



Original Article

Association Between the Dark Triad of Personality Traits and Risk of Violence: A Comparative Study Between Prisoners and Non-Offenders

Pakstan Faiq Muhammedamin*,¹, Nabi Fatahi^{1,2}

¹Department of Psychology, Faculty of Arts, University of Soran, Kurdistan Region, Iraq.

²Department of Learning and Leadership for Healthcare Professional, University of Gothenburg Institute of Health and Care Sciences, Göteborg, Sweden.

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ABSTRACT

The dark triad traits of personality, namely Psychopathy, Narcissism, and Machiavellianism, are three different but interrelated traits that relate to several antisocial characteristics and behaviours that are not acceptable in society. These traits share several attributes at various levels, such as a tendency for self-promotion or self-exhibition, dominance, duplicity, impulsivity, and emotional coldness. This study aims to determine whether there is a relationship between dark triad characteristics and the risk of committing violent acts. This study employed a rigorous methodology, using two distinct samples to ensure comprehensive data collection. The first sample comprised incarcerated offenders, with 215 participants, while the second sample included 304 non-offenders of both sexes. Three measures were used for data collection, including the dark traits of personality scale, the violence risk scale, and the psychopathic personality scale designed explicitly for prisoners. These measures and several statistical tools were used to analyse the data, ensuring a thorough and robust approach to the study. The findings of this study are significant, revealing a statistically significant association between the dark triad personality traits of Psychopathy and Narcissism and the risk of violence in both study samples. These traits emerged as strong predictors of violence, with narcissism being the most potent predictor. The study also confirmed that males exhibit higher levels of psychopathic traits than females and that the risk of violence is higher among prisoners than non-offenders. These results provide valuable insights into the relationship between dark triad traits and violent behavior, contributing to our understanding of these complex issues. These traits alone and according to their characteristics have been associated with criminal outcomes. Conducting more research on the characteristics of dark traits of personality could facilitate the design of prevention programs aimed at reducing violence and inappropriate behavior.

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Keywords: Dark triad personality traits; psychopath; narcissism; Machiavellianism; violence.

1 Introduction

Dark triad personality traits, such as Psychopathy, Narcissism, and Machiavellianism, are terms used to describe socially unacceptable traits associated with antisocial behavior and violence [1-4]. These traits were first described by Paulhus & Williams [2002] and have attracted significant research attention in recent decades [5]. Mostly, these traits are referred to as the 'dark triangle' [6]. Some previous studies have suggested that the dark triangle of personality underlies several antisocial behaviors related to aggression and violence [7].

Psychopathic people have a variety of negative characteristics and antisocial behaviors that date back to their adverse childhood [8,9]. Psychopathy as a multidimensional construct includes several dimensions, such as lack of empathy and coldness in relationships, characteristic of primary psychopaths [10]. Meanwhile, secondary Psychopathy is associated with high levels of overwhelm, unstable fluctuations of impulsivity, and unstable emotions [11]. Psychopathic people are known to feel no guilt or regret for their actions, are easily angered and annoyed, and complain when they fail [8].

Narcissism in psychopaths is a multidimensional trait involving extreme existential certainty, self-affirmation [12], and grandiosity [13]. This dark trait is positively and strongly associated with extraversion, one of the big five personality traits, which means that both traits have common characteristics, such as controlling and leadership [14]. In general, dark triad traits are associated with

* Corresponding author

E-mail address pakstan.mohamedamin@psy.soran.edu.iq (Instructor).

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the five major personality traits; they are contributing factors and are associated with violence ^[15,16]. One of the most prominent characteristics of narcissistic people is high self-esteem, which makes them prone to violence and deviant behavior ^[16].

Christie and Geis first described Machiavellianism in 1970 to explain individual differences. They described a variable of personality traits characterized by deceiving others ^[17,18], lying, cheating, and coldness used to achieve personal goals ^[19,20]. Research also indicates that the Machiavellianism characteristic is associated with low levels of self-control ^[21,22].

In this context, the dark triad can be described as subclinical and non-pathologic ^[5]. Although the mechanisms of these three dark triad personality traits may be fundamentally different, they share several characteristics at various levels. The most common characteristics are self-promotion or self-exhibition, emotional coldness, duplicity, aggressiveness, impulsiveness, and sensation-seeking ^[5,23,24].

In addition, if one of these common traits is reduced, the three traits cannot be treated as a complete concept ^[15]. Previous studies have broadly suggested that dark traits are associated with a range of criminal, antisocial, and deviant behaviors ^[25-28]. To further explore the subject, Walker and Bows conducted a study to assess violent thinking among criminals and offenders that relied on the three views on criminal violence proposed by Bush in 1995. First, violence is not an independent form of criminal behavior. Second, violence is a learned behavior that can be understood as a coping mechanism that people often feel they have. Third, patterns of violence and criminal behavior are inherent in the individual's thought system, and the absence of obstacles to that wrong thinking means moving towards committing violent behavior [Bush, 1995; adapted from ^[29]. In general, according to the scientific evidence, it could be said that personality is positively associated with violence ^[30,31].

Researchers also believe that dark personality traits are a significant factor and play an influential role in violating norms, violent behavior, and violent acts ^[2,32]. This is why some types of violence are noteworthy, especially direct or overt violence that includes physical or verbal violence ^[33], violence between partners (intimate partner violence), or between individuals ^[34], including verbal or psychological ^[35], physical, sexual ^[36], and economic violence ^[37]. Research results have shown that dark faces are strongly positively associated with the types of violence mentioned. Such personalities are at risk of repeating crime and violence several times ^[38]. Scientific evidence also suggests that convicted prisoners with dominant psychopathic characteristics are more likely to re-offend than those with the other two dark triad traits ^[39-41]. Some researchers have suggested that the three dark traits should not be studied separately but should be assessed together to determine which trait is more associated with antisocial behavior ^[42, 5]. In 2012, Rauthmann found that people with dark traits have different outlooks and look at their surroundings negatively and worthlessly. For example, while a psychopath has no view (positive or negative) of others, a narcissist sees others as inferior or unconscious, and Machiavellianism believes that people are inferior ^[43]. For this

purpose, the results of scientific research show how these dark traits are associated with violence and how violence strengthens the dark side of personality. This suggests an interactive relationship between dark features and violence, reinforcing the other ^[26]. This study assumes that non-offenders have dark traits similar to prisoners. The present study aims to understand the relationship between dark personality traits and violence in two different samples of prisoners and non-offenders.

2 Methods and Materials

2.1 Research Method

This study uses a quantitative descriptive method. Quantitative methods aim to obtain more information and understanding of the study variables. Researchers use quantitative methods to study situations or events that affect people ^[44]. Quantitative research collects data based on scale and then analyzes it using statistical tools ^[45].

2.2 Participants

This study was conducted on two research communities. The first sample used in the study is made up of prisoners sentenced for committing various crimes in three prisons in Erbil province, including the Erbil Adult Correctional Directorate and the Women and Children Correctional Directorate. The third prison is Soran Police Station. Some of the prisoners had not yet been sentenced. The second sample was non-offenders in the Soran Autonomous Administration.

Data must be collected to answer the research questions. Thus, the researcher will need a research sample to select a subset of people representative of society ^[46].

The first sample, which consisted of prisoners, was chosen based on the purposive method, a sampling technique or procedure that selects individuals because they are easily accessible ^[47]. The offenders were recruited from three different prisons in Erbil province, with 215 participants of both sexes. The second sample of this study consisted of 304 non-offenders of both sexes, who were divided into four age groups (15-20), (21-25), (26- 30), and (31- 35).

2.3 Measures

Translation validation for all three measures was used as translated versions because the original versions were in English, and this research sample was Kurdish people who did not speak English. The process of translation validation was done in several ways; the first step, the English version of the measures, was translated into the Kurdish language by a psychologist who knows English and the Kurdish language well. In the second step, the translated version was reviewed and evaluated by experts, and the items that were not clear were reformulated linguistically. To be easy to understand and straightforward by the sample. The third step, translation accuracy, has been done to translate the Kurdish version to English by two experts who hold doctorates in English language and psychology from Soran University. Finally,

the original and translated versions for English and Kurdish languages were compared to evaluate the accuracy and similarity ratio between the two versions. It was found that they have the same level of similarity.

To collect data, this study used three self-report measures listed below.

2.3.1 Dark trade scale

The Short Dark Triad (SD3) was initially used to measure dark traits [5]. The scale originally had 41 items but was later reduced to 33 items, and one of the weakest items concerning the psychopath was taken out, leaving 27 items, or 9 for each trait. Regarding the response options, each item has five options, ranging from (1 = always agree to 5 = never agree). The measures of Narcissism and Machiavellianism are used for the first example, but all three are used for the second. Regarding the scale's reliability, the Cronbach alpha for internal reliability for the first sample of this study for Narcissism was 0.70, and Machiavellianism was 0.72. The internal reliability for each trait in the second sample of the survey, Machiavellianism, Narcissism, and Psychopathy, was 0.70, 0.72, and 0.75, respectively.

2.3.2 Psychopathic Personality Trait Scale (PPTS)

The Psychopathic Personality Trait Scale (PPTS) is a psychological assessment tool that consists of 20 items, with two options for each item (agree = 1) and (disagree = 0). This scale is designed to assess the forensic and non-forensic appearance of a psychopath. Scores range from 0 to 20, with higher scores indicating increased levels of psychopathic traits in an individual. Items 17,14,13,10,6 and 2 are reverse scored, and Cronbach alpha is used for internal confidence, which is 0.80 [48].

2.3.3 A Self-Report Measure of Violence Risk

This scale was developed by Plutchik et al. and consisted of 36 items used to measure violent behavior. This scale is an effective tool suitable for inmates, psychiatric patients, and college

students. The scores indicate that the scale was significantly related to the history and experience of violence [49]. The scale is then shortened to 12 items, referred to as PFAV. Each item had four options: (never =0, sometimes =1, often =2, and always =3). The Cronbach alpha for the scale was 0.77, but the alpha for internal reliability in this study for sample 1 and sample 2 was 0.76 and 0.74, respectively.

2.4 Ethical Considerations

After the psychology department has approved the ethics approval and consent form for participation, Permission was obtained from the General Directorate of Social Corrections in Erbil, the Directorate of Erbil Adult Correctional Directorate, the Women and Children Correctional Directorate, and the Soran Police Station for data collection. Then, through the permission form provided instructions on how to participate and answer the research questions. Participation was voluntary, and participants could stop answering the research questions anytime. After the participation consent form was approved, participants were assured that their responses would remain anonymous and confidential. Participants were also ensured that all their information would be used for scientific purposes only.

2.5 Data Analyzes

After the missing data were extracted, statistical tools were performed. Data were analyzed using the SPSS v.23 program. The Pearson correlation coefficient was used to identify the correlation between study variables. Regression analysis was used to predict dark personality traits for risk of violent acts, and an independent-sample t-test and ANOVA were used to understand gender and age differences in the study sample.

Table 1 presents the demographic variables for the study participants. The percentage of non-offender participants is provided, while the number of prisoners is not disclosed. The reason is mentioned in the limitations section at the end of the discussion.

Table 1: Demographic Variables.

Sample of prisoners			Sample of non-offenders		
The percentage %	number	Variable	The percentage %	number	Variable
	Not provided	gender			Gender
			39.1	119	male
			60.9	185	female
	Not provided	age			Age
			30.9	94	20-15
			50.7	154	25-21
			9.5	29	30-26
			8.9	27	35-31

Table 2: Descriptive statistics and correlation analysis for sampling of offenders.

Variables	1	2	3	4	M	SD	Skew.	Kurt.
Psychopath	–				11.423	2.588	-. 397	0.634
Machiavellianism	0.188**	–			26.498	6.568	-. 174	- . 497
Narcissism	0.162*	0.549**	–		25.688	6.169	- 451	-0.619
Violence	0.242**	0.059	0.252**	–	8.414	6.024	1.436	2.827
Note: ** $p < 0.01$. * $p < 0.05$								

3 Results and Discussion

3.1 Relationships between dark traits and risk of violence among prisoners

The results presented a significant association between the dark triad personality traits of Psychopathy and Narcissism with the risk of violence at different rates. Psychopath; $r = .242$, $p < 0.01$, Narcissism; $r = .252$, $p < 0.01$. No significant and statistical correlation was recorded for Machiavellianism with risk of committing violence $r = -0.059$, $p > 0.05$. According to the results, all three dark traits of personality have a statistically documented relationship with each other: psychopath with narcissism $r = 0.162$, $p < 0.05$, psychopath with Machiavellianism $r = 0.188$, $p < 0.01$, narcissism with Machiavellianism $r = 0.549$, $p < 0.01$, shown in Table 2.

3.2 Dark triad traits in predicting violence among prisoners

As shown in Table 3, the study results indicate that dark traits predict violent acts by 11.9 %, and the correlation between all traits and violence was $r = 0.346$. The outcome shows that traits adequately predict violence $F = 9.543$, $P < 0.01$. Narcissism appearance predicts violence to a greater extent than Psychopathy. For example, the prediction of psychopath $\beta = 0.221$, $t = 3.351$, $p < .001$, 95% CI (.176, .679); Narcissism $\beta = 0.296$, $t = 3.821$, $p < 0.001$, CI 95 % (0.112, 0.352), in contrast the dark triad of Machiavellianism statistically not expecting risk of violence acts, $\beta = -0.144$, $t = -1.867$, $p = .063$, CI 95 % (-.255, .007).

Table 3: Predicting violence by the dark triad personality traits among offenders.

Variables	b	SE	B	t	p-value	CI 95 %		sr2
						Lower	Upper	
Psychopath	0.428	0.128	0.221	3.351	< 0.001	0.176	0.679	0.225
Machiavellianism	-.124	0.067	-.144	-1.867	0.063	-.255	0.007	-.127
Narcissism	0.232	0.061	0.296	3.821	< 0.001	0.112	0.352	0.254

3.3 Relationship between dark triad personality traits and the risk of violence among non-offenders.

The results of this study show that both dark traits of psychopath and Narcissism are significantly associated with the risk of violence. The positive correlation between psychopath and violence is $r = 0.416$, $p < 0.01$. Similarly, a positive correlation between Narcissism and violence is $r = 0.305$, $p < 0.01$. Nonetheless, no significant correlation was documented for the trait of Machiavellianism $r = 0.083$, $p > 0.01$. The results indicate that all three characteristics have recorded statistical relationships with each other, for example: psychopath with narcissism $r =$

0.218, $p < 0.01$, psychopath with Machiavellianism $r = 0.287$, $p < 0.01$, narcissism with Machiavellianism $r = 0.239$, $p < 0.01$, shown in Table4.

3.4 Prediction analyses

According to the results, it is found that dark personality variables are appropriate to predict violence $F = 29.531$, $p < 0.01$. The results showed that dark traits contribute 22.8% to violence. The correlation between the overall score of dark traits and violence is $r = 0.477$. The results show that the dark trait of psychopath predicts the risk of violence $\beta = 0.389$, $t = 7.242$, $p < 0.01$, CI 95% (0.164, 0.286). The trait of Narcissism also predicts violence

$\beta = 0.241$, $t = 4.545$, $p < 0.00$, CI 95% (0.075 0.189), but conversely, the dark trait of Machiavellianism does not $\beta = -0.$

086, $t = -1.587$, $p > 0.01$, CI 95% (0.117, -0.013), shown in Table5.

Table 4: Relationship between study variables and normality tests for a non-offender sample.

variables	1	2	3	4	M	SD	Skew.	Kurt.
Psychopath	–				21.86	6.12	0.46	0.07
Machiavellianism	0.287**	–			32.14	5.81	-0.88	2.02
Narcissism	0.218**	0.239**	–		26.32	6.46	-0.75	0.54
violence	0.416**	0.083	0.305**	–	5.79	3.55	1.38	3.48
Note: ** $p < 0.01$. * $p < 0.05$								

Table 5: Predicting violence by the triangle of dark traits among non-offenders.

Variable	b	SE	B	t	p.value	CI 95 %		Sr ²
						Lower	Upper	
Psychopathy	0.225	0.031	0.389	7.242	<0.01	0.164	0.286	0.386
Machiavellianism	-0.052	0.033	-0.086	-1.587	0.114	-0.117	0.013	
Narcissism	0.132	0.029	0.241	4.545	<0.01	0.075	0.189	0.254

3.5 Demographic variables in relation to violence among non-offenders

3.5.1 Differences by gender variable

Following the t-test for the gender variable, the results show a gender difference. Regarding psychopathic traits, the two genders had a statistically significant difference $t(302) = 2.228$, $p < 0.05$, 95% CI (0.229, 3.042). It has a small size effect of 0.268. Males have more dark psychopathic traits because the mean score of males is higher, $M = 22.857$, than the mean score of females, $M = 21.222$. Regarding violence, there was a statistically significant difference between males and females' variable $t(302) = 4.911$, $p < 0.01$ 95% CI (1.184, 2.767). With a mean effect size of 0.577. The results show that male's $M = 6.992$ are more likely to commit violent acts than females. $M = 5.016$. In contrast, the traits of Machiavellianism and Narcissism had no statistically significant differences according to gender differences $t(302) = -0.279$, $p > 0.05$, $t(302) = 0.091$, $p > 0.05$, shown in Table 7.

3.5.2 Differences by age variable

The results indicate that Machiavellianism varies with age $F(3.300) = 4.359$, $p < 0.01$ and that there is a difference between the ages of 15-20 ($M = 33.532$) and 21-25 ($M = 31.610$). And this difference is statistically documented $p < 0.01$. Violent acts also differed by age $F(3.300) = 2.881$, $P < 0.05$, and applying LSD shows that this difference was documented only between ages 21–25 ($M = 5.286$), 26–30 ($M = 6.966$). $p < 0.05$. However, it is documented that there are no significant differences in terms of age for both dark traits of psychopath and Narcissism, shown in Table 6.

3.5.3 The level of violence among prisoners and non-offenders

Results about the level of the risk of violence among prisoners ($M=8.414$; $SD=6.024$) and non-offenders ($M=5.79$; $SD=3.55$) $t(517) = 5.23$, $p = (0.00)$ with medium effect size $d = 0.47$, the results show that prisoners have a higher risk of violence than non-offenders.

4. Discussion

The results of both samples used in this study illustrated that dark triad personality traits of a psychopath and Narcissism statistically have a significant association with violent behavior. However, the results also demonstrated that Machiavellianism had no statistically significant correlation with the risk of violence. The dark traits of Psychopathy and Narcissism are also two appropriate variables to predict the risk of committing violent acts. Previous studies emphasized and supported the positive relationship between Psychopathy and violent behavior [26,49]. The reason why psychopaths commit violent behavior is related to the characteristics that distinguish them from others, such as coldness, lack of emotion, and attempts to manipulate [50].

The results regarding psychopathic traits and their relationship to violence are consistent with those of previous studies [25]. Several other studies have also shown that Psychopathy is the strongest predictor of committing violent acts and committing and being involved in a series of crimes [50-52]. Research has shown that exposure to and experience of violence in the past are significant factors in whether psychopathic people will commit violent acts in the future [54].

Table 6: Age differences according to personality trait variables and violence.

Variable	M					SD					F	p-value	effect size
	15-20	21-25	26-30	31-35	total	15-20	21-25	26-30	31-35	total			
psychopath	22.72 3	21.53 9	21.93 1	20.63 0	21.86 2	6.41 8	5.91 7	6.15 8	6.17 2	6.12 5	1.13 0	0.337	
Machiavellianism	33.53 2	31.61 0	32.89 7	29.51 9	32.14 1	5.64 9	5.49 7	6.20 1	6.62 4	5.81 2	4.35 9	0.005	0.966
narcissism	26.81 9	26.17 5	25.17 2	26.63 0	26.31 9	6.21 0	6.67 8	6.40 9	6.30 1	6.46 3	0.53 6	0.658	–
violence	5.979	5.286	6.966	6.741	5.790	3.47 6	3.65 8	3.65 0	2.55 1	3.55 1	2.88 1	0.036	0.740

Table 7: Gender differences according to dark triad personality and violence.

variable	M		SD		t	p-value	MD	% 95 CI		Effect Size
	male	female	male	female				Lower	Upper	
psychopath	22.857	21.222	6.101	6.070	2.288	< 0.05	1.636	0.229	3.042	0.268
Machiavellianism	32.025	32.216	6.505	5.336	-0.279	0.780	-0.19	-1.53	1.155	–
narcissism	26.361	26.292	6.632	6.371	0.091	0.927	0.069	-1.42	1.567	–
violence	6.992	5.016	3.716	3.221	4.911	< 0.01	1.975	1.184	2.767	0.577

Psychopathic people commit violence even against weak and powerless people and use violence as a means to achieve their own goals [42]. Research has also shown that people with psychopathic traits are more likely to repeat violent behavior [54,55].

In addition, psychopathic people commit violence differently from ordinary people, so they commit their crimes more violently. Even throughout life, aggression and violence are observed in their behavior [57]. Many mental disorders and neuropsychiatric conditions may also be associated with aggressive behavior and acts of violence, especially in psychopathic personalities because the frontal cortex is suspected to be damaged in individuals with psychopathic traits [58]. Scientific evidence has shown that psychopathic personalities can develop in both criminal and non-criminal contexts [58-60].

Regarding the relationship between the trait of Machiavellianism and violence, no relationship was found between these two variables in the results of this study. When searching through previous studies, two types of conclusions can be drawn. Some studies have shown that Machiavellianism is positively associated with violent behavior [2]. However, opposing views argue that Machiavellianism does not predict violence [62]. There are two views on Machiavellianism in research. The first suggests that this trait has an independent structure and is different from other traits [43]. The second view is that this trait is essentially no different from Psychopathy and that there is a positive relationship between Machiavellianism and Psychopathy. The

present study found that Narcissism was associated with violent behavior. This is in line with the results of other studies, which have indicated the existence of a relationship between Narcissism and violent behaviour [3,7,40]. The presence of the egocentric characteristics of Narcissism causes narcissistic people to commit violent acts. Narcissistic people have several characteristics, including impulsivity due to overconfidence [62] and high levels of sensation-seeking [62-64]. Sensation-seeking is a personality factor strongly associated with risk-taking, which is sometimes a reason for risky behavior and perpetrating crime [5,65].

Narcissistic individuals indeed commit violent behavior because of high levels of self-esteem. In contrast, other theoretical views on violence, aggression, and criminal behavior argue that the consequences of violence in normal people may be due to low levels of self-esteem [67]. Because individuals with low levels of self-esteem think that people around them are responsible for their problems, they seek to respond by performing certain behaviours to attract attention or attempting to use violent acts to restore a greater level of self-esteem, superiority, and independence [67,68].

The present study also found that there are gender differences in terms of Psychopathy and violence and that males have higher levels of psychopathic traits than females. This finding is similar to the results of previous studies [2,25,70]. However, this does not mean that males and females differ in the dark traits themselves but that there are differences in their value systems [71]. Interestingly, society is primarily responsible for the existence of

gender differences. For example, based on the social role theory developed by Eagly and Wood [72], this theory emphasizes the division of labor and individual participation in social roles based on gender. This leads to gender differences, which are seen in the behavior of individuals [73,74].

The risk factors that cause the relationship between dark trait variables and the risk of committing violent acts are not fully understood. Vernon and colleagues showed that the three dark personality traits have a genetic component, with only Machiavellianism having a common environmental component [75]. Interestingly, the cause of the development of dark traits alongside genetic and environmental factors can be highlighted by the importance of parental parenting style [4]. In other words, parental upbringing and behavior are related to the development of dark personality traits and the development of violent tendencies in individuals, particularly rejection experiences by either parent, as well as control, punishment, and excessive protection. Therefore, these parental behaviors are influenced directly by individuals' tendency to commit violent acts and antisocial behavior at different stages of life [76,4]. Thus, in general, it can be said that these dark traits are associated with various variables, such as dominance, self-esteem, aggressive behavior, pleasure-seeking, etc., and that each of these characteristics impacts the risk of violence.

No study is without shortcomings, and the current study has several limitations. For example, the questionnaires used were appropriate for measuring the study sample. Still, the study sample could not be controlled for age and gender because the researcher could not interview the prisoners directly. Due to the limitations of the researcher's powers, it was also impossible to classify the offenders according to the type of crime or the number of crimes committed. Inmate participants were also afraid to answer the questionnaire since they believed any answer would affect the punishment they received. Therefore, some of them regretted their participation and withdrew. The small number of participants was another weakness of this study, which affected the results because the small number of participants creates obstacles to generalization.

Conclusion

Dark personality traits are considered a practical foundation for antisocial and criminal outcomes. The presence of these negative characteristics in an individual is regarded as a risk factor for committing acts of violence. As we assumed at the beginning, ordinary people may have dark traits and are not noticed because they have not committed any crime. Thus, the stereotype of criminals is more damaging than that of ordinary people, so it is thought that only criminals have these dark characteristics.

This study is essential as a starting point for preventing antisocial behavior associated with the dark triad of personality traits and factors in the emergence of violent behavior in future generations. Because there is very little research on the triangle of dark traits in Kurdish society, this study will provide information on dark traits and the impact of these traits on individuals at risk of

committing violence. Therefore, more research should be conducted on child-rearing training and parental behavior in the future. Further research is needed on different samples in the community because these findings cannot be generalized.

Conflict of interests

The authors declare no conflict of interest.

Author contribution

In the collaborative development of this manuscript, Pakistan Mohamadamin has a leading role in initiating the process by drafting the manuscript and establishing its structure, conducting data collection and analysis, contributing significantly to the research methodology and results, leading role in the later stages, crafting the discussion section, providing detailed data analysis, and Nabi fatahi finalizing the manuscript with conclusive comments. This clear delineation highlights the unique contributions of each author throughout the research project. All authors read and approved the final manuscript.

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Competing interests

The authors declare that they have no competing interest.

References

- [1] Jauk, E. & Dieterich, R. "Addiction and the Dark Triad of Personality," *Front. Psychiatry*, vol. **0**, doi: 10.3389/fpsyt.2019.00662 (2019).
- [2] Kiire, S. "Psychopathy rather than Machiavellianism or narcissism facilitates intimate partner violence via fast life strategy," *Personal. Individ. Differ.*, vol. **104**, pp. 401–406, doi: 10.1016/j.paid.2016.08.043 (2017).
- [3] Pedro, S. Curtis, M. DeLisi, Maroco, J. & Nunes, C. "Dark Triad Psychopathy Outperforms Self-Control in Predicting Antisocial Outcomes: A Structural Equation Modeling Approach," *Eur. J. Investig. Health Psychol. Educ.*, vol. **12**, no. 6, pp. 549–562, doi: 10.3390/ejihpe12060041 (2022).
- [4] Yendell, A. Clemens, V., Schuler, J. & Decker, O. "What makes a violent mind? The interplay of parental rearing, dark triad personality traits and propensity for violence in a sample of German adolescents," *PloS One*, vol. **17**, no. 6, p. e0268992, doi: 10.1371/journal.pone.0268992 (2022).
- [5] Paulhus, D. L. & Williams, K. M. "The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy," *J. Res. Personal.*, vol. **36**, no. 6, pp. 556–563, doi: 10.1016/S0092-6566(02)00505-6 (2002).
- [6] Jonason, P. & Webster, G. "The Dirty Dozen: A Concise Measure of the Dark Triad," *Psychol. Assess.*, vol. **22**, pp. 420–32, doi: 10.1037/a0019265 (2010).
- [7] Pailing, A. J., Boon, J. & Egan, V. "Personality, the Dark Triad and violence," *Personal. Individ. Differ.*, vol. **67**, pp. 81–86, doi: 10.1016/j.paid.2013.11.018 (2014).
- [8] Raine, A. & Glenn, A. L. *Psychopathy: An Introduction to Biological Findings and Their Implications*, vol. **1**. New York University Press, doi: 10.18574/nyu/9780814777053.001.0001 (2014).
- [9] Tetreault, C., Bates, E. A., & Bolam, L. T., "How Dark Personalities Perpetrate Partner and General Aggression in Sweden and the United Kingdom," *J. Interpers. Violence*, vol. **36**, no. 9–10, pp. NP4743–NP4767, doi: 10.1177/0886260518793992 (2021).

- [10] Levenson, M. R., Kiehl, K. A. & Fitzpatrick, C. M. "Assessing psychopathic attributes in a noninstitutionalized population," *J. Pers. Soc. Psychol.*, vol. **68**, no. 1, pp. 151–158, doi: 10.1037//0022-3514.68.1.151 (1995).
- [11] Wai, M. & Tiliopoulos, N. "The affective and cognitive empathic nature of the dark triad of personality," *Personal. Individ. Differ.*, vol. **52**, no. 7, pp. 794–799, doi: 10.1016/j.paid.2012.01.008 (2012).
- [12] Houlcroft, L., Bore, M. & Munro, D. "Three faces of Narcissism," *Personal. Individ. Differ.*, vol. **53**, no. 3, pp. 274–278, doi: 10.1016/j.paid.2012.03.036 (2012).
- [13] Campbell, W. K., Reeder, G. D., Sedikides, C. & Elliot, A. J. "Narcissism and Comparative Self-Enhancement Strategies," *J. Res. Personal.*, vol. **34**, no. 3, pp. 329–347, doi: 10.1006/jrpe.2000.2282 (2000).
- [14] Lee, K. Ashton, M. C., Wiltshire, J. Bourdage, J. S., Visser, B. A. & Gallucci, A. "Sex, Power, and Money: Prediction from the Dark Triad and Honesty–Humility," *Eur. J. Personal.*, vol. **27**, no. 2, pp. 169–184, doi: 10.1002/per.1860 (2013).
- [15] Furnham, A. Richards, S. Rangel, L. & Jones, D. N. "Measuring malevolence: Quantitative issues surrounding the Dark Triad of personality," *Personal. Individ. Differ.*, vol. **67**, pp. 114–121, doi: 10.1016/j.paid.2014.02.001 (2014).
- [16] Barry, C. T., Grafeman, S. J., K. Adler, K. & Pickard, J. D. "The relations among narcissism, self-esteem, and delinquency in a sample of at-risk adolescents," *J. Adolesc.*, vol. **30**, no. 6, pp. 933–942, doi: 10.1016/j.adolescence.2006.12.003 (2007).
- [17] Al Ain, S. Carré, A. Fantini-Hauwel, C.J.,-Y. Boudouin, and C. Besche-Richard, "What is the emotional core of the multidimensional Machiavellian personality trait?," *Front. Psychol.*, vol. **4**, Accessed: May 06, 2023. [Online]. Available: <https://www.frontiersin.org/articles/10.3389/fpsyg.2013.00454> (2013)
- [18] Bouchard, T. J. "Studies in Machiavellianism. Edited by R. Christie and F. L. Geis. (New York: Academic Press, 1970. Pp. xii, 415. \$12.50.)." *Am. Polit. Sci. Rev.*, vol. **67**, no. 1, pp. 204–205, doi: 10.2307/1958540 (1973).
- [19] Ali, F. Amorim, I. S. & Chamorro-Premuzic, T. "Empathy deficits and trait emotional intelligence in psychopathy and Machiavellianism," *Personal. Individ. Differ.*, vol. **47**, no. 7, pp. 758–762, doi: 10.1016/j.paid.2009.06.016 (2009).
- [20] Christie, R. & Geis, F. L. *Studies in Machiavellianism. Academic Press*, (2013).
- [21] Jonason, P. K. & Tost, J. "I just cannot control myself: The Dark Triad and self-control," *Personal. Individ. Differ.*, vol. **49**, no. 6, pp. 611–615, doi: 10.1016/j.paid.2010.05.031 (2010).
- [22] Yong, F. L. "Self-concepts, locus of control, and Machiavellianism of ethnically diverse middle school students who are gifted," *Roepers Rev.*, vol. **16**, no. 3, pp. 192–194, doi: 10.1080/02783199409553571 (1994).
- [23] Jones, D. N. & Figueredo, A. J. "The Core of Darkness: Uncovering the Heart of the Dark Triad," *Eur. J. Personal.*, vol. **27**, no. 6, pp. 521–531, doi: 10.1002/per.1893 (2013).
- [24] Warburton, W. A. & Anderson, C. A. "Aggression, Social Psychology of," in *International Encyclopedia of the Social & Behavioral Sciences (Second Edition)*, J. D. Wright, Ed., Oxford: Elsevier, pp. 373–380. doi: 10.1016/B978-0-08-097086-8.24002-6 (2015).
- [25] López-Gómez, I. Chaves, C. & Vázquez, C. "Life Satisfaction," in *The Wiley Encyclopedia of Personality and Individual Differences*, John Wiley & Sons, Ltd, pp. 275–280. doi: 10.1002/9781118970843.ch224 (2020).
- [26] Kanemasa, Y. Miyagawa, Y. & Arai, T. "Do the Dark Triad and psychological intimate partner violence mutually reinforce each other? An examination from a four-wave longitudinal study," *Personal. Individ. Differ.*, vol. **196**, p. 111714, doi: 10.1016/j.paid.2022.111714 (2022).
- [27] Methot-Jones, T. Book, A. & Gauthier, N. Y. "Less than human: psychopathy, dehumanization, and sexist and violent attitudes towards women," *Personal. Individ. Differ.*, vol. **149**, pp. 250–260, doi: 10.1016/j.paid.2019.06.002 (2019).
- [28] Figueredo, A. J., Gladden, P. R., Sisco, M. M., Patch, E. A. & Jones, D. N. "The Unholy Trinity: The Dark Triad, Sexual Coercion, and Brunswik-Symmetry," *Evol. Psychol.*, vol. **13**, no. 2, p. 147470491501300208, doi: 10.1177/147470491501300208 (2015).
- [29] Walker, J. & Bowes, N. "The evaluation of violent thinking in adult offenders and non-offenders using the Maudsley Violence Questionnaire," *Crim. Behav. Ment. Health*, vol. **23**, no. 2, pp. 113–123, doi: 10.1002/cbm.1861 (2013).
- [30] Jones, R. M., Van Den Bree, M. Zammit, S. & Taylor, P. J. "The Relationship Between the Big Five Personality Factors, Anger-hostility, and Alcohol and Violence in Men and Women: A Nationally Representative Cohort of 15,701 Young Adults," *J. Interpers. Violence*, vol. **37**, no. 11–12, pp. NP8559–NP8581, doi: 10.1177/0886260520978178 (2022).
- [31] Mohamedamin, P. F. & Fatahi, N. "Relationship Between Personality Traits and Violence Involvement –a Study of High School Students in Northern Iraq," *Acta Inform. Medica*, vol. **30**, no. 3, pp. 213–219, doi: 10.5455/aim.2022.30.213-219 (2022).
- [32] Muris, P. Merckelbach, H. Otgaar, H. & Meijer, E. "The Malevolent Side of Human Nature," *Perspect. Psychol. Sci. J. Assoc. Psychol. Sci.*, vol. **12**, no. 2, pp. 183–204, doi: 10.1177/1745691616666070 (2017).
- [33] Klimstra, T. A., Sijtsema, J. J., Henrichs, J. & Cima, M. "The Dark Triad of personality in adolescence: Psychometric properties of a concise measure and associations with adolescent adjustment from a multi-informant perspective," *J. Res. Personal.*, vol. **53**, pp. 84–92, doi: 10.1016/j.jrp.2014.09.001 (2014).
- [34] Suárez, A. F., Perez, B., Herrero, J. Basterretxea, J. J., Rodreguze-Diaz, F.J. "The role of psychopathic traits among intimate partner-violent men: A systematic review," *Rev. Iberoam. Psicol. Salud*, vol. **9**, no. 2, p. 84, doi: 10.23923/j.rips.2018.02.017 (2017).
- [35] Dokkedahl, S. Kok, R. N., Murphy, S. Kristensen, T. R., Bech-Hansen, D. & Elklit, A. "The psychological subtype of intimate partner violence and its effect on mental health: protocol for a systematic review and meta-analysis," *Syst. Rev.*, vol. **8**, no. 1, p. 198, doi: 10.1186/s13643-019-1118-1 (2019).
- [36] Sardinha, L. Maheu-Giroux, M. Stöckl, H. Meyer, S. R. & García-Moreno, C. "Global, regional, and national prevalence estimates of physical or sexual, or both, intimate partner violence against women in 2018," *The Lancet*, vol. **399**, no. 10327, pp. 803–813, doi: 10.1016/S0140-6736(21)02664-7 (2022).
- [37] Barbara, G. "Intimate Partner Violence in the COVID-19 Era: A Health, Psychological, Forensic and Legal Perspective," *Int. J. Environ. Res. Public Health*, vol. **19**, no. 9, Art. no. 9, doi: 10.3390/ijerph19094973 (2022).
- [38] Brugués, G. & Caparrós, B. "Dysfunctional personality, Dark Triad and moral disengagement in incarcerated offenders: implications for recidivism and violence," *Psychiatry Psychol. Law Interdiscip. J. Aust. N. Z. Assoc. Psychiatry Psychol. Law*, vol. **29**, no. 3, pp. 431–455, doi: 10.1080/13218719.2021.1917011 (2022).
- [39] Dhinra, K. & Boduszek, D. "Psychopathy and criminal behaviour: a psychosocial research perspective," *J. Crim. Psychol.*, vol. **3**, no. 2, pp. 83–107, doi: 10.1108/JCP-06-2013-0014 (2013).
- [40] Harris, P. B., Boccaccini, M. T. & Rice, A. K. "Field measures of psychopathy and sexual deviance as predictors of recidivism among sexual offenders," *Psychol. Assess.*, vol. **29**, no. 6, pp. 639–651, doi: 10.1037/pas0000394 (2017).
- [41] Rawatlat, N. "Antisocial personality disorder and Dark Tetrad personality traits, violent crime, and recidivism: A systematic review, Accessed: May 21, 2023. [Online]. Available: <https://repository.up.ac.za/handle/2263/81178> (2021)
- [42] Hare, R. D. "Psychopathy as a risk factor for violence," *Psychiatr. Q.*, vol. **70**, pp. 181–197, doi: 10.1023/A:1022094925150 (1999).
- [43] Rauthmann, J. F. "The Dark Triad and Interpersonal Perception: Similarities and Differences in the Social Consequences of Narcissism, Machiavellianism, and Psychopathy," *Soc. Psychol. Personal. Sci.*, vol. **3**, no. 4, pp. 487–496, doi: 10.1177/1948550611427608 (2012).
- [44] Kakamad, K. Mawlod, K. S. & Mohammed, M. H. "Personality Traits and Language Learning Strategies among EFL Students," *Passer J. Basic Appl. Sci.*, vol. **6**, no. 1, pp. 185–191, doi: 10.24271/psr.2024.425624.1422 (2024).
- [45] Yue, C. & Xu, X. "Review of Quantitative Methods Used in Chinese Educational Research, 1978–2018," *ECNU Rev. Educ.*, vol. **2**, no. 4, pp. 515–543, doi: 10.1177/2096531119886692 (2019).
- [46] Taherdoost, H. "Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research," *Int. J. Acad. Res. Manag. IJARM*, vol. **5**, 2016, Accessed: [Online]. Available: <https://hal.archives-ouvertes.fr/hal-02546796> (2022)
- [47] Showkat, N. & Parveen, H. "Non-Probability and Probability Sampling," *e-PG Pathshala* pp. 1–9 (2017).
- [48] Boduszek, D. Debowska, A. Sherretts, N. & Willmott, D. "Psychopathic Personality Traits Scale (PPTS): Construct Validity of the Instrument in a Sample of U.S. Prisoners," *Front. Psychol.*, vol. **9**, Accessed: Sep. 26, 2022.

- [Online]. Available: <https://www.frontiersin.org/articles/10.3389/fpsyg.2018.01596> (2018).
- [49] Plutchik, R. & van Praag, H. M. "A self-report measure of violence risk, II," *Compr. Psychiatry*, vol. **31**, no. 5, pp. 450–456, doi: 10.1016/0010-440X(90)90031-M (1990).
- [50] Jones, D. N. & Neria, A. L. "The Dark Triad and dispositional aggression," *Personal. Individ. Differ.*, vol. **86**, pp. 360–364, doi: 10.1016/j.paid.2015.06.021 (2015).
- [51] Bergström, H. & Farrington, D. P. "Psychopathic personality and criminal violence across the life-course in a prospective longitudinal study: Does psychopathic personality predict violence when controlling for other risk factors," *J. Crim. Justice*, vol. **80**, p. 101817, doi: 10.1016/j.jcrimjus.2021.101817 (2022).
- [52] Furnham, A. Richards, S. C. & Paulhus, D. L. "The Dark Triad of Personality: A 10 Year Review," *Soc. Personal. Psychol. Compass*, vol. **7**, no. 3, pp. 199–216, doi: 10.1111/spc3.12018 (2013).
- [53] Shagufta, S. "Psychopathy Predicting Violent Criminal Behaviour among Adult Offenders," *Psychol. Av. Discip.*, vol. **14**, no. 1, pp. 75–83, doi: 10.21500/19002386.4316 (2020).
- [54] Estrada, S. Cinguina, M. & Baskin-Sommers, A. "The Role of Exposure to Violence and Psychopathy on Violent Crime Perpetration," *J. Psychopathol. Behav. Assess.*, vol. **43**, no. 2, pp. 320–331, doi: 10.1007/s10862-020-09834-3 (2021).
- [55] Hemphill, J. F., R. Hare, D. & Wong, S. "Psychopathy and recidivism: A review," *Leg. Criminol. Psychol.*, vol. **3**, no. 1, pp. 139–170, doi: 10.1111/j.2044-8333.1998.tb00355.x (1998).
- [56] Långström, N. & Grann, M. "Psychopathy and violent recidivism among young criminal offenders," *Acta Psychiatr. Scand.*, vol. **106**, no. s412, pp. 86–92, doi: 10.1034/j.1600-0447.106.s412.19.x (2002).
- [57] Hare, R. D. & McPherson, L. M. "Violent and aggressive behavior by criminal psychopaths," *Int. J. Law Psychiatry*, vol. **7**, no. 1, pp. 35–50, doi: 10.1016/0160-2527(84)90005-0 (1984).
- [58] Anderson, N. E. & Kiehl, K. A. "Psychopathy & Aggression: When Paralimbic Dysfunction Leads to Violence," *Curr. Top. Behav. Neurosci.*, vol. **17**, pp. 369–393, doi: 10.1007/7854_2013_257 (2014).
- [59] Babiak, P. Neumann, C. S. & Hare, R. D. "Corporate psychopathy: Talking the walk," *Behav. Sci. Law*, vol. **28**, no. 2, pp. 174–193, doi: 10.1002/bsl.925 (2010).
- [60] Boduszek, D. Debowska, A. Dhingra, K. & DeLisi, M. "Introduction and validation of Psychopathic Personality Traits Scale (PPTS) in a large prison sample," *J. Crim. Justice*, vol. **46**, pp. 9–17, doi: 10.1016/j.jcrimjus.2016.02.004 (2016).
- [61] Hassall, J. Boduszek, D. & Dhingra, K. "Psychopathic traits of business and psychology students and their relationship to academic success," *Personal. Individ. Differ.*, vol. **82**, pp. 227–231, doi: 10.1016/j.paid.2015.03.017 (2015).
- [62] Carton, H. & Egan, V. "The dark triad and intimate partner violence," *Personal. Individ. Differ.*, vol. **105**, pp. 84–88, doi: 10.1016/j.paid.2016.09.040 (2017).
- [63] Emmons, R. A. "Relationship between narcissism and sensation seeking," *Psychol. Rep.*, vol. **48**, pp. 247–250, doi: 10.2466/pr0.1981.48.1.247 (1981).
- [64] Dickey, A. "The relationship between sensation seeking, psychopathy, and deception," *Mod. Psychol. Stud.*, vol. **19**, no. 2, [Online]. Available: <https://scholar.utc.edu/mps/vol19/iss2/2> (2014).
- [65] Zuckerman, M. Sensation seeking and risky behavior. in Sensation seeking and risky behavior. Washington, DC, US: American Psychological Association, pp. xix, 309. doi: 10.1037/11555-000 (2007).
- [66] Babakr, Z. & Fatahi, N. "Big Five personality traits and risky decision-making: A study of behavioural tasks among college students," *Passer J. Basic Appl. Sci.*, vol. **5**, no. 2, pp. 298–303, doi: 10.24271/psr.2023.387309.1263 (2023).
- [67] Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., Moffitt, T. E. & Caspi, A. "Low Self-Esteem Is Related to Aggression, Antisocial Behavior, and Delinquency," *Psychol. Sci.*, vol. **16**, no. 4, pp. 328–335, doi: 10.1111/j.0956-7976.2005.01535.x (2005).
- [68] Ostrowsky, M. K. Self-medication and Violent Behavior. *LFB Scholarly Pub.*, (2009).
- [69] Ostrowsky, M. K. "Are violent people more likely to have low self-esteem or high self-esteem?" *Aggress. Violent Behav.*, vol. **15**, no. 1, pp. 69–75, doi: 10.1016/j.avb.2009.08.004 (2010).
- [70] Jonason, P. K. & Davis, M. D. "A gender role view of the Dark Triad traits," *Personal. Individ. Differ.*, vol. **125**, pp. 102–105, doi: 10.1016/j.paid.2018.01.004 (2018).
- [71] Jonason, P. K., Strosser, G. L., Kroll, C. H., Duineveld, J. J. & Baruffi, S. A. "Valuing myself over others: The Dark Triad traits and moral and social values," *Personal. Individ. Differ.*, vol. **81**, pp. 102–106, doi: 10.1016/j.paid.2014.10.045 (2015).
- [72] Eagly, A. H. & Wood, W. "Social Role Theory of Sex Differences," in *The Wiley Blackwell Encyclopedia of Gender and Sexuality Studies*, John Wiley & Sons, Ltd, pp. 1–3, doi: 10.1002/9781118663219.wbegss183 (2016).
- [73] Newman, B. M. & Newman, P. R. *Theories of Human Development*, 2nd ed., doi: 10.4324/9781315871240 (New York: Psychology Press, 2015).
- [74] Schmitt, D. P., Long, A. E., McPhearson, A. O'Brien K., Remmert, B. & Shah, S. H. "Personality and gender differences in global perspective," *Int. J. Psychol.*, vol. **52**, no. S1, pp. 45–56, doi: 10.1002/ijop.12265 (2017).
- [75] Vernon, P. A., Villani, V. C., Vickers, L. C. & Harris, J. A. "A behavioral genetic investigation of the Dark Triad and the Big 5," *Personal. Individ. Differ.*, vol. **44**, pp. 445–452, doi: 10.1016/j.paid.2007.09.007 (2008).
- [76] Allroggen, M. & Ludolph, A. "Entwicklungspsychopathologie narzisstischer Störungen," *PPmP - Psychother. · Psychosom. · Med. Psychol.*, vol. **61**, no. 11, pp. 453–458, doi: 10.1055/s-0031-1291209 (2011).