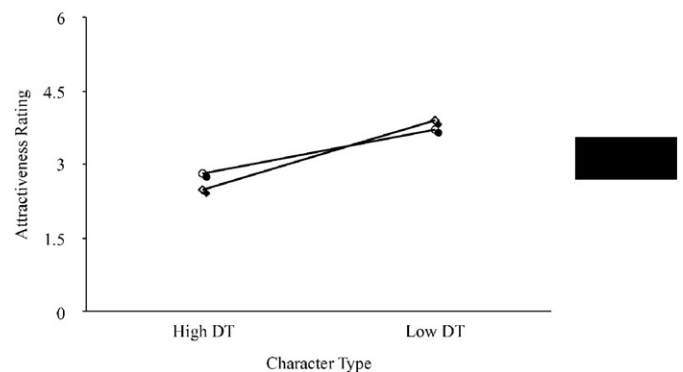


Fig. 2. Significant interaction between attractiveness ratings of the high-scoring DT and low-scoring DT characters in relation to participants' (dichotomized) age.

such as those individuals who are taking testosterone, which could in turn lead to expression of behaviors typical of the Dark Triad personality (Gangestad et al., 2005; Gangestad et al., 2004; Gangestad & Thornhill, 1998).

The manipulation checks—which evaluated the perceived personality traits and hypothetical relationship engagement with the described personality—revealed that the high-scoring DT and low-scoring DT characters were both perceived as intended by participants. However, it should be noted that the low-scoring DT personality was rated as significantly more attractive than the high-scoring DT personality by both younger and older participants. These findings contrast with previous literature which found younger women to exhibit a preference for a high-scoring DT personality (Carter et al., 2014a). It is possible that this difference is linked to the fact that the characters that were presented to participants in prior research included a picture of a male along with the descriptions. This difference could have influenced the ratings in several ways, such as prompting participants to focus more on the picture when making their ratings, or biasing attraction ratings based on individual ideations of what is attractive. Conversely, the picture may have enabled participants to use mental imagery with more ease when imagining an interaction with the described character, thus, inducing a more affectively measurable response.

Another potential reason for participants rating the low-scoring DT personality as more attractive than the high-scoring DT personality in both age groups lies in the composition of the younger sample. Participants who were recruited in this study in the “younger” group were virtually all taken from Western University, Canada. It is suggested here that due to a likely right skew in both IQ scores and maturity levels of this type of sample, these younger participants were not representative of the younger female population as a whole. That is, it is likely that results were confounded with the fact that undergraduate and graduate students will exhibit more informed or mature preferences. Future studies may wish to examine these sampling effects on attraction, fertility, and age studies.

Additionally, Gangestad and Thornhill (1998) reported that women's attraction to typically ‘masculine’ traits increases significantly during the more fertile phases of their menstrual cycles, however, this result was only found in women who did not use birth control pills. Thus, a study conducted with women not on birth control pills or other hormone-altering birth control methods may result in a more supportive outcome of the effects of fertility level on attractiveness ratings of either so-called masculine traits or the DT cluster.

5. Conclusion

This study supported and extended previous literature which suggested that younger women are more highly attracted to the DT personality traits (Carter et al., 2014a; Carter et al., 2014b). Results of the current study lend support to the notion that women's mate preferences change over time, such that as women age, they are less likely to be attracted to the DT personality as a whole. Thus, findings of the current study were

supportive of the prediction that older women would report less attraction to a personality which highly exemplifies the DT traits as compared to younger women; and conversely that older women would report greater attraction to a personality which does not exemplify any prototypical DT characteristics than younger women. However, both age groups rated the low-scoring DT personality as higher in attractiveness than the high-scoring DT personality, possible reasons for which were discussed.

Finally, the fertility level of participants did not significantly influence their ratings. Research that further investigates the factors that contribute to females' mate selection tactics across the aging process is suggested, including short- versus long-term preferences for mates. Also, interpersonal attraction variables might usefully be examined along the female aging process in non-hormone users to determine how age affects the preferences of specific other personality variables.

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