

Research Article

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# Predictive Effects of Women's Adverse Childhood Experiences and Attachment Style upon Romantic Attraction towards Men with Dark Triad Personality Traits

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## Abstract

The purpose of this study was to understand the influence Adverse Childhood Experiences (ACE) and attachment styles (anxious and avoidant) among cis females upon attraction towards individuals with low or high Dark Trait (DT) personality traits. The first assessment in the study measured the adverse childhood experiences of participants while the second assessment in the study measured the level of anxious or avoidant attachment style of participants. After the second assessment, participants were randomly assigned to read one of two DT scenarios that represents either a low DT traits male dating profile ( $n=272$ ) or a high DT traits male dating profile ( $n=268$ ). This research study found there was no relationship between ACE on personal attraction, pursuing a short-term relationship, and pursuing a long-term relationship toward a hypothetical male dating profile with either high Dark Triad traits. This study also found there was a statistically significant positive linear relationship between avoidant attachment style towards men with high Dark Triad traits in terms of attraction, likeliness having a short-term relationship, and likeliness in engaging in a long-term relationship. Moreover, women who had a high anxious attachment style were less likely to be attracted, less likely to pursue a short-term relationship, and less likely to pursue a long-term relationship with a hypothetical man who has high Dark Triad traits. No statistical effects were found with a hypothetical male dating profile with low Dark Triad traits.

## Introduction

In a systematic review of 13 different studies by Cox K & As-saad L [1], 92.19% of the participants who were diagnosed with Antisocial Personality Disorder (ASPD) were married. The percentage of men with ASPD who were married was 49.9% [1]. This is a very large number, considering individuals who are typically

diagnosed with antisocial personality disorder have a "disregard for the rights of others" [2]. In fact, Kim & Capaldi [3], conducted a study with married individuals who were diagnosed with anti-social personality disorder and found that the participants' "own antisocial behavior and depressive symptoms would contribute to

aggression toward a partner and was a consistent, strong predictor for physical and psychological aggression toward a partner over time". The individual with ASPD might have waited to show their "true colors" and aggression. The ASPD qualities most likely came out as the relationship progressed and they felt more secure in the relationship or felt like they got everything out of the relationship that they wanted.

There are various cases that have been made popular by the media that highlight a phenomenon where women are romantically attracted towards men with anti-social personality backgrounds or psychopathic personality tendencies. For example, freelance magazine editor Doreen Lioy started corresponding with Richard Ramirez, the "Night Stalker" directly after his arrest in 1989 [4]. She then went on to marry him seven years later. Shirlee Joyce Book married Kenneth Bianchi, the "Hillside Strangler", in 1989. She had been a pen pal of his and previously tried to become involved with Ted Bundy [4]. Kristin Joan Svege, married and ended up having four children with Charles Denton "Tex" Watson. This occurred while he was serving his life sentence for the murder and involvement with the Sharon Tate murder case. These are just a few examples of women who were romantically attached to individuals after the Dark Triad personalities were revealed.

The Dark Triad (DT) personality consists of personality traits of narcissism, Machiavellianism, and psychopathy [5]. Previous research has indicated an implicit attraction among samples of women towards men who exhibit Dark Triad (DT) personality traits [6]. However, the biggest question not clearly answered in the research literature is regarding the psychological mechanisms of why women may be romantically attracted to men who exhibit such dangerous types of personality traits.

Currently, there is research on women who are romantically attracted to men who exhibit psychopathic traits and the results of that attraction. For example, Watts A, et al. [7], asked research participants to report on their own personality traits and elaborated on the personality traits of their ideal mate for a dating, short-term, and long-term relationships from a list of 70 characteristics drawn from well-validated criteria for psychopathic personality and diagnostic criteria for DSM-5 personality disorders. Watts A, et al. [7], found that psychopathic traits were not more attractive to women in the context of long-term dating and relationships. However, in terms of short-term dating and brief sexual encounters, the women were more attracted to the psychopathic traits, despite the high probability of violence in the short-term encounters [7]. Another interesting finding was that there were many participants who did not explicitly specify if they were attracted to the psychopathic traits. The researchers commented that there may have been some shame involved in consciously (or publicly) admitting attraction towards men with psychopathic traits [7]. In a related study, Brazil KJ & Forth AE [8], researchers studied women's preference toward psychopathic traits in their potential romantic partners. Based on their results, there is preliminary support for the hypothesis that women are more attracted to men who have psychopathic traits. Brazil KJ & Forth AE [8], did point out that there would need to be a more "rigorous test and more diverse sample". In a third study,

women's romantic attraction towards psychopathic traits were analyzed in the very particular environment of speed dating [9]. Although the setting of the study was different, there were similar results to the previous studies discussed. Jauk E, et al. [9], found that men with narcissistic personalities and psychopathic personality traits were found to be favorable for short term romantic relationships by the women evaluating them. Jauk E, et al. [9], then argued that this result was because of the physical attractiveness of the men. The attractiveness of the male overpowered the fear of getting hurt by the individual. Even though all three studies provided essential information, there needs to be more research to examine if women experience a thrill of meeting with potential romantic partners with psychopathic personality traits.

The purpose of the current quantitative research study was to identify if cis gendered females' prior Adverse Childhood Experiences (ACE) [10,11], might have an influence in the attraction towards male dating personality profiles who exhibit Dark Triad personality traits. The current research study is a direct extension of the prior research done by Qureshi C, et al. [6], who developed hypothetical low versus high Dark Triad male personality traits dating profile scenarios and then participants being randomly presented either one of the male personality traits dating profile scenarios. Afterwards, Qureshi C, et al. [6], then asked participants' rating on their attractiveness to the male dating profile they were randomly provided, the participants' ratings on their likeliness to engage in a short term sexual experience with the to the male dating profile they were randomly provided, and , the participants' ratings likeliness to engage in a long-term relationship with the to the male dating profile they were randomly provided.

Focusing back on the current research study, it could be argued that women with high ACE scores have lived in unstable settings or environments [10], thus possibility making them susceptible to feel an implicit romantic attraction towards male personality profiles that may have dominant personality traits such as ones found in Dark Triad traits. Moreover, another purpose of the current quantitative research study was to identify if women with an insecure attachment style (avoidant attachment and anxious attachment) have an increased attraction towards male dating personality profiles who exhibit the Dark Triad personality traits. Previous research has also shown that individuals who have insecure attachment styles, such as avoidant and anxious attachment styles, grew up with an unstable parenting experience [12-14]. As such, individuals with insecure attachment styles might be susceptible to feel an implicit romantic attraction towards males with Dark Personality Traits.

### Research Questions and Hypotheses

The following three research questions guided this current quantitative research study.

**RQ1:** Is there a statistical linear relationship between women's previous Adverse Childhood Experiences (ACE) and attraction to dark triad profile assignments?

H<sub>10</sub>: There is a linear relationship between women's previous Adverse Childhood Experiences (ACE) and attraction to dark triad profile assignments.

H1<sub>a</sub>: There is no linear relationship between women's previous Adverse Childhood Experiences (ACE) and attraction to dark triad profile assignments.

RQ2: Is there a statistical linear relationship between women's attachment-related avoidance (ECR-R) and attraction to dark triad profile assignments?

H2<sub>0</sub>: There is a linear relationship between women's attachment-related avoidance (ECR-R) and attraction to dark triad profile assignments.

H2<sub>a</sub>: There is no linear relationship between women's attachment-related avoidance (ECR R) and attraction to dark triad profile assignments.

RQ3: Is there a statistical linear relationship between women's attachment-related anxiety (ECR-R) and attraction to dark triad profile assignments?

H3<sub>0</sub>: There is a linear relationship between women's attachment-related anxiety (ECR-R) and attraction to dark triad profile assignments.

H3<sub>a</sub>: There is a linear relationship between women's attachment-related anxiety (ECR-R) and attraction to dark triad profile assignments.

Figure 1 below summarizes the key variables examined in the current quantitative research study.

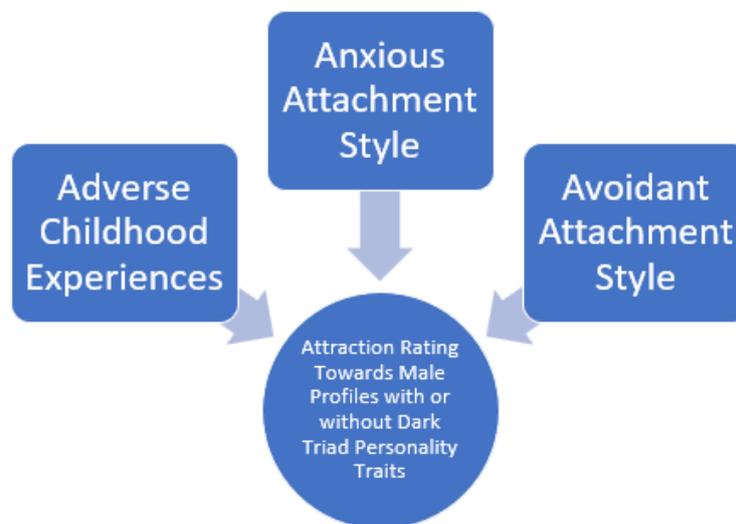


Figure 1: Conceptual Framework

## Methodology

### Population and Sample

Participants ( $n=529$ ) were cis gender females between the ages of 18 to 65 and who have a proficiency with understanding English. The questionnaires targeted cis women living in the United States. However, a few participants identified as residing outside the United States. Men and individuals from the LGBTQ+ community were excluded from this research study because the focus of the research study were cis gender females.

### Instrumentation

Assessments used for this research study gathered information about the cis gendered woman's adverse childhood experiences and attitudes towards being romantically attracted towards certain types of personality traits expressed in a hypothetical dating profile. Each assessment as part of the current research study had a specific rating scale used.

The first assessment used asked participants how many adverse childhood experiences they have experienced in their life. The

second assessment was used to determine the type of attachment style participants possessed. After the second assessment, participants were randomly assigned by the online survey platform to participants to read one of two DT scenarios that represents either a low DT traits male dating profile ( $n= 272$ ) or a high DT traits male dating profile ( $n= 268$ ). After reading one of two DT scenarios via the online survey platform, the participant answered 3 attraction scales. The final 3 attraction rating scales were adapted from the previous research work of Qureshi C, et al. [6]. The attraction rating scales was used in conjunction with either a hypothetical male dating with high Dark Triad personality traits versus a hypothetical male dating with low Dark Triad personality traits.

**Demographic Questionnaire:** A demographic questionnaire was used to collect general background information about participants such as their age, gender, relationship status (single, married, divorced, widowed, or in a relationship), ethnicity (African American, Hispanic/Latinx, Caucasian, Asian, Native American, other) and geographic region (state within the United States or outside the United States).

**Adverse Childhood Experiences (ACE-R):** The instrument was developed as a retrospective assessment to measure exposure to several types of childhood trauma. The original 10-item ACE has been correlated with several adult health problems including heart disease, cancer, diabetes, depression, and found to be valid and reliable measurement [11]. The revised 14-item adverse childhood experiences (ACE-R) was used in this study to measure participant's exposure to childhood victimization and adversity. The instrument was administered in the form of yes/no questions, participants responses were coded as no=0 and yes=1. Total raw ACE-R score ranges from 0 to 14. Where a score of zero (0) indicates a lack of adverse childhood experiences and a score of 14 would indicate extreme exposure to childhood adversity. Per instrument instructions, the average (mean) of all 14 items was computed.

**Experience in Close Relationships-Revised (ECR-R):** To measure participant levels of the attachment-related avoidance and anxiety, the revised Experience in Close Relationships (ECR-R) Fraley RC, et al. [15], instrument was utilized. The ECR-R is a 36-item self-reported questionnaire containing 18 items for avoidance and 18 items for anxiety. Fraley, Waller, and Brennan (2000) reported an internal consistency reliability, via Cronbach's alpha, to be .90 or higher for the two ECR-R scales for anxiety and avoidance. Participants are asked to respond to all thirty-six items using a 7-point Likert scale ranging from 1 = Strongly disagree to 7 = Strongly agree. A total score for both the ECR-R attachment-related avoidance and attachment-related anxiety sub-scales were calculated by recoding then averaging the 18-items associated with each sub-scale, reflecting a total score for each of the two dysfunctional attachment patterns.

**Dark Triad (DT) Conditions:** Two Dark Triad (DT) personality trait male dating profiles were adapted for this study based on the prior scenario-based work of Qureshi, Harris, and Atkinson [6]. The current study randomly assigned all participants ( $n = 529$ ) to read one of two DT scenarios developed to represent either a low DT traits male dating profile ( $n = 272$ ) and a high DT traits male dating profile ( $n = 268$ ).

**Attraction Rating Scales after Reading the Hypothetical Male Dating Profiles:** After the participants were presented with either the low or high DT male dating profile scenario, all participants were asked to rate the hypothetical male in the scenario based on (1) participants' attractiveness to the dating profile they were provided, (2) participants' likeliness to engage in a short term sexual experience with the dating profile they were provided, and (3) participants' likeliness to engage in a long-term relationship with the dating profile they were provided. The Likert rating scales for each of these 3 items ranged from 1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Somewhat Agree, 5 Agree, and 6=Strongly Agree.

## Procedures

The study used Amazon Mechanical Turk to recruit participants for the research study while the secure online survey platform of Survey Monkey was where the participants read the related information relevant to the written profiles of potential male romantic

partners and answer the online survey questions. Each participant recruited via Amazon Mechanical Turk were sent directly to a secure and confidential Survey Monkey online survey website to complete participation in the study to allow for their identity to be kept confidential.

On the first page of the Survey Monkey online survey platform, the participants were asked to review an informed consent document. They were given the opportunity to opt out of the study at this point if they no longer wish to be a part of it. They were not penalized for not wanting to participate or discontinuing participation in the research study. Once the participants read and understood the informed consent document, they clicked the bottom of the informed consent document to proceed with the online survey. Before the assessments used in this research study, there was a demographics section asking the participant to identify their age, ethnicity, relationship status, and state of residence.

After completing the ACE and ECR-R validated assessments, the final step for the participants was each of them were provided a dating profile of a hypothetical male with either Low Dark Triad traits or a High Dark Triad trait [6]. The exposure to one of these two profiles for each participant was provided at random assignment via Survey Monkey. After the participants read the hypothetical dating profile vignette provided to them, they were asked to evaluate their willingness to engage in hypothetical romantic interactions via three different Likert Scales. Each Likert Scale were measured by 1 (Strongly Disagree) to 6 (Strongly Agree). The three scales assessed (1) participants attractiveness to the dating profile they were provided, (2) their likeliness to engage in a short-term sexual experience with the individual, and (3) likeliness to engage in a long-term relationship with the individual. Participation in this study was about 10-15 minutes. After completing the online survey, each participant who signed up through Amazon Mechanical Turk were rewarded with a \$1.00 Amazon credit, via Amazon Mechanical Turk as compensation for participating in the research study.

## Results

### Descriptive Statistics

The following section outlines the demographic data collected in this study.

**Age of Participants:** All respondents reported their age and the results are detailed in Table 1 below; 65.7% of participants reported being in their twenties and 21.3% of participants were thirty years of age or older. The average age of the participants was 25.74 years old with a standard deviation of 6.15.

**Gender of Participants:** All participants were cis female.

**Relationship Status:** All respondents reported their current relationship status, and the results are detailed in Table 2 below; 62.3% of participants reported as either married or in a relationship and 36.2% of participants reported being single or widowed.

**Ethnicity:** All respondents reported their ethnicity, and the results are detailed in Table 3 below; 73.8% of participants reported as Caucasian and 18.5% of participants reported being Hispanic/Latinx.

**Geographic Region:** All respondents reported their current geographic region, and the results are detailed in Table 4 below; 36.1% of participants reported being situated in the Western Unit-

ed States and 1.4% of participants reported being outside the United States at the time of the study.

**Table 1:** Age of Participants.

Age	Frequency	Percentage	Cumulative Percentage
Teens	64	11.8	11.7
Twenties	355	65.7	78.1
Thirties	102	18.8	96.8
Forties	14	2.5	99.2
Fifties	5	0.9	100
Total	540	100	

**Table 2:** Participant Relationship Status.

Relationship Status	Frequency	Percentage	Cumulative Percentage
Single	195	36.1	35.5
Married	96	17.7	16.6
Divorced	13	2.4	2.6
Widowed	1	0.1	0.4
In a relationship	241	44.6	44.8
Total	540	100	

**Table 3:** Participant Ethnicity.

Ethnicity	Frequency	Percentage	Cumulative Percentage
African American	24	4.4	4.5
Hispanic/Latinx	100	18.5	20
Caucasian	399	73.8	70.7
Asian	39	7.2	96.4
Native American	14	2.5	100
Other	16	2.9	100
Total	540	100	

**Table 4:** Participant Geographic Regions.

Geographic Region	Frequency	Percentage	Cumulative Percentage
Western US	195	36.1	35.9
Midwest US	90	16.6	52.4
South US	145	26.8	79.8
Northeast US	102	18.8	98.7
Non-US	8	1.4	100
Total	540	100	

## Inferential Tests

A series of multiple linear regressions were used to investigate the relationships between adverse childhood experiences, attachment style (avoidance or anxiety) upon the (1) participants' attractiveness to the dating profile they were provided, (2) participants' likelihood to engage in a short term sexual experience with the individual, and (3) participants' likelihood to engage in a long-term relationship with the individual as grouped based if either the par-

ticipant read the high Dark Triad personality trait male dating profile scenario or the participant read the low Dark Triad personality trait male dating profile scenario. Table 5 summarizes the multiple regression analyses ran for the current research study.

## High Dark Triad Vignette-Attraction

When looking at the dependent variable of attraction (question: "I find this individual very attractive"), the predictor variables

are the scores on the ACE and the scores on the ECR-R (Avoidant and Anxiety). There was significant mixed effect based on the multiple regression analysis between the predictor variables of ACE and ECR scores upon the attraction toward an individual with high dark triad traits,  $F(3,266) = 8.186, p < .001$ . The overall R-squared value of 0.085 reflects that 8.5% of variance on attraction to a hypothetical male with Dark Triad traits is explained by the combination between an individual's ACE score and attachment style scores.

Upon closer inspection, a significant positive effect of the avoidant attachment style and attraction toward an individual with high dark triad traits was found,  $F(3,266) = 3.503, p < .001$ . Alternatively, a significant negative effect of the anxious attachment style and attraction toward an individual with the high dark triad traits was found,  $F(3,266) = -2.286, p = .023$ . However, the effect of the ACE score on attraction toward an individual with high dark triad traits was not significant,  $F(3,266) = 1.792, p = .074$ . A summary of this multiple regression analysis is found on Table 6.

**Table 5:** Summary of the multiple regression analyses.

	High Dark Triad personality Traits	Low Dark Triad personality Traits
<b>Participants' attractiveness to the dating profile they were provided (Dependent Variable)</b>	Adverse Childhood (ACE) experiences (Predictor variable) Avoidant Attachment (ECR-R) (Predictor variable) Anxious Attachment (ECR-R) (Predictor variable)	Adverse Childhood (ACE) experiences (Predictor variable) Avoidant Attachment (ECR-R) (Predictor variable) Anxious Attachment (ECR-R) (Predictor variable)
<b>Participants' likeliness to engage in a short-term sexual experience with the individual (Dependent Variable)</b>	Adverse Childhood (ACE) experiences (Predictor variable) Avoidant Attachment (ECR-R) (Predictor variable) Anxious Attachment (ECR-R) (Predictor variable)	Adverse Childhood (ACE) experiences (Predictor variable) Avoidant Attachment (ECR-R) (Predictor variable) Anxious Attachment (ECR-R) (Predictor variable)
<b>Participants' likeliness to engage in a long-term relationship with the individual (Dependent Variable)</b>	Adverse Childhood (ACE) experiences (Predictor variable) Avoidant Attachment (ECR-R) (Predictor variable) Anxious Attachment (ECR-R) (Predictor variable)	Adverse Childhood (ACE) experiences (Predictor variable) Avoidant Attachment (ECR-R) (Predictor variable) Anxious Attachment (ECR-R) (Predictor variable)

**Table 6:** Summary of RQ1 Multiple Regression Analysis – High Condition.

Variable	B	SE <sub>B</sub>	β
Intercept	2.742	0.796	
ACE_SCORE	0.056	0.031	0.111
TOTAL_ANXIETY	-0.009	0.004	-0.148*
TOTAL_AVOIDANCE	0.031	0.009	0.219**

Note: Dependent variable = Attraction; ACE score = Adverse childhood experience measure; Avoidance score = Attachment-related avoidance sub-scale of experience in close relationships measure; Anxiety score = Attachment-related anxiety sub-scale of experience in close relationships measure; B = slope coefficients; SE<sub>B</sub> = Standard error; β = Standardized beta; \* =  $p < .05$ ; \*\* =  $p < .005$ .

### Low Dark Triad Vignette-Attraction

There was no statistically significant effect based on the multiple regression analysis between the predictor variables of ACE and ECR scores upon the attraction toward an individual with low dark triad traits,  $F(3, 270) = 1.429, p = .235$ . The overall R-squared value of 0.016 reflects that 1.6% of variance on attraction to a hypothetical male with Dark Triad traits is explained by the combination between an individual's ACE score and attachment style scores.

### High Dark Triad Vignette-Short- Term Relationship

When looking at the dependent variable of attraction (question: "I would have a sexual experience (short-term) with this individual"), the predictor variables are the score on the ACE and scores on the ECR-R (Avoidant and Anxiety). There was significant mixed effect based on the multiple regression analysis between the predictor variables of ACE and ECR scores upon wanting a short-term

relationship with an individual with high dark triad traits,  $F(3,266) = 8.502, p < .001$ . The overall R-squared value of 0.088 reflects that 8.8% of variance on attraction to a hypothetical male with Dark Triad traits is explained by the combination between an individual's ACE score and attachment style scores.

Upon closer inspection, a significant positive effect of the avoidant attachment style and if they would have a short-term relationship with an individual with high dark triad traits was found,  $F(3,266) = 3.386, p < .001$ . On the other hand, there was a significant negative effect of the anxious attachment style and if they would have a short-term relationship with an individual with the high dark triad trait was found,  $F(3, 266) = -2.339, p = .020$ . In contrast, there was not a significant relationship between the ACE score and wanting a short-term relationship with an individual who has high dark triad traits,  $F(3, 266) = -.024, p = .981$ . A summary of this multiple regression analysis is found on Table 7.

**Table 7:** Summary of RQ2 Multiple Regression Analysis – High Condition.

Variable	<i>B</i>	SE <sub>B</sub>	$\beta$
Intercept	2.524	0.969	
ACE_SCORE	-0.001	0.038	-0.001
TOTAL_ANXIETY	-0.011	0.005	-0.151*
TOTAL_AVOIDANCE	0.036	0.011	0.211**

**Note:** Dependent variable = Short-term sex; ACE score = Adverse childhood experience measure; Avoidance score = Attachment-related avoidance sub-scale of experience in close relationships measure; Anxiety score = Attachment-related anxiety sub-scale of experience in close relationships measure; *B* = slope coefficients; SE<sub>B</sub> = Standard error;  $\beta$  = Standardized beta; \* =  $p < .05$ ; \*\* =  $p < .005$ .

### Low Dark Triad Vignette-Short-Term Relationship

When looking at the dependent variable of attraction (question: “I would have a sexual experience (short-term) with this individual”), the predictor variables are the score on the ACE and scores on the ECR-R (Avoidant and Anxiety). There was no statistically significant effect based on the multiple regression analysis between the predictor variables of ACE and ECR scores upon wanting a short-term relationship with an individual with low dark triad traits,  $F(3,270) = 2.444, p=.064$ . The overall R-squared value of 0.027 reflects that 2.7% of variance on attraction to a hypothetical male with Dark Triad traits is explained by the combination between an individual’s ACE score and attachment style score.

### High Dark Triad Vignette- Long-Term Relationship

When looking at the dependent variable of attraction (question: “I would have a long-term relationship with this individual.”), the predictor variables are the score on the ACE and scores on the ECR-R (Avoidant and Anxiety). There was a statistically significant

mixed effect based on the multiple regression analysis between the predictor variables of ACE and ECR scores upon wanting a long-term relationship with an individual with high dark triad traits,  $F(3,266) = 5.567, p=.001$ . The overall R-squared value of 0.059 reflects that 5.9% of variance on attraction to a hypothetical male with Dark Triad traits is explained by the combination between an individual’s ACE score and attachment style score.

Upon further inspection, a significant positive effect of the avoidant attachment style and wanting a long-term relationship toward an individual with high dark triad traits was found,  $F(3, 266) = 2.415, p=0.016$ . Alternatively, a there was a significant negative effect of the anxious attachment style on wanting a long-term relationship with an individual with the high dark triad trait was found,  $F(3,266) = -2.398, p=.017$ . However, the effect of the ACE score on wanting a long-term relationship with an individual who has high dark triad traits was not significant,  $F(3, 264) = .610, p=.542$ . A summary of this multiple regression analysis is found on Table 8.

**Table 8:** Summary of RQ3 Multiple Regression Analysis – High Condition.

Variable	<i>B</i>	SE <sub>B</sub>	$\beta$
Intercept	4.095	0.809	
ACE_SCORE	0.020	0.032	0.038
TOTAL_ANXIETY	-0.009	0.004	-0.157*
TOTAL_AVOIDANCE	0.021	0.009	0.153*

**Note:** Dependent variable = Long-term relationship; ACE score = Adverse childhood experience measure; Avoidance score = Attachment-related avoidance sub-scale of experience in close relationships measure; Anxiety score = Attachment-related anxiety sub-scale of experience in close relationships measure; *B* = slope coefficients; SE<sub>B</sub> = Standard error;  $\beta$  = Standardized beta; \* =  $p < .05$ ; \*\* =  $p < .005$ .

### Low Dark Triad Vignette-Long-Term Relationship

When looking at the dependent variable of attraction (question: “I would have a long-term relationship with this individual.”), the predictor variables are the score on the ACE and scores on the ECR-R (Avoidant and Anxiety). There was no statistically significant effect based on the multiple regression analysis between the predictor variables of ACE and ECR scores upon wanting a long-term relationship with an individual with low dark triad traits,  $F(3, 270) = 0.913, p=.435$ . The overall R-squared value of 0.010 reflects that 1.0% of variance on attraction to a hypothetical male with Dark Triad traits is explained by the combination between an individual’s ACE score and attachment style score.

### Discussion

The purpose of this study was to understand the influence adverse childhood experiences and attachment styles (anxious and avoidant attachment) upon attraction to individuals with low or high Dark Trait personality traits. Previous research [6,16,17], has indicated women have an attraction to men who seem to exhibit high Dark Trait personality traits. Based on this prior literature, there was an expectation that avoidant attachment would be less attracted to dating profile with individuals who have high Dark Triad traits (versus low Dark Triad traits) because these individuals are less interested in entering relationships [14].

Surprisingly, this research study found there was no relationship between adverse childhood experiences on personal attraction, short-term relationship, and long-term relationship toward a hypothetical male dating profile with high or low Dark Triad traits. On the other hand, this study found there was a statistically significant relationship between avoidant attachment style and attraction regarding men with high Dark Triad traits. Women who had an avoidant attachment style were more likely attracted to a hypothetical male with who had high Dark Triad traits ( $p=0.001$ ). In contrast, women who had anxiety attachment are less likely to be attracted to a hypothetical man who had Dark Triad traits ( $p=0.023$ ).

Regarding short term relationships, women who had an avoidant attachment style were more likely to want a short-term relationship with those with who had high Dark Triad traits ( $p=0.001$ ). Women who have a higher anxiety attachment would be less likely to want a short-term relationship with a hypothetical man who had high Dark Triad traits ( $p=0.020$ ). Regarding long term relationships, women with avoidant attachment style were more likely to engage in a long-term relationship with hypothetical men who had high Dark Triad traits ( $p=0.016$ ). Moreover, women who had a higher anxious attachment style were less likely to engage in a long-term relationship with a hypothetical man who has high Dark Triad traits ( $p=0.017$ ).

Based on this study, it is important to understand how an individual's attachment style can have influence on a potential unhealthy romantic relationship in the future. If cis gendered female in this research study having an avoidant attachment, they will be more likely to might be in an might be predisposed in seeking out an unhealthy relationship with a cis male with high Dark Triad personality traits.

When an individual has an avoidant attachment style, their parents or primary caregiver were not emotionally or physically present during childhood and this made the individual to self soothe for comfort due to the inconsistent presence their parents or primary caregiver in their early childhood development [14]. As such, the results of this research study seems to suggest that a man with high Dark Triad personality traits can seem dependable and exciting because of how they portray themselves in the beginning of the relationship. The women who are attracted to them start might repeat their family history and relationship style they had with their parents or primary caregiver. These women are attracted to what they cannot have which might be a cis male with high Dark Triad traits. These romantic relationships will never work out successfully because of how manipulative and cold the Dark Triad individual can be towards their romantic partners in a long-term relationship. Therefore, the clinical psychologist or mental health counsellor's job in part is to show these women with an avoidant attachment style what the relationship truly looks like with a cis male with high Dark Triad traits. In therapy sessions, the clinician or counsellor can help the individuals see the whole person and their flaws instead of what they want to see in their partner. Therefore, therapy with this individual could be a psycho-educational process. While processing feelings of the clients are extremely important, provid-

ing the clients with education on the cycle of pathological love can be just as imperative.

## Conclusion

Overall, this study showed that attachment styles among cis women does influence whether or not they are attracted to a cis man with high Dark Triad personality traits. In contrast, prior adverse childhood experiences did not have any impact on the attraction towards cis men with high Dark Triad personality traits. Mass media has started to bring light to cis male individuals who have Dark Triad traits. This can be seen through true crime books, podcasts, and movies on streaming services. However, there is not a lot of emphasis on highlighting the academic research and consequences of women being attracted towards cis male individuals who have Dark Triad traits. If psychoeducation programs or interventions will be developed by clinical psychologists and mental health professionals focusing on the dangers of entering in relationships with individuals with high Dark Triad personality traits, these should be made for wide public access to help counteract the seductive media portrayal of high Dark Triad personality styles.

## Acknowledgement

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## Conflict of interest

None of the authors have a conflict of interest.

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