

Emotion recognition and moral utilitarianism in the dark triad of personality

Rozpoznawanie emocji i decyzje o charakterze moralnym a ciemna triada osobowości

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Abstract

Introduction: In the last decade, the dark triad of personality has attracted a great deal of attention in studies. However, little is known about the emotional and moral defects in such circumstances.

Aim of the study: To evaluate emotion recognition and utilitarianism in moral decision-making in people with dark triad personality tendencies.

Material and methods: Three hundred and ninety girl students (with an average age of 22.7 years and a standard deviation of 2.66) were selected in 2017. Then 120 of them were selected for the second stage according to cluster analysis on the *Dark Triad Scale* (SD3); as Machiavellian, psychopathic, and narcissistic. Finally, participants were studied in emotion recognition using the *International Affective Picture System* (IAPS) and moral decision-making.

Results: The results showed that there is a significant difference between the dark triad personality groups in emotion recognition and moral decision making. Participants with dark triad traits have lower performance in emotion recognition. The comparison groups in impersonal moral decision-making showed that participants with psychopathic tendencies showed more utilitarianism.

Conclusions: It can be concluded that people with Machiavellian, psychopathic, and narcissistic personality tendencies, as dark dimensions of personality, have deficiencies in emotional aspects and moral decision making.

Key words: decision-making, facial recognition, personality.

Introduction

The dark triad traits refer to narcissistic, Machiavellian, and psychopathic personality structures, which are independent but relevant to each other [1]. Narcissism refers to exaggerated feelings of oneself, an inflated sense of one's own importance, merit, mastery, and superiority [2]. Psychopathy includes impulsivity, thrill-seeking, and lack of anxiety and empathy [1]. Finally, Machiavellianism refers to exploiting others in one's interest through adopting maladaptive interpersonal style and also hegemonic behaviour, lack of intimacy, and cruelty [3].

A defect in emotion experience has been considered as the main common factor among the dark triad traits [4]. Research on the relationship between psychopathy and emotional experiences has benefited from heterogeneous models. Accordingly, psychopathy contains two

subgroups: primary psychopathy (including selfishness, cruelty, lack of interpersonal affection, attractiveness, and brutality) and secondary psychopathy (including antisocial behaviour and lifestyle) [5]. Primary psychopathy is negatively correlated with emotions, and people with high scores in psychopathy tend to pay attention to their emotions in a descending way [6]. The researchers have considered the findings as evidence showing that psychopathy may have a foundation of emotional experiences deficiencies that creates a lack of sensitivity towards emotional stimulus [7].

There are limitations in investigating the relationship between dark traits and emotional experience deficiencies. First, most of the research has been focused mainly on only one of the dark triad traits [8], and empathy is the only emotional trait which has been paid attention

to [9]. What is completely obvious is that the dark triad traits are correlated with low levels of empathy and negative emotional experiences and, particularly, high scores in psychopathy cause difficulty in experiencing the negative emotions [10], mental toughness, anxiety sensitivity, intolerance to uncertainty, and emotion regulation [11, 12], and difficulty in processing the emotional experiences may play a fundamental role in the formation of dark traits, especially psychopathic tendencies. However, the role of emotional experience defects, specifically emotion recognition in association with dark traits, have not been regarded a lot [13].

Meanwhile, new approaches are focused on the role of emotion in moral decision making [14]. According to this approach, emotional processes have an essential function in a person's decision making [15]. In order to explain the role of emotional processes, Greene suggests Dual Process Theory in moral decision-making, which includes the effects of both cognitive and emotional processes [14]. The primary process contains a rational and conscious assessment of events, which creates utilitarian responses. It is believed that the system is activated when the personal/emotional involvement in decision-making decreases. The secondary system consists of affective responses and the result of situation's emotional conditions. In these cases, responses tend to be irrational and non-utilitarian [16].

Research into the types of emotional defects that lead to utilitarian tendencies do not represent any evidence [17]. As a feature, subclinical disgusting characters have empathy deficiency [18] and a defect in prosocial behaviour [19]. In line with this reasoning, the present study focused on the dark triad traits [1]. Overall, the dark traits have a variety of impacts on honesty/philanthropy and have different levels of defects in empathy. Because empathy deficit probably leads to utilitarian tendencies in dark traits, it is suggested that psychopathy is the strongest predictor of utilitarianism. Conversely, the trait of narcissism is the weakest empathy-correlated factor [10, 18], and it is predicted that it is the weakest predictor of utilitarianism as well.

According to what has been stated, dark traits have attracted lots of attention in recent years and have led to shaping systematic networks of studies that show the role of emotion in dark traits [13]. In the present study the triad traits of narcissism, psychopathy, and Machiavellianism have been considered as subclinical traits in the general population. Individuals with these dark

traits are specified because of disagreement, cruelty, dishonesty, hypocrisy, and aggression; they are more likely to live exploitatively rather than empathetically, along with a lack of attention to social benefits [20, 21].

Research studying the relationship between dark traits and some emotional experiences have not evaluated the traits correctly and instead studied the emotional experiences and dark traits more in a clinical context [22] or the imprisoned criminal population [23]. Regarding the role of emotion in the relationship with dark triad traits and also the hypothesis of the existence of a relationship between dark triad traits and deficiency in emotion recognition [24], the conflicting findings about the relationship between emotional experiences and dark triad [18], and also the findings that also indicate that brain structures related to emotion, social cognition, and cognitive areas of brain are involved in personal and impersonal moral judgment [14], this study tried to ascertain to what extent the dark traits have a deficit in recognition of emotions. Also, since it was stated that dark traits have deficiency in empathy and emotion, the other aim of this study was to analyse utilitarianism in the moral decision-making of people with dark traits.

Material and methods

Ethical provisions

All procedures performed in studies involving human participants were in accordance with the ethical standards of the Institutional and National Research Committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

Participants and procedure

The participants were 390 (were selected based on the Cohen table) female students in Bu Ali Sina University in 2017 (with an average age of 22.7 years and a standard deviation of 2.66), who were chosen among university students through multistage cluster sampling. On the basis of cluster sampling, first five colleges were selected, then from each college nine classes were randomly selected, and data were collected from students in these classes. After the findings' primary analysis, based on the cluster analysis of *Short Dark Triad* (SD3), scores of the three scales were calculated and 120 participants were selected from the early participants, in this way,

30 participants were randomly assigned to each of the groups.

Due to not manipulating the variables and comparing the groups, this study is descriptive post-event research (causal-comparative). According to the type of research that was causal/comparative, the number of final samples in this type of research was stated to be at least 30 participants. In accordance with the guidelines for the ethical treatment of human participants of the Iranian Psychological Association, all participants were informed fully about the aims of the research, and formal consent was obtained prior to commencing with data collection. Then they were categorised in four groups of high psychopathic, high Machiavellian, and high narcissistic tendencies and a control group. In the next step, the four groups' participants were invited to the Psychology Laboratory to measure emotion recognition and moral decision making. Then the researcher explained the study's procedure to the participants of the four groups, who were finally studied for their recognition of images of seven major emotions and personal and impersonal moral decision making. It should be mentioned that the participants of the second phase were studied individually. Data from five participants were unused. Instead of these, alternative participants were used. Missing data were excluded from the final sample and replaced by new participants who were assigned instead of excluded participants.

Measures

Short Dark Triad (SD3)

The SD3 scale includes 27 items and three subscales. Each of the three subscales in this questionnaire contains nine items, which are used to assess the three personality traits: Machiavellianism, narcissism and psychopathy. The items in this scale are scored on the basis of participants' agreement or disagreement, considering a five-degree Likert scale: from 1 (*strongly disagree*) to 5 (*strongly agree*). In Jones and Paulhus's [26] study the α coefficients' range was 0.68 to 0.74. The researchers performed this scale on different large population samples ($N = 768$). Peer validation was also carried out on 65 university students [26]. The subscales showed Cronbach's α coefficients of 0.70 to 0.80 in a cross-validation sample [26]. 0.77 to 0.84 was reported for retest coefficients in a two-week interval [27].

In order to prepare the Persian version of the SD3, two experts on English language translated

the questionnaire into fluent Persian, and then the translated text was edited. In the next step, the translated version was translated into English language again and then the two versions were compared. Then the questionnaires were given to two psychologists to examine their validity. After comparing the two translated and the main versions and editing, the questionnaire was conducted on 40 university students who were similar to the goal population, and after receiving essential feedback on the items' content and fixing the weaknesses, the final version of the questionnaire was prepared. *Short Dark Triad's* psychometric properties in Iranian society indicated its desirable characteristics. The Cronbach's α coefficients for the three subscales – psychopathy, Machiavellianism, and narcissism – were respectively 0.69, 0.71, and 0.82. The retest coefficients were reported as 0.79, 0.73, and 0.66, which shows the desirable stability of this scale [25].

The International Affective Picture System (IAPS)

In order to measure the emotional memory, a set of slides (including the images with six main emotions) selected from the collection of Ekman & Friesen's images of facial expressions of emotions [28] was used, which has been already used widely in a series of studies and its emotional load has been confirmed. The collection contains more than 240 images for which the affective norms (pleasantness, arousal, and dominance) have been obtained separately in 18 studies and they cause main universal emotions such as: anger, hatred, sorrow, happiness, excitement, and peace [29].

Moral decision making

In order to evaluate the moral judgment in the present study, Greene *et al.*'s [14] moral stories were used, which are divided into two categories: personal and impersonal. The moral personal stories have three criteria: 1. They cause serious bodily injury. 2. This injury harms a particular person. 3. They act in a way (indirectly) that is not originated in deviation of the current threat to another group. The stories which do not have these three criteria are considered impersonal. The frequent usage of these stories by philosophers, psychologists, and neurology specialists in the field of ethics [14, 30] indicates the validity of these stories in evaluating moral judgment. The ecological and structural validity of the tools have been

studied by Amiri, Hasani, and Abdollahi [31, 32]. On the basis of scoring moral decision making (personal and impersonal), the five-degree Likert scale, from 5 (*strongly agree*) to 1 (*strongly disagree*), was applied, in which higher scores indicate greater utilitarianism

Data analyses

The obtained data were analysed using multivariate analysis of variance, univariate ANOVA, and Scheffe’s *post hoc* test.

Results

The mean and standard deviation for the four personality groups’ variables are listed in Table 1.

Multivariate analysis of variance was used in order to compare the groups in emotion recog-

nition and moral decision-making. The results of the M box test showed that the assumption of the sameness of matrix of the dependent variables’ variance-covariance was true, and so multivariate analysis of variance could be applied. The results of multivariate tests of Wilks’ λ (0.38; $F = 1.97$; $P < 0.05$) showed that there is a significant difference between the four personality groups, at least in one of the dimensions of emotion recognition and moral decision making.

Considering the significance of group differences, one-way analysis of variance and Scheffe’s *post hoc* test were used to determine in which groups and at which levels of variables the differences are, and the results are shown in Tables 2 and 3.

According to the results of Table 3 it can be said that the comparison of the three groups

Table 1. The descriptive indices of main emotions and decision-making

Group	Happiness	Fear	Excitement	Normal	Anger
	Mean (standard deviation)	Mean (standard deviation)	Mean (standard deviation)	Mean (standard deviation)	Mean (standard deviation)
Machiavellianism	2.78 (0.42)	2.92 (2.1)	6.64 (1.59)	5.78 (1.62)	4.00 (1.41)
Narcissism	2.80 (0.56)	2.53 (2.44)	6.80 (1.89)	6.20 (1.37)	3.60 (1.68)
Psychopathy	2.92 (0.26)	3.35 (2.30)	7.35 (0.92)	5.71 (2.39)	3.57 (2.44)
Control	3.00 (0.00)	5.20 (1.01)	7.13 (1.40)	8.06 (1.33)	4.20 (1.32)
Total	2.87 (0.37)	3.51 (2.22)	6.98 (1.49)	6.46 (1.93)	3.48 (1.73)
	Sorrow	Impersonal moral story	Personal moral story	Hatred	
Machiavellianism	5.78 (1.88)	3.42 (1.45)	1.64 (0.84)	2.07 (1.14)	
Narcissism	6.33 (1.58)	3.86 (1.18)	1.86 (0.83)	1.80 (1.08)	
Psychopathy	7.00 (1.10)	4.78 (0.42)	1.35 (0.63)	2.35 (0.74)	
Control	7.13 (1.06)	4.26 (0.79)	1.66 (0.89)	2.80 (0.41)	
Total	6.56 (1.51)	4.08 (1.12)	1.63 (0.80)	2.25 (0.94)	

Table 2. The results of the four groups’ one-way analysis of variance in the dimensions of main emotions and moral decision-making

Dependent variable	Source of changes	Sum of squares	Mean of squares	Degree of freedom	F	Significance level	(η^2)
Anger	Intergroup	4.17	1.39	3	0.44	0.719	0.02
Normal	Intergroup	53.88	17.96	3	6.04	0.001	0.25
Excitement	Intergroup	4.42	1.47	3	0.64	0.587	0.03
Fear	Intergroup	62.20	20.73	3	5.08	0.004	0.22
Happiness	Intergroup	0.46	0.15	3	1.09	0.357	0.06
Sorrow	Intergroup	16.80	5.60	3	2.66	0.037	0.13
Hatred	Intergroup	8.17	2.72	3	3.42	0.023	0.16
Personal moral story	Intergroup	1.90	0.63	3	0.96	0.416	0.05
Impersonal moral story	Intergroup	14.11	4.70	3	4.34	0.008	0.19

Table 3. The results of the three groups' Scheffe's *post hoc* test in dimensions of main variables and moral judgement

Variable	Source of comparison	Mean differences	Standard error	Variable	Source of comparison	Means differences	Standard error
Anger	Machiavellianism-Narcissism	0.40	0.65	Sorrow	Machiavellianism-Narcissism	0.54-	0.53
	Machiavellianism-Psychopath	0.42	0.66		Machiavellianism-Psychopath	*1.21-	0.54
	Machiavellianism-Control	0.20-	0.65		Machiavellianism-Control	*1.34-	0.53
	Narcissism-Psychopath	0.02	0.65		Narcissism-Psychopath	0.66-	0.53
	Narcissism-Control	0.60-	0.64		Narcissism-Control	0.80-	0.52
	Psychopath-Control	0.62-	0.65		Psychopath-Control	0.13-	0.53
Normal	Machiavellianism-Narcissism	0.41-	0.64	Hatred	Machiavellianism-Narcissism	0.27	0.33
	Machiavellianism-Psychopath	0.07	0.65		Machiavellianism-Psychopath	0.28-	0.33
	Machiavellianism-Control	*2.28-	0.64		Machiavellianism-Control	0.72-	0.33
	Narcissism-Psychopath	0.48	0.64		Narcissism-Psychopath	0.55-	0.33
	Narcissism-Control	*1.86-	0.62		Narcissism-Control	*1.00-	0.32
	Psychopath-Control	*2.35-	0.64		Psychopath-Control	0.44-	0.33
Excitement	Machiavellianism-Narcissism	0.15-	0.55	Personal moral stories	Machiavellianism-Narcissism	0.22-	0.30
	Machiavellianism-Psychopath	0.71-	0.56		Machiavellianism-Psychopath	0.28	0.30
	Machiavellianism-Control	0.49-	0.55		Machiavellianism-Control	0.02-	0.30
	Narcissism-Psychopath	0.55-	0.55		Narcissism-Psychopath	0.50	0.30
	Narcissism-Control	0.33-	0.55		Narcissism-Control	0.20	0.29
	Psychopath-Control	0.22	0.55		Psychopath-Control	0.30-	0.30
Fear	Machiavellianism-Narcissism	0.40	0.75	Impersonal moral stories	Machiavellianism-Narcissism	0.43-	0.38
	Machiavellianism-Psychopath	0.42	0.76		Machiavellianism-Psychopath	*1.35-	0.39
	Machiavellianism-Control	0.20-	0.75		Machiavellianism-Control	0.83-	0.38
	Narcissism-Psychopath	0.02	0.75		Narcissism-Psychopath	0.91-	0.38
	Narcissism-Control	0.60-	0.73		Narcissism-Control	0.40-	0.38
	Psychopath-Control	0.62-	0.75		Psychopath-Control	0.51	0.38
Happiness	Machiavellianism-Narcissism	0.41-	0.14				
	Machiavellianism-Psychopath	0.07	0.14				
	Machiavellianism-Control	*2.28-	0.14				
	Narcissism-Psychopath	0.48	0.14				
	Narcissism-Control	*1.86-	0.14				
	Psychopath-Control	*2.35-	0.14				

**p* < 0.05

represented significant differences in some of the aspects of emotion recognition and moral decision-making, and compared to the control group, the participants with Machiavellian, narcissistic, or psychopathic traits had lower performance in recognising the photos related to the seven main emotions, and this difference was significant in recognising the images with normal emotional load and fear. Also, comparing the psychopathic participants and the control group, participants with Machiavellian traits had lower performance in sorrow emotion, and narcissistic participants had lower performance in the emotion of hatred. The comparison of impersonal moral decision-making of the groups indicated that participants with psychopathic tendencies had higher scores.

Discussion

The aim of this study was to examine emotion recognition and utilitarianism in moral personal/impersonal decision making in dark triad traits. Participants with high scores in dark triad traits are more likely to show defects in expressing and understanding emotional information and more utilitarianism in moral impersonal decision-making.

The negative correlation between emotional experiences, Machiavellianism, and psychopathy is in line with the findings of previous studies [13]. Behavioural genetics research on these relationships has shown that almost all the significant correlations in these cases are ascribable to common genetic factors. This means that the results reflect the significant overlap in genes associated with emotional abilities and dark triad traits. From different theoretical views, the researchers predict that *Dark Triad* traits must be emotionally impaired. However, evolutionary psychologists do not support the conclusion. Instead, the evolutionary perspective suggests that the individual differences represent integrated coordinated systems that facilitate pursuance of the compliance purposes [33].

It seems that the relationship between the dark triad traits and emotional defects indicates the same fact. This means that showing low levels of empathy, little ability or incentive to connect ones' own emotions with those of others, and paying attention to emotions facilitate social hostile strategies that have been formed in the shape of dark triad traits. The external orientation of the people with dark triad traits may in fact show that those who have higher scores in dark triad traits, particularly psychopathy, have

spent less time paying attention to their internal world and focus more on what they receive from the external world instead. In other words, spending much time being worried about the feeling of oneself or the others', which can be vividly seen in dark triad traits, might prohibit the process of chasing rapid life strategies [33, 34]. So, people with dark triad traits only try to fulfil their own goals and egocentric tendencies and pay no attention to others as a result, and they solely try to take advantage of others in their own interests, which is a characteristic that is in contrast with understanding capacity and regulating their own emotions and those of others [35, 36].

In the present study, on the other hand, narcissism showed higher scores in emotion recognition in comparison with psychopathy. Although only some of these relationships were significant, it is consistent with studies that have suggested that narcissism is related to mental well-being as a positive emotional structure [37–40]. As was shown, people with narcissistic tendencies had low performance in recognising hatred, and this finding is consistent with meta-analysis studies that have been carried out using the Five-Factor model of personality [41], which showed that narcissism is strongly associated with lower happiness and negative emotions [42].

People with psychopathic tendencies show more utilitarianism in moral impersonal decision-making. So, impersonal moral decision making is processed in the brain's cognitive areas and accordingly has a different neural basis. Greene *et al.* [14] showed that in comparison with healthy people and patients with neurological-brain lesions (with damage in other parts of the cortex), the ones with ventromedial prefrontal cortex (VMPFC) injuries are more disposed to confirm personal moral violations and maximum good outcomes (i.e. the utilitarian responses). Therefore, lack of emotional perception, which originates in cognitive parts of the brain's injury, and deficiency of emotion in momentary conditions lead to the involvement of moral judgment's first system [14] and finally lead to utilitarianism in moral personal decision-making.

On the basis of Greene's Dual Process [14], impersonal moral decision making's content only engages cognition, and emotion has no impact in this system. If we accept this explanation, the present study's finding is consistent with Valdesolo and DeSteno's [30], which indicated that positive emotion has no influence on im-

personal moral decision-making. The findings correspond perfectly with Dual-Process theory [14], i.e. emotions have no effect on impersonal moral decision-making and the procedure is guided by cognitive processes; as a result, it is followed by utilitarianism.

The logic of the Dual-Process theory suggests that people with high cognitive control avoid non-utilitarian decision-making [43]; accordingly, Moore, Clark, and Kane [44] stated that high cognitive control leads to utilitarianism. However, since the defect in emotional factors has not been considered, this difference was insignificant. Thus, the present finding confirms the view that personal moral decision-making is more involved with emotion, and the result of emotional process engagement in moral personal decision making is utilitarian. But on the other hand, the impersonal moral decision-making is more involved with cognition, and the result of cognitive process engagement in moral impersonal judgment is non-utilitarian. This hypothesis accepts that personality characteristics related to antisocial behaviour have a negative correlation with the development of moral decision-making. Bartels and Pizarro [45] showed that individuals with high antisocial characteristic features use more utilitarian solutions in moral judgment. Some research indicates that a positive correlation between moral utilitarian judgment and the two personality traits of psychopathy and Machiavellianism might exist [46].

Conclusions

The reported findings in the present study were obtained through self-reported data. Future studies are required to compare the self-reported data with findings gathered using other tools, such as informal reports and interviews, and examine them on a larger scale and in different population samples. Therefore, it is suggested that similar research be carried out on other age groups, including teenagers and adults with comparative perspectives. Since dark triad traits are associated with personality dimensions and diverse psychological characteristics, it seems useful to carry out some studies on these various dimensions to create and develop theoretical and empirical views about dark traits and their relationships with other structures, such as social behaviour and personality theories. It should be noted that this study was conducted on a normal population, so extrapolating the obtained results to other populations or clinical groups should be done with caution.

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