

## Exploring Sociosexuality: The Role of Dark Tetrad in Predicting Casual Sex Attitudes among Indonesian Adults

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### Abstract

Attitude toward casual sex can lead to various risky behaviors and therefore, needs to be further explored. This study was conducted in Indonesia, where religious and social norms are strongly against premarital sex, so the findings on the role of the Dark Tetrad may differ from the Western context. This study examined the role of the dark tetrad personality in predicting attitudes toward casual sex among 733 adults in Indonesia ( $M_{age} = 28.7$ ,  $SD = 5.47$ , 50.1% male; 59.8% married), controlling for demographic factors (i.e., age, biological sex, and marital status). Hierarchical regression analysis revealed that psychopathy ( $\beta = 0.160$ ) and sadism ( $\beta = 0.175$ ) showed small to moderate effects in predicting permissive attitudes, accounting for an additional 7.9% variance after controlling for demographic factors. These findings highlight the psychological dimensions of permissive attitudes toward casual sex and demonstrate that dark personality traits have stronger predictive roles than demographic factors.

**Keywords:** attitude toward casual sex, dark tetrad, trait sadism, trait psychopathy, gender, marital status

### Abstrak

Sikap terhadap seks kasual dapat berkontribusi pada berbagai perilaku berisiko, sehingga perlu ditelaah lebih lanjut. Studi ini dilakukan di Indonesia, dimana praktik seks kasual bertentangan dengan norma agama dan sosial, sehingga temuan mengenai peran Dark Tetrad mungkin berbeda dengan konteks Barat. Studi ini mengkaji peran kepribadian dark tetrad dalam memprediksi sikap terhadap seks kasual pada 733 orang dewasa di Indonesia ( $M_{age} = 28.7$ ,  $SD = 5.47$ , 50.1% laki-laki; 59.8% menikah), dengan mempertimbangkan faktor demografis (usia, jenis kelamin, dan status pernikahan). Analisis regresi hirarkis menunjukkan bahwa trait psikopati ( $\beta = .160$ ) dan sadisme ( $\beta = .175$ ) (signifikan memprediksi sikap permisif terhadap seks kasual dengan tambahan 7,9% varians setelah mengontrol faktor demografi.. Temuan ini menyoroti dimensi psikologis dari sikap permisif terhadap seks kasual dan menunjukkan bahwa ciri kepribadian gelap lebih kuat memprediksi dibanding faktor demografis.

**Keywords:** sikap terhadap seks kasual, dark tetrad, trait sadism, trait psychopathy, jenis kelamin, status pernikahan

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## INTRODUCTION

Casual sex, defined as sexual activity occurring outside of committed romantic relationships, has become increasingly common, particularly among young adults (Vrangalova & Ong, 2014). It falls under the broader construct of sociosexuality, which refers to individual differences (behavior, attitude, and desire) in the willingness to engage in such encounters (Fernández Del Río et al., 2019; Kinsey et al., 1948; Penke & Asendorpf, 2008). Sociosexuality helps to explain short-term mating strategies, which are often perceived by some individuals as a relationship that is less emotionally demanding and easier to navigate (Jonason et al., 2015). Besides sociosexuality, casual sex is also known as or referred to as hookup culture (Monto & Carey, 2014), which captures not only the non-committed relationship but also the element of promiscuity: engaging with multiple or changing partners.

Although often associated with Western liberal societies, casual sex also occurs in more conservative contexts, such as Indonesia, where religious and cultural norms strongly disapprove of premarital sexual behavior (O'Donnell et al., 2020). While traditionally framed as a concern for single individuals, issues surrounding casual sex in Indonesia also involve committed partners, such as extramarital affairs, raising further questions about underlying psychological factors and shifting sexual norms. Casual sex can be categorized as a form of risky behavior due to its potential negative consequences, including unwanted pregnancies, sexually transmitted infections (STIs), and adverse mental health outcomes (Fielder et al., 2013; McKeen et al., 2022). Previous studies have also reported that higher permissiveness toward casual sex attitudes correlates with both mate poaching (Craib et al., 2024) and wrongful moral judgments (Moore et al., 2020). These moral judgment patterns manifest as tendencies toward deception, acting in a wrongful way due to convenience, failure (to act morally), body “violations” including some types of sexual behavior, and disgust (e.g., poor hygiene). An exploration of the antecedents of this behavior is crucial for developing more targeted and effective prevention strategies for individuals at high risk.

As mentioned before, investigating sociosexuality involves measuring not only behavior but also desire and attitudes toward casual sex. Attitudes toward casual sex have been identified as critical antecedents of actual engagement in such behavior. Individuals with more permissive sexual attitudes tend to report greater frequency of casual sex, short-term mating, and sexual risk-taking (Penke & Asendorpf, 2008; Rodrigues et al., 2017). Demographic factors such as age, gender, and marital status have also been found to shape sexual attitudes. There are mixed findings regarding the influence of gender. Some studies have found that men exhibit more positive attitudes toward casual sex (Freyth & Jonason, 2023; Jonason et al., 2015; Semenyna et al., 2024; Urganci et al., 2025; Valentova et al., 2020), supported by the existence of a double standard, in which men are more socially advantaged in the context of casual sex (England & Bearak, 2014), while others have identified women as stronger predictors of such attitudes (Fernández Del Río et al., 2019). Still, other studies have reported no significant role of gender in predicting attitudes toward casual sex (Rodrigues et al., 2017). Findings concerning age also vary: some studies suggest that younger individuals tend to hold more permissive attitudes (Jannani & Divya, 2024), in contrast to the findings reported by Fernández Del Río et al. (2019) that increasing age predicts more permissive attitudes, whereas others report no significant association between age and attitudes, which may be explained by



the idea that once attitudes are formed, they tend to remain stable over time (Río et al., 2019). Moreover, individuals with secure attachment styles are generally engaged in serious romantic relationships and tend to report lower levels of casual sex engagement (Jonason et al., 2015), aligning with the finding that not being involved in a current relationship predicted higher scores in casual sex attitude, suggesting that married individuals are more likely to hold negative attitudes toward casual sex.

Río et al. (2019) reported that sexual minority groups predict higher permissiveness toward casual sex attitudes. Previous studies have also found differences in casual sex attitudes, with bisexual samples exhibiting greater permissiveness than heterosexual or mostly heterosexual groups (Semenyna et al., 2018), among both male and female participants (Semenyna et al., 2024). These findings on differing casual sex attitudes among sexual minorities were further corroborated by Bártová et al. (2020), who observed higher permissiveness in individuals with homosexual orientations, regardless of gender.

Personality traits and individual differences play a crucial role in understanding various aspects of human sexuality (Jonason et al., 2015). The Dark Tetrad of personality (Paulhus et al., 2021), a recent extension of the Dark Triad model (Paulhus & Williams, 2002), comprises four socially aversive traits: machiavellianism, narcissism, psychopathy, and sadism. These traits have been linked to a wide range of intersexual and intrasexual behaviors (Jonason et al., 2014). All four traits are associated with antisocial tendencies, characterized by emotional cruelty, lack of empathy, and exploitation, each expressing these elements in distinct ways (Paulhus et al., 2021). Machiavellianism is marked by a tendency to manipulate others; narcissism is defined by a sense of superiority and entitlement; psychopathy involves emotional callousness and lack of self-awareness; and sadism is characterized by the enjoyment of others' suffering.

Casual sex, as part of a short-term mating orientation, has also been positively associated with all dark personality traits (Jonason et al., 2012; Tsoukas & March, 2018). Psychopathy is specifically associated not only with attitudes toward casual sex, but also with behavior and desire (Río et al., 2019). Other studies have also found that sadism (and psychopathy) is associated with casual sex, likely due to its link with impulsivity. Narcissism is associated with unrestricted sexual attitudes, possibly due to an inflated perception of one's ability to attract partners (Jonason et al., 2009). Meanwhile, machiavellianism may involve the use of manipulative strategies to achieve instrumental goals, such as sex, even when those actions violate moral norms (Jones & Paulhus, 2011). Accordingly, we hypothesize that each of the Dark Tetrad traits will serve as stronger positive predictors of attitudes toward casual sex than demographic factors.

Although several studies report significant correlations between attitudes toward casual sex and all three Dark Triad personality traits (Haddad & Angman, 2016; Semenyna et al., 2018; Rico-Bordera et al., 2024; Urganci et al., 2025), as well as with their total composite scores (Haddad & Angman, 2016; Semenyna et al., 2018) in both male and female samples (Freyth & Jonason, 2023), other studies (Nascimento et al., 2018; Valentova et al., 2020) found no significant association between casual sex attitudes and these dark personality traits. Garcia (2020) conducted a profiling study by clustering dark personality profiles, where each cluster represented varying degrees of the three Dark Triad traits in different combinations. Generally, the study found that clusters



with a higher number of elevated dark traits tended to consist of individuals exhibiting more permissive attitudes toward casual sex.

Conversely, other studies have reported mixed findings. Fernández Del Río et al. (2019) revealed significant positive correlations between attitudes toward casual sex and narcissism, psychopathy, and sadism traits, but not with machiavellianism. Moore et al. (2020) found that casual sex attitudes correlated significantly with machiavellianism and narcissism traits, but only among female participants, with no such correlations observed in males. Another study reported significant correlations between casual sex attitudes and psychopathy traits in both male and female samples. These findings contrast with those of Freyth & Jonason (2023), who found correlations between casual sex attitudes and both machiavellianism and narcissism traits across genders, but only observed a correlation with psychopathy in female participants. The findings suggest that the interplay of multiple dark traits, rather than isolated traits, may better predict permissive sexual attitudes.

In Southeast Asian societies such as Indonesia, where religiosity and gender norms are prominent, the interplay between individual dark traits and broader socio-cultural values remains poorly understood. While most existing studies on the Dark Tetrad and sexuality have been conducted in Western populations, little is known about how these dynamics operate in non-Western, value-laden settings like Indonesia.

By examining the predictive role of all four dark personality traits comprising the Dark Tetrad, this study replicates and extends the work of Urganci et al. (2025) which reported findings from hierarchical regression analysis that only psychopathy significantly predicted attitudes toward casual sex after controlling for demographic factors (age, romantic relationship status, and gender). We predict findings that differ from previous studies due to distinct social and cultural norms characterizing our study population. These cross-cultural differences highlight the need for population-specific investigations of personality-attitude relationships, particularly in non-Western contexts.

This study aims to examine the extent to which each Dark Tetrad trait independently predicts attitudes toward casual sex in an Indonesian adult sample. We use hierarchical regression analysis, entering demographic factors (age, gender, and marital status) in the first step, followed by the Dark Tetrad traits in the second step. Additionally, this research seeks to investigate the demographic correlates of the Dark Tetrad traits and sexual behavior, an area that has received limited attention in the literature in Indonesia.

## **METHOD**

### **Participants**

A total of 733 participants aged 18 to 40 years ( $M_{age} = 28.7$ ,  $SD = 5.47$ ) took part in the study after passing an attention check. Of these, 50.1% were male, 59.8% were married, and 59.2% reported having at least a Senior High School or equivalent level of education. Only individuals with a minimum of senior high school education were included to ensure sufficient literacy and comprehension. In addition, only self-identified heterosexual participants were included, to focus on a context shaped by Indonesia's strict religious and social norms that may influence sociosexual tendencies.



## Procedure

This study was approved by the Ethics Committee of the Faculty of Psychology, Universitas Indonesia (No. 191/FPsi.Komite Etik/PDP.04.00/2024). Data collection was conducted using a self-report questionnaire administered in digital form via Microsoft Forms. Informed consent was obtained online prior to participation. Participation was entirely voluntary, and participants could withdraw at any time without any consequences. Participants were recruited via convenience sampling through social media platforms (Facebook, Instagram, TikTok), with a randomly assigned e-wallet reward as an incentive. The survey was open-ended and conducted over time, with a completion time of approximately 10 minutes before the end of December 2024. To minimize voluntary participation bias, the invitation was widely distributed, and demographic screening ensured that the inclusion criteria were met. An attention check using a Direct Instruction Check item was included to assess whether participants read instructions carefully; only those who followed the prompt correctly were included in the analysis.

## Measures

**Demographic Information.** Participants were asked to provide demographic information, including age, gender, marital status, sexual orientation and education.

**Attitude toward Casual Sex.** Attitudes toward casual sex were measured using 2 items adapted from the attitude subscale of the Revised Sociosexual Orientation Inventory (SOI-R; Penke & Asendorpf, 2008) that measured respondents' views on non-marital sex and partner switching. Although brief, these items were chosen for their high relevance to the local context and had an adequate reliability coefficient ( $\alpha = 0.725$ ). Each item was rated on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores indicated more favorable attitudes toward casual sex.

As previously explained, this study utilized only two of the three items from the attitude subscale of the SOI-R (Penke & Asendorpf, 2008) to assess attitudes toward casual sex. This decision was made because the content of the excluded item contains the term "love" (Sex without love is OK), which carries multiple and culturally sensitive interpretations in Indonesian society. In cultures with strict religious and social norms, such as Indonesia, "love" in the context of sexual relationships is not uniformly understood. It may refer to romantic attachment, emotional commitment, marital legitimacy, or even religiously sanctioned relationships. This semantic ambiguity increases the risk of inconsistent interpretations among respondents, potentially compromising the clarity and validity of the construct being measured. Moreover, the explicit moral framing of the item, coupled with the term "love", may prompt respondents to rely on normative beliefs rather than their actual personal attitudes toward casual sex. To maintain conceptual clarity, minimize interpretive bias, and preserve the cultural sensitivity of the measure within the Indonesian context, the item was excluded from this study.

**Dark tetrad.** The Short Dark Tetrad (Paulhus et al., 2021), adapted into Indonesian (Asih et al., In Press), was used to measure the four dark personality traits. This instrument consists of 28 items assessing four dark personality traits, with each subscale represented by 7 items. Participants rated the items on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha for each dimension was as follows: Machiavellianism = 0.659, Narcissism = 0.875, Psychopathy = 0.835, and Sadism =



0.871. Confirmatory factor analysis indicated a good model fit [ $\chi^2$  (df = 344) = 2399.342,  $p < 0.001$ , CFI = 0.88, TLI = 0.87, SRMR = 0.06, RMSEA = 0.064, 90% CI = 0.061–0.067]. Considering that the reliability index of the machiavellianism subscale was relatively lower than the other three subscales, it is important to note that Cronbach's alpha values ranging from 0.60 to 0.70 are generally deemed acceptable for exploratory studies (Hair et al., 2019).

The adaptation study and psychometric evaluation of the SD4 scale Asih et al. (In Press) began with correspondence with the original developers of the SD4, Paulhus et al. (2021), to obtain permission for scale adaptation. The process continued with the translation of the scale into Indonesian, involving a certified professional translation agency. Additionally, a university lecturer served as an expert translator to independently translate the scale, resulting in two translation versions. A synthesis of these two versions was carried out through a focus group discussion involving three postgraduate psychology students and a psychology lecturer, resulting in a final translation draft that was subsequently subjected to back-translation. The back-translated version was then compared with the original English version to ensure consistency in meaning and content of the items. The finalized Indonesian version of the SD4 scale was then administered to 1,340 participants aged 18 to 40 years ( $M = 29.1$ ;  $SD = 5.31$ ). Internal reliability and construct validity analyses were subsequently conducted, as previously described.

### Data Analysis

Data were analyzed using SPSS version 27.0. First, data cleaning was conducted by applying the attention check criteria, and no missing data were involved in the analysis. Secondly, regression assumptions were tested to ensure the validity of the analysis. The data met the criteria for multicollinearity ( $VIF < 10$  and  $Tolerance > 0.1$ ) but violated the assumptions of normality ( $p < 0.05$ ) and heteroscedasticity, as indicated by a non-random pattern in the residual scatterplot. Therefore, a bootstrap procedure with 5,000 resamples was conducted to obtain more robust parameter estimates. Descriptive statistics and  $t$ -tests were then conducted, followed by a multiple regression analysis in two steps: the first step examined the effects of demographic variables (age, gender, and marital status) on attitudes toward casual sex, and the second step assessed the influence of machiavellianism, narcissism, psychopathy, and sadism on attitude toward casual sex.

## RESULT AND DISCUSSION

This study included 733 participants, aged between 18 and 40 years, with a relatively balanced demographic distribution: 50.1% identified as male, 59.8% were married, and 59.2% had completed senior high school or an equivalent level of education. The demographic characteristics of the participants are reported in Table 1.



**Table 1**  
 Demographic Characteristics

Characteristics	Total	
	n	(%)
<b>Biological Sex</b>		
Male	367	50.1%
Female	366	49.9%
<b>Age</b>		
18–20	46	6.2%
21–25	182	24.8%
26–30	258	35.2%
31–35	153	20.9%
36–40	94	12.8%
<b>Marital Status</b>		
Single	295	40.2%
Married	438	59.8
<b>Education</b>		
Senior High School or Equivalent	434	59.2%
D1-D4 or S1	273	37.3%
Professional Education	6	0.8%
S2/S3 or higher	20	2.7%

Group comparisons based on biological sex and marital status were conducted using Welch's t-test (Table 2). Results are reported in Table 2. Compared to females, males scored significantly higher in psychopathy ( $d = -0.257, p < .001$ ), sadism ( $d = -0.512, p < .001$ ), and attitude toward casual sex ( $d = -0.402, p < .001$ ). There were no significant gender differences in machiavellianism or narcissism. In terms of marital status, single individuals reported significantly higher levels of psychopathy ( $d = 0.150, p < .01$ ), sadism ( $d = 0.341, p < .001$ ), and attitude toward casual sex ( $d = 0.209, p < .01$ ) compared to married individuals. Interestingly, married participants scored higher in narcissism ( $d = -0.371, p < .001$ ) and machiavellianism ( $d = -0.199, p < .01$ ) than their single counterparts.

**Table 2**  
 Group Differences in Sexual Attitudes Based on Biological Sex and Marital Status

	Mean (SD)		<i>d</i>	Mean (SD)		<i>d</i>
	Female	Male		Single	Married	
<b>Mach</b>	3.93 (0.74)	3.94 (0.62)	-0.018	3.85 (0.67)	3.99 (0.69)	-0.199**
<b>Narc</b>	3.19 (0.87)	3.17 (0.91)	0.020	2.98 (0.87)	3.31 (0.88)	-0.371***
<b>Psyc</b>	2.00 (0.72)	2.20 (0.82)	-0.257***	2.17 (0.78)	2.05 (0.78)	0.150*
<b>Sdsm</b>	1.89 (0.82)	2.35 (0.97)	-0.512***	2.31 (0.91)	2.00 (0.91)	0.341***
<b>ACS</b>	2.69 (1.53)	3.53 (2.53)	-0.402***	3.37 (2.28)	2.93 (2.00)	0.206**

Mach= Machiavellianism; Narc=Narcissism; Psyc= Psychopathy; Sdsm= Sadism; ACS= Attitude toward Casual Sex; Biological sex is coded as female=0, male=1; Marital Status is coded as single=0, married=1;  $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

These findings diverge from previous research, which suggests that all Dark Tetrad traits tend to be higher in men (Jones & Paulhus, 2014; Paulhus et al., 2021). In the present study, men scored significantly higher only on psychopathy and sadism, but



not on machiavellianism or narcissism. This discrepancy is supported by prior findings using the Dirty Dozen scale, which reported no significant gender differences in machiavellianism in Study 2 and narcissism in Study 3 (Jonason & Webster, 2010). This suggests that within the Indonesian cultural context, machiavellianism and narcissism may not exhibit sex differences to the same extent as other Dark Tetrad traits. Attitudes toward casual sex were found to be significantly higher among men, supporting previous research by England & Bearak (2014) and Jonason et al. (2015). McKeen et al. (2022) further distinguished that while men tend to hold more positive views toward casual sex, women are more likely to experience regret.

Interestingly, this study demonstrates that marital status may be a more meaningful differentiator of Dark Tetrad traits in the Indonesian context. Psychopathy and sadism were found to be higher among single individuals. Notably, narcissism and machiavellianism were higher among married individuals, highlighting the need for further exploration of the relationship between the Dark Tetrad and marriage, particularly concerning long-term mate retention strategies, which will be discussed in the subsequent section. Previous research on mate retention suggests that individuals high in machiavellianism and narcissism tend to employ more active strategies to maintain relationships, in contrast to those high in psychopathy, who are generally less oriented toward long-term relational stability (Chegeni et al., 2018; Jonason et al., 2015). This indirectly implies that individuals high in machiavellianism and narcissism may be more successful in sustaining long-term relationships, at least to the extent of entering a marital relationship. This study also aligns with findings that single individuals report more permissive attitudes toward casual sex (Fernández Del Río et al., 2019). These findings are consistent with both evolutionary and socio-cultural perspectives, which suggest that males are generally more inclined toward short-term mating strategies and sexual risk-taking behaviors (Buss & Schmitt, 1993).

A hierarchical regression analysis was conducted to examine the predictive power of demographic variables and Dark Tetrad traits on attitudes toward casual sex (Table 3). In Step 1, age, biological sex, and marital status were entered into the model. This model was statistically significant,  $F(3, 729) = 12.877, p < .001$ , and accounted for 5.0% of the variance in casual sex attitudes (Adjusted  $R^2 = .050$ ). Among these variables, biological sex ( $\beta = 0.200, t = 5.490, p < 0.001$ ) and marital status ( $\beta = -0.107, t = -2.437, p < 0.05$ ) emerged as significant predictors, while age was not.

This research finds that demographic factors significantly contributed to explaining variations in casual sex attitudes, especially before accounting for dark personality traits. In the first model of the regression, biological sex and marital status emerged as significant predictors, while age was not. The insignificant role of age may be explained by the stability of sexual attitudes over time, as suggested by prior research (Fernández Del Río et al., 2019). Nevertheless, demographic variables alone explained a relatively small proportion of variance (5%) in casual sex attitudes.



**Table 3.**  
 Hierarchical Regression of Attitude Toward Casual Sex

	B	$\beta$	Bias	Bootstrap SE	<i>p</i> (2-tailed)	95% CI
Step 1 <sup>a</sup>						
(Constant)	2.949		.002	.433	.000	[2.094, 3.783]
Age	.000	.001	.000	.018	.984	[-.034, .035]
Biological sex	.852	.200	.001	.157	.000	[.552, 1.166]
Marital Status	-.464	-.107	.003	.194	.017	[-.840, -.076]
Step 2 <sup>b</sup>						
(Constant)	1.705		.007	.603	.005	[.531, 2.904]
Age	.014	.036	.000	.017	.420	[-.020, .048]
Biological sex	.561	.132	.001	.152	.000	[.257, .860]
Marital Status	-.330	-.076	.002	.187	.079	[-.699, .041]
Machiavellianism	-.189	-.061	-.003	.105	.078	[-.405, .010]
Narcissism	-.036	-.015	.002	.091	.700	[-.211, .145]
Psychopathy	.437	.160	.002	.157	.006	[.145, .752]
Sadism	.403	.175	.000	.117	.002	[.169, .636]

*p* < 0.05; \*\**p* < 0.01; \*\*\**p* < 0.001

a. *F* = 12.877\*\*\*; *df* = 3, 729; Adjusted *R*<sup>2</sup> = 5.0%

b. *F* = 15.369\*\*\*; *df* = 7,725; Adjusted *R*<sup>2</sup> = 12.9%

Bootstrap results based on 5000 samples

Biological sex is coded as female=0, male=1

Marital Status is coded as single=0, married=1

In Step 2, the four Dark Tetrad traits machiavellianism, narcissism, psychopathy, and sadism, were added to the model. The overall model remained significant, *F* (7, 725) = 15.369, *p* < .001, and the explained variance increased to 12.9% (Adjusted *R*<sup>2</sup> = .129), indicating a meaningful improvement in prediction. In this step, biological sex remained a significant predictor ( $\beta$  = .132, *t* = 3.604, *p* < .001), while marital status became insignificant. Among the Dark Tetrad traits, psychopathy ( $\beta$  = .160, *t* = 3.382, *p* < .01) and sadism ( $\beta$  = .175, *t* = 3.539, *p* < .001) significantly predicted more positive attitudes toward casual sex. Machiavellianism and narcissism were not significant predictors.

The inclusion of the Dark Tetrad traits can explain more about attitudes toward casual sex. Among these traits, psychopathy and sadism were significant positive predictors of positive attitudes toward casual sex. This aligns with prior findings that individuals high in psychopathy and sadism tend to exhibit greater impulsivity, emotional detachment, and a preference for short-term mating strategies (Jonason et al., 2015; Tsoukas & March, 2018). These traits may facilitate engagement in casual sexual encounters due to a reduced sensitivity to emotional bonding and social norms.

In contrast, machiavellianism and narcissism were not significant predictors in the final model. These findings are consistent with the results reported by Nascimento et al. (2018) and Valentova et al. (2020), both of which found no significant correlation between machiavellianism, narcissism, and attitudes toward casual sex. While these traits have previously been associated with unrestricted sexuality (Tsoukas & March, 2018), the present findings suggest their influence may be more context-dependent, shaped by cultural norms and individual motivations.

One possible explanation is that individuals high in machiavellianism, characterised by strategic manipulation and long-term instrumental goals (Paulhus &



Williams, 2002), may not view casual sexual encounters as universally beneficial. In societies with conservative sexual norms, such as Indonesia, casual sex may carry considerable reputational and social risks, potentially threatening long-term objectives such as social status, career advancement, or financial security. Previous research has also shown that machiavellian individuals tend to exhibit greater self-control compared to other Dark Tetrad traits (Jones & Paulhus, 2011), enabling them to restrain impulsive behaviours like casual sex when such actions do not align with their strategic interests.

Similarly, while narcissism is commonly linked to a desire for admiration, validation, and sexual conquests (Jonason et al., 2009), this trait is also associated with heightened sensitivity to social evaluation and criticism (Morf & Rhodewalt, 2001). In highly conservative and collectivist cultures, where personal image and reputation are closely monitored and valued, narcissistic individuals may avoid behaviours such as casual sex if they perceive it could damage their social standing. Moreover, the relationship between narcissism and sociosexuality may differ depending on its facets (i.e., grandiose and vulnerable narcissism). The present study did not differentiate between these subtypes, which may have contributed to the absence of a significant effect.

Interestingly, after controlling for personality traits, marital status was no longer a significant predictor. This suggests that the earlier observed differences between single and married individuals in casual sex attitudes may be explained by underlying personality factors, particularly psychopathy and sadism, which were found to be higher among single individuals. This finding supports the notion that single individuals may possess greater motivational and psychological readiness for casual sex, driven by traits associated with impulsivity and lack of emotional investment (Fernández Del Río et al., 2019).

This study exclusively involved heterosexual individuals in Indonesia as the research sample. Consequently, the generalisability of the findings is inherently limited to this group and may not fully reflect the psychological dynamics that might occur among individuals with minority sexual orientations, such as homosexual or bisexual individuals. This limitation has both conceptual and empirical foundations. Several previous studies have identified differences in attitudes toward casual sex based on sexual orientation. For instance, Fernández Del Río et al. (2019); Semenyna et al. (2018); Semenyna et al. (2024); and Bártová et al. (2020) reported that individuals with minority sexual orientations tend to hold more permissive attitudes toward casual sex compared to heterosexual individuals. Moreover, the generalisability of the findings may also be limited to societies with relatively conservative religious and social norms regarding sexuality, as is the case in Indonesia. Such norms are likely to shape particular attitudes among heterosexual individuals in Indonesia toward casual sex, which may differ from those held by heterosexual individuals in countries with different norms and values concerning sexuality.

One notable limitation of this study concerns the relatively low internal reliability of the machiavellianism subscale, with a Cronbach's alpha value of .60. Although this value meets the minimum acceptable threshold for exploratory research (Hair et al., 2019), it remains lower than the reliability coefficients of the other subscales used in this study. Lower internal consistency may indicate greater measurement error, which can reduce the precision of the observed associations involving machiavellianism. Moreover, it is important to consider that machiavellianism as a personality trait may be inherently



more sensitive to contextual and environmental factors than other dark traits. (Vernon et al., 2008) suggested that, unlike other personality trait, machiavellianism is only moderately heritable and shows a more pronounced influence from the shared environment. This implies that machiavellian-like behaviors are, to some extent, learned through social and cultural experiences in addition to genetic predispositions. Consequently, cultural variations and normative expectations within Indonesian society may have contributed to heterogeneous interpretations of the machiavellian items, thus affecting the scale's internal consistency. Future research is encouraged to refine or culturally adapt the measurement of machiavellianism in similar contexts to improve its internal reliability and capture more consistent individual differences in this construct.

Another limitation of this study involves the distribution of scores for the psychopathy and sadism subscales, which did not meet the assumption of normality. Non-normal data distributions can affect the robustness of parametric statistical analyses, potentially leading to biased estimates, reduced statistical power, and increased risk of Type I or Type II errors (Field, 2024). This issue is particularly relevant given that both psychopathy and sadism are socially sensitive traits, especially in cultures with strong religious and moral norms such as Indonesia. The non-normality observed in this study may reflect a tendency among participants to underreport socially undesirable traits, resulting in skewed or kurtotic response distributions. Consequently, the strength and direction of the associations between these traits and attitudes toward casual sex should be interpreted with caution. Future studies should consider employing non-parametric or robust statistical techniques, or using alternative data collection strategies, such as indirect questioning or behavioral measures, to more accurately capture the expression of these traits in culturally conservative populations.

## CONCLUSION

Taken together, these results emphasize the importance of both demographic and psychological factors in shaping sexual attitudes. While sex and marital status influence permissiveness toward casual sex, dark personality traits—especially psychopathy and sadism provide a stronger and more nuanced explanation. Male and unmarried individuals high in these traits exhibit more positive attitudes toward casual sex and may be more susceptible to engaging in high-risk sexual behaviors. Practically, these results suggest the need for mental health interventions that incorporate personality-based risk assessments, particularly for traits linked to impulsivity and low empathy. Sex education programs should also address psychological risk factors and promote healthy relationship values, alongside biological and moral content. Additionally, since age did not significantly predict attitudes, prevention programs addressing risky sexual behavior should target adults across age groups. These findings enrich the understanding of sociosexual attitudes within the Indonesian cultural context.

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