



Morality and Psychopathology: Tendencies to Personality Disorders and Some Other Mental Disorders Among Individuals with High and Low Moral Identity

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Abstract

Background: According to the criteria of personality disorders, some disorders, especially the antisocial personality disorder, can be characterized by the hypo-morality and some disorders, especially the obsessive-compulsive personality disorder, can be characterized by the hyper-morality. It seems that both the hyper-morality and the hypo-morality have linkages to different aspects of psychopathology.

Objectives: To better understand the issue, the current study aimed to compare individuals with high and low moral identity in the tendencies to all personality disorders and some other mental disorders.

Methods: From a database that had been gathered from 212 undergraduate university students, 30 students that had the highest moral identity and 24 students that had the lowest moral identity were selected to complete Millon clinical multi-axial inventory-III. The data of the two groups were compared by the multiple analysis of variance statistical method.

Results: The findings indicated that students with the highest moral identity had only higher tendency to the obsessive-compulsive personality disorder while students with the lowest moral identity had higher tendencies to the antisocial personality disorder, narcissistic personality disorders, and somatoform disorders. Nevertheless, in the tendencies to other disorders, a significant difference was not found.

Conclusions: The findings indicated that both very low and very high moral identity might be related to some psychopathological traits. It is in coordination with the emphasis of some philosophers such as Aristotle on the importance of sobriety or the doctrine of the mean for constituting the virtues and the theories of some psychiatrists such as Freud about the role of inflammation of superego in shaping some neurotic reactions. There may be some implications for preventing from both wastage and extremism in educating the moral identity.

Keywords: Antisocial Personality Disorder, Mental Disorders, Moral Identity, Obsessive-Compulsive Personality Disorder, Personality Disorders

1. Background

Studies indicate that frequently doing prosocially or moral behaviors have positive relationships with wellbeing and mental health (1-4) and vice versa, frequently doing antisocial, aggressive, or immoral behaviors have negative relationships with mental health (5, 6). Having frequently violent, immoral, or antisocial behaviors or lack of responsibility and respect to other's right are seen in the characteristics of antisocial personality disorder (7). Charlady asserting the criteria of other disorders in cluster B of personality disorders considered all disorders in this cluster as moral disorders: criteria such as "lack of

empathy" in narcissistic personality disorder, "inappropriate, intense anger" and "instability in interpersonal relationships" in borderline personality disorder, and even "excessive attention seeking" and "inappropriate sexually seductive and provocative behavior" in histrionic personality disorder (8).

Nevertheless, extravagance in morality has its own problems. According to the doctrine of the meaning of Aristotle's ethics, the goodness such as kindness and honesty may be problematic when they practiced in the extreme and the ethical virtues can be made in mean and sobriety (9). In the perspective of Freud also swelled superego make moral anxiety and some neu-

rotic disorders (10). Indeed, many studies confirmed the hyper-morality or hyper-responsibility in the people with obsessive-compulsive disorder (OCD) (11-13). One similarity between OCD and obsessive-compulsive personality disorder (OCPD) is the hyper-morality in both disorders (14). Indeed, being overconscientious, scrupulous, and inflexible about matters of morality, ethics, or values is one of the criteria of OCPD (7).

2. Objectives

Many approaches in moral education intend to increase morality and moral-related variables in the people from childhood, the variables such as moral reasoning, moral emotions, and moral behaviors (15). One of the core moral variables that can be considered as a predictor of other aspects of morality is the moral identity (16, 17). Moral identity is defined as a cognitive schema that a person holds about his or her moral character (18). In searching the literature, any study was not found about the linkage between high or low moral identity and tendencies to personality disorders. The purpose of the present study is to compare the people with high and low moral identity in tendencies to personality disorders. In addition, as a marginal aim, a comparison is made in tendencies to other mental disorders. If the study reveals that individuals with the highest moral identity more have some psychopathological tendencies, it will be an implication for preventing from superfluity in the inspiration of moral identity in moral education.

3. Materials and Methods

3.1. Participants

Participants were selected from the database of a previous author's study (in press) that had been done on the freshmen undergraduate university students (212 students; 164 females, M age: 18.99; SD: 1.16) from Salman Farsi University of Kazerun (Kazerun, Iran) in 2014, a year before administering the present study. One of the measures, which they had completed, was the measure of moral identity. The Z score of the internalization subscale of moral identity measure was used as the inclusion and exclusion criteria to find the participants. People with a Z score $\geq +1$ were selected as a group with high moral identity, people with a Z score ≤ -1 were selected as a group with low moral identity, and other students (a Z score between -1 and +1) were excused from the study.

The test demanded many students from the two groups to complete the Millon clinical multi-axial inventory-III (MCMI-III) individually. 10 students with

high moral identity and 9 students with low moral identity did not participate in the test or cannot be found because of dropout from the university. Finally, 24 students were used as the low moral identity group (seven males, M age: 18.83; SD: 0.96) and 30 students were recruited as the high moral identity group (eight males, M age: 19.13, SD: 1.26). Although a higher sample size is better for such studies, considering the inclusion and exclusion criteria and the non-participation of some students, these numbers of participants were found. All students were in the 4th semester of an undergraduate course at the time of MCMI-III administration. Independent T test showed a high difference between the two groups in moral identity ($t: -25.74; P < 0.0001$).

3.2. Instruments

3.2.1. Millon Clinical Multi-axial Inventory-III (MCMI-III)

For the assessment of tendencies to personality and other mental disorders, MCMI-III (19) was used. Although there is an advice about not using the MCMI-III on normal people (19, 20), the present study did not intend to use the questionnaire for diagnosis. It just views the scores of MCMI-III as tendencies to personality disorders or tendencies to other disorders.

MCMI-III is a self-report scale with 175 true/false items (19). It includes the moderate personality disorder scales (1: schizoid, 2A: avoidant, 2B: depressive, 3: dependent, 4: histrionic, 5: narcissistic, 6A: antisocial, 6B: aggressive or sadistic, 7: compulsive, 8A: passive-aggressive or negativistic, and 8B: self-defeating), severe personality pathology scales (S: schizotypal, C: borderline, and P: paranoid), moderate clinical syndrome scales (A: anxiety, H: somatoform, N: bipolar or manic, D: dysthymia, B: alcohol dependence, T: drug dependence, and R: post-traumatic stress disorder), and severe syndrome scales (SS: thought disorder, CC: major depression, and PP: delusional disorder). It also has some modifying indices (X: disclosure, Y: desirability, Z: debasement, and V: validity). The validity scale must not reach three and the raw scores of other scales change to the base rate (BR) scores (20).

MCMI-III was validated on an Iranian population and its validity and reliability were confirmed. The internal consistency reliability was desirable (schizoid: 0.94, avoidant: 0.96, depressive: 0.77, dependent: 0.92, histrionic: 0.94, narcissistic: 0.95, antisocial: 0.95, aggressive or sadistic: 0.96, compulsive: 0.90, passive-aggressive or negativistic: 0.94, self-defeating: 0.93, schizotypal: 0.93, borderline: 0.95, paranoid: 0.94, anxiety: 0.92, somatoform: 0.95, bipolar or manic: 0.95, dysthymia: 0.95, alcohol dependence: 0.85, drug dependence: 0.91, post-traumatic stress disorder: 0.97, thought disorder: 0.90, major depres-

sion: 0.88, delusional disorder: 0.93, desirability: 0.93, and debasement: 0.95) (21).

3.2.2. The Self-Importance of Moral Identity

For administering “The self-importance of moral identity” (22), first, some moral traits were represented to the respondents (caring, compassionate, fair, friendly, and so on) and then, they responded to 10 questions on a scale from 1 (strongly disagree) to 7 (strongly agree) about the traits. The measure has two subscales: internalization (the degree to which the moral traits are central to the self-concept) and symbolization (the degree to which the traits are reflected in the respondent’s actions in the world). Due to more relationships between the internalization subscale and other moral-related variables (17, 22) and considering the definition of internalization of moral identity, the present study used internalization of moral identity (as moral identity) for grouping the sample. The measure had been translated into Persian and validated on Iranian university students. The validity and reliability of this measure by different methods were desirable and the internal consistency coefficients for internalization and symbolization were 0.79 and 0.78, respectively (23).

3.3. Statistical Analysis

For statistical analysis, multiple analysis of variance (MANOVA) was used to compare the psychopathological variables between the two groups.

3.4. Ethical Considerations

All participants voluntarily participated or did not participate in the study. In addition, the examiners pledged that the individual’s data remain confidential and any participant knows just about his/her data if he/she wants to.

4. Results

No validity (V) scores of MCMI-III reached three, so no questionnaire was omitted from the analysis. Table 1 represents the descriptive indices (mean and standard deviation) of the variables in the two groups and in total.

Non-significant Levene’s test confirms the equality of variances as one of the presuppositions for the analysis of variance (24). Table 2 shows the results of Levene’s test for any variables. This is better to have variables with non-significant Levene’s tests of equality. Except for X, 2A, 4, H, and SS, other variables had no significant F ($P > 0.05$); so, their variances were equal.

Table 3 represents the overall effect of groups on the variables by the different indices of MANOVA. The effect’s significance was low and borderline ($F: 1.632$; $P: 0.11$) but the

Table 1. Descriptive Indices^{a,b}

	Group 1	Group 2	Total
X	68.04 ± 6.44	69.41 ± 5.74	68.79 ± 6.05
Y	66.25 ± 15.55	69.67 ± 22.20	68.15 ± 19.46
Z	35.29 ± 23.81	45.83 ± 23.90	41.15 ± 24.21
1	40.75 ± 19.63	36.26 ± 22.20	38.26 ± 21.03
2A	36 ± 18.70	38 ± 29.29	37.11 ± 24.94
2B	40.58 ± 26.81	45.96 ± 30.36	43.57 ± 28.69
3	36 ± 18.70	38 ± 29.29	37.11 ± 24.94
4	73.83 ± 17.84	72.53 ± 27.1	73.11 ± 23.25
5	61.92 ± 15.41	53.53 ± 18.85	57.26 ± 17.75
6A	40.58 ± 20.53	30.1 ± 19.62	34.75 ± 20.53
6B	37.50 ± 20.23	38.86 ± 17.73	38.26 ± 18.71
7	43.58 ± 24.08	58.43 ± 23.25	51.83 ± 24.55
8A	41.42 ± 26.9	46.56 ± 23.86	44.27 ± 25.14
8B	28.08 ± 21.53	34.7 ± 22.85	31.76 ± 22.45
S	33.58 ± 20.98	38.43 ± 23.14	36.28 ± 22.13
C	39.37 ± 20.13	38.96 ± 24.84	39.15 ± 22.66
P	41.29 ± 22.12	46.77 ± 15.58	44.33 ± 18.90
A	38.83 ± 21.53	43.70 ± 26.51	43.54 ± 24.32
H	53.96 ± 23	38.90 ± 29.19	23.14 ± 27.16
N	38.17 ± 24.25	42.50 ± 29.21	42.80 ± 26.87
D	26.66 ± 21.15	32.37 ± 25.07	29.83 ± 23.37
B	21.96 ± 13.29	18.93 ± 14.47	20.28 ± 13.91
T	30.91 ± 19.33	26.07 ± 16.75	28.22 ± 17.93
R	26.21 ± 38.31	30.57 ± 29.90	28.63 ± 29.01
SS	50.45 ± 17.47	48.63 ± 26.68	49.44 ± 22.86
CC	27.25 ± 21.99	35.43 ± 25.60	31.80 ± 24.19
PP	30.66 ± 19.94	39.17 ± 22.68	35.39 ± 21.73

^aValues are expressed as mean ± SD.

^bGroup 1: low moral identity group, group 2: high moral identity group, X: disclosure, Y: desirability, Z: debasement, 1: schizoid, 2A: avoidant, 2B: depressive, 3: dependent, 4: histrionic, 5: narcissistic, 6A: antisocial, 6B: aggressive or sadistic, 7: compulsive, 8A: passive-aggressive or negativistic, 8B: self-defeating, S: schizotypal, C: borderline, P: paranoid, A: anxiety, H: somatoform, N: bipolar or manic, D: dysthymia, B: alcohol dependence, T: drug dependence, R: post-traumatic stress disorder, SS: thought disorder, CC: major depression, PP: delusional disorder.

effect size indices were plausible. The observed power was more than 0.80 (0.815) and partial Eta squared was 0.638; so, it can be told that 81% of the individual’s variances are explained by the between-group variance. Perhaps, a low significance of F can be attributed to the low sample size besides many numbers of the dependent variables.

Although the total effect of the groups on tendencies to disorders had a low significance, there were some significant differences in some variables. Table 4 represents

Table 2. The Result of Levene's Test for Equal Variance^a

Variables	F	P Value
X	0.016	0.901
Y	3.555	0.065
Z	0.006	0.938
1	0.909	0.345
2A	6.599	0.013
2B	0.057	0.812
3	0.007	0.934
4	7.211	0.010
5	1.531	0.222
6A	0.027	0.869
6B	0.814	0.371
7	0.181	0.673
8A	1.516	0.224
8B	0.112	0.739
S	0.040	0.842
C	0.015	0.905
P	2.180	0.146
A	2.234	0.141
H	7.725	0.008
N	1.319	0.256
D	1.534	0.221
B	0.648	0.425
T	1.323	0.2555
R	0.000	1.000
SS	4.928	0.031
CC	2.659	0.109
PP	1.678	0.2

^aGroup 1: low moral identity group, group 2: high moral identity group, X: disclosure, Y: desirability, Z: debasement, 1: schizoid, 2A: avoidant, 2B: depressive, 3: dependent, 4: histrionic, 5: narcissistic, 6A: antisocial, 6B: aggressive or sadistic, 7: compulsive, 8A: passive-aggressive or negativistic, 8B: self-defeating, S: schizotypal, C: borderline, P: paranoid, A: anxiety, H: somatoform, N: bipolar or manic, D: dysthymia, B: alcohol dependence, T: drug dependence, R: post-traumatic stress disorder, SS: thought disorder, CC: major depression, PP: delusional disorder.

the results of MANOVA on the variables separately. Because of the small sample size in the two groups [24 and 30], the borderline significances ($P < 0.1$) were considered (25, 26).

As Table 4 represents, tendencies to the obsessive-compulsive personality disorder ($P < 0.05$), antisocial personality disorder ($P < 0.1$), narcissistic personality disorder ($P < 0.1$), and somatoform disorders ($P < 0.1$) were significantly different between the groups. There were no significant differences between the groups in the other vari-

ables. Inasmuch as the total effect of the groups had a low significance (Table 3), we must be scrupulous to interpret the significant differences. In order to have robust findings, only variables with significant differences in Table 4 (obsessive-compulsive personality disorder, antisocial personality disorder, narcissistic personality disorder, and somatoform disorders) were considered for reanalyzing by another MANOVA. Table 5 represents that the overall effect of this analysis was significant ($F: 1.632; P > 0.05$).

Table 6 shows the differences in tendencies to the obsessive-compulsive personality disorder, antisocial personality disorder, narcissistic personality disorder, and somatoform disorders in the high and low moral identity groups. The table shows that there were significant differences between the two groups in obsessive-compulsive personality disorder ($P > 0.05$), antisocial personality disorder ($P > 0.1$), narcissistic personality disorder ($P > 0.1$), and somatoform disorders ($P > 0.1$). By referring to Table 1, it was shown that groups with higher moral identity had a higher tendency to the obsessive-compulsive personality disorder and lower tendencies to the antisocial personality disorder, narcissistic personality disorder, and somatoform disorders.

5. Discussion

The higher tendency to antisocial personality disorder in the people with less moral identity was highly predictable because of the definition and criteria of antisocial personality disorder as “a pervasive pattern of disregard for and violation of the rights of others” (7). The higher tendency to the narcissistic personality disorder in the people with less moral identity is comprehensible by viewing the lack of empathy as one of the criteria of narcissistic personality disorder (7). Indeed, many studies confirmed the importance of empathy in making morality and prosocially behavior (16, 27, 28) or in preventing from aggressive and antisocial behavior (28, 29).

Nevertheless, the present study did not show any difference between people with high and low moral identity in other personality disorders in cluster B (borderline and histrionic personality disorders). This is not in line with Charland claims (8) that considered all disorders in cluster B as moral disorders. Perhaps, the criteria that Charland had addressed to as moral problems are related to other aspects of morality (moral behaviors, moral reasoning, or moral emotions) rather than to moral identity.

The higher tendency to somatoform disorders in the people with less moral identity was somewhat unpredictable. One of the disorders that may have comorbidity with an antisocial personality disorder is the somatic syndrome disorder (7) that is similar to the somatoform dis-

Table 3. The Result of the Overall Effect of Groups with High and Low Moral Identity on Tendencies to Personality and Clinical Disorders

Effect	Value	F	Hypothesis df	Error of df	P Value	Partial Eta Squared	Observed Power
Group							
Pillai's trace	0.638	1.632	27.00	25.00	0.111	0.638	0.815
Wilks' lambda	0.632	1.632	27.00	25.00	0.111	0.638	0.815
Hotelling trace	1.762	1.632	27.00	25.00	0.111	0.638	0.815
Roy's largest root	1.762	1.632	27.00	25.00	0.111	0.638	0.815

Table 4. The Differences of Tendencies to Disorders in the High and Low Moral Identity Groups^a

Variables	F	P Value	Partial Eta Squared	Observed Power
X	0.672	0.416	0.013	0.127
Y	0.448	0.506	0.009	0.101
Z	2.87	0.096	0.053	0.383
1	1.033	0.314	0.020	0.169
2A	0.025	0.874	0.000	0.053
2B	0.399	0.53	0.008	0.095
3	0.719	0.401	0.014	0.132
4	0.007	0.936	0.000	0.051
5	3.270	0.076	0.06	0.426
6A	3.525	0.066	0.065	0.453
6B	0.028	0.867	0.001	0.053
7	4.826	0.033	0.086	0.577
8A	0.76	0.387	0.015	0.137
8B	1.312	0.257	0.025	0.203
S	0.52	0.474	0.010	0.109
C	0.012	0.912	0.000	0.051
P	0.864	0.357	0.017	0.149
A	0.454	0.504	0.009	0.101
H	3.637	0.062	0.067	0.465
N	0.000	0.992	0.000	0.05
D	0.814	0.371	0.016	0.144
B	0.634	0.430	0.012	0.122
T	0.982	0.326	0.019	0.163
R	0.262	0.607	0.005	0.080
SS	0.12	0.731	0.002	0.63
CC	1.866	0.178	0.035	0.268
PP	1.712	0.196	0.033	0.251

^aGroup 1: low moral identity group, group 2: high moral identity group, X: disclosure, Y: desirability, Z: debasement, 1: schizoid, 2A: avoidant, 2B: depressive, 3: dependent, 4: histrionic, 5: narcissistic, 6A: antisocial, 6B: aggressive or sadistic, 7: compulsive, 8A: passive-aggressive or negativistic, 8B: self-defeating, S: schizotypal, C: borderline, P: paranoid, A: anxiety, H: somatoform, N: bipolar or manic, D: dysthymia, B: alcohol dependence, T: drug dependence, R: post-traumatic stress disorder, SS: thought disorder, CC: major depression, PP: delusional disorder.

orders in MCMI-III. Perhaps, this comorbidity can explain the finding. However, the finding did not repeat for other

pathological tendencies that have some similarity and comorbidity with an antisocial personality disorder (aggres-

Table 5. The Results of the Overall Effect of Groups with High and Low Moral Identity on Obsessive-Compulsive Personality Disorder, Antisocial Personality Disorder, Narcissistic Personality Disorder, and Somatoform Disorders

Effect	Value	F	Hypothesis df	Error of df	P Value	Partial Eta Squared	Observed Power
Group							
Pillai's trace	0.198	2.984	4	49	0.028	0.196	0.755
Wilks' lambda	0.804	2.984	4	49	0.028	0.196	0.755
Hotelling trace	0.244	2.984	4	49	0.028	0.196	0.755
Roy's largest root	0.244	2.984	4	49	0.028	0.196	0.755

Table 6. The Differences in Tendencies to the Obsessive-Compulsive Personality Disorder, Antisocial Personality Disorder, Narcissistic Personality Disorder, and Somatoform Disorders in the High and Low Moral Identity Groups

Variables	F	P Value	Partial Eta Squared	Observed Power
Obsessive compulsive personality disorder	5.271	0.026	0.092	0.615
Antisocial personality disorder	3.652	0.062	0.066	0.466
Narcissistic personality disorder	3.309	0.085	0.056	0.407
Somatoform disorders	3.149	0.082	0.057	0.414

sive or sadistic, passive-aggressive, borderline, alcohol dependence, and drug dependence). It is likely doing similar studies in the patient population or using more number of participants would reveal more clear findings.

One of the other findings was a higher tendency to the obsessive-compulsive personality disorder in the people with a higher moral identity. This is in coordination with some previous studies (14) and the criteria of obsessive-compulsive personality disorder (7). If the causality linkage between moral identity and obsessive-compulsive personality disorder is supposed, the finding can have some implications for a correct moral education to prevent from extravagance for infusion of moral identity in the people. The finding can indicate, like the wastage in shaping and educating moral identity, superfluity in it can be harmful and pathological. It can be in coordination with Aristotle's doctrine of the mean in the moral philosophy and Freud's view about the linkage of some neurosis with inflammation of superego.

5.1. Conclusion

The study showed that extremity at both high and low amount of morality in the identity of individuals could be problematic. Indeed, the tendencies to the antisocial personality disorder, narcissistic personality disorder, and even a clinical disorder such as somatoform symptoms are related to the hypo-morality and obsessive-compulsive personality disorder is related to the hyper-morality. It has some implications for moral education and moral philosophy to prevent the extremism or wastage and considering the doctrine of the mean in the emphasis on moral values.

According to some limitations to the present study, such as the type and size of the sample, further studies on abnormal and larger samples are needed for more clear findings. In addition, due to the cross-sectional and comparative characterization of the research, still, we cannot be sure about the casual linkage between hypo or hyper-morality as the cause and psychopathological tendencies as the effect. Perhaps a longitude research or studying the relationship between moral education styles of families and psychopathology of children in the future can give the researchers more secure information.

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Footnotes

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References

1. Thoits PA, Hewitt LN. Volunteer Work and Well-Being. *J Health Soc Behav.* 2001;42(2):115. doi:10.2307/3090173.

2. Crocker J, Canevello A, Breines JG, Flynn H. Interpersonal goals and change in anxiety and dysphoria in first-semester college students. *J Pers Soc Psychol.* 2010;**98**(6):1009–24. doi: [10.1037/a0019400](https://doi.org/10.1037/a0019400). [PubMed: [20515255](https://pubmed.ncbi.nlm.nih.gov/20515255/)]. [PubMed Central: [PMC2966869](https://pubmed.ncbi.nlm.nih.gov/PMC2966869/)].
3. Weinstein N, Ryan RM. When helping helps: Autonomous motivation for prosocial behavior and its influence on well-being for the helper and recipient. *J Pers Soc Psychol.* 2010;**98**(2):222–44. doi: [10.1037/a0016984](https://doi.org/10.1037/a0016984). [PubMed: [20085397](https://pubmed.ncbi.nlm.nih.gov/20085397/)].
4. Erickson TM, Abelson JL. Even the downhearted may be uplifted: Moral elevation in the daily life of clinically depressed and anxious adults. *J Soc Clin Psychol.* 2012;**31**(7):707–28. doi: [10.1521/jscp.2012.31.7.707](https://doi.org/10.1521/jscp.2012.31.7.707).
5. Eron LD, Huesmann L. The relation of prosocial behavior to the development of aggression and psychopathology. *Aggress Behav.* 1984;**10**(3):201–11. doi: [10.1002/1098-2337\(1984\)10:3<201::aid-ab2480100304>3.0.co;2-s](https://doi.org/10.1002/1098-2337(1984)10:3<201::aid-ab2480100304>3.0.co;2-s).
6. Zimmer-Gembeck MJ, Hunter TA, Pronk R. A Model of Behaviors, Peer Relations and Depression: Perceived Social Acceptance as a Mediator and the Divergence of Perceptions. *J Soc Clin Psychol.* 2007;**26**(3):273–302. doi: [10.1521/jscp.2007.26.3.273](https://doi.org/10.1521/jscp.2007.26.3.273).
7. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders (DSM-5)*. Washington and London: American Psychiatric Publishing; 2013.
8. Charland LC. Moral nature of the DSM-IV cluster B personality disorders. *J Pers Disord.* 2006;**20**(2):116–25. discussion 181-5. doi: [10.1521/pedi.2006.20.2.116](https://doi.org/10.1521/pedi.2006.20.2.116). [PubMed: [16643116](https://pubmed.ncbi.nlm.nih.gov/16643116/)].
9. Piazza J, Goodwin GP, Rozin P, Royzman EB. When a virtue is not a virtue: Conditional virtues in moral evaluation. *Soc Cogn.* 2014;**32**(6):528–58. doi: [10.1521/soco.2014.32.6.528](https://doi.org/10.1521/soco.2014.32.6.528).
10. Shultz DP. *Theories of personality*. Tehran: Arasbaran; 1990. Translated by Karimi U, Jomehri F, Naghshbandi S, Godarzi B, Bohearaee H, Nickho MR. Persian.
11. Gwilliam P, Wells A, Cartwright-Hatton S. Dose meta-cognition or responsibility predict obsessive-compulsive symptoms: A test of the metacognitive model. *Clin Psychol Psychother.* 2004;**11**(2):137–44. doi: [10.1002/cpp.402](https://doi.org/10.1002/cpp.402).
12. Nelson EA, Abramowitz JS, Whiteside SP, Deacon BJ. Scrupulosity in patients with obsessive-compulsive disorder: Relationship to clinical and cognitive phenomena. *J Anxiety Disord.* 2006;**20**(8):1071–86. doi: [10.1016/j.janxdis.2006.02.001](https://doi.org/10.1016/j.janxdis.2006.02.001). [PubMed: [16524696](https://pubmed.ncbi.nlm.nih.gov/16524696/)].
13. Doron G, Szepeswol O, Elad-Strenger J, Hargil E, Bogoslavsky B. Entity perceptions of morality and character are associated with obsessive compulsive phenomena. *J Soc Clin Psychol.* 2013;**32**(7):733–52. doi: [10.1521/jscp.2013.32.7.733](https://doi.org/10.1521/jscp.2013.32.7.733).
14. Mancebo MC, Eisen JL, Grant JE, Rasmussen SA. Obsessive compulsive personality disorder and obsessive compulsive disorder: Clinical characteristics, diagnostic difficulties, and treatment. *Ann Clin Psychiatr.* 2005;**17**(4):197–204. doi: [10.1080/10401230500295305](https://doi.org/10.1080/10401230500295305). [PubMed: [16402751](https://pubmed.ncbi.nlm.nih.gov/16402751/)].
15. Bebeau MJ, Rest JR, Narvaez D. Beyond the promise: A perspective on research in moral education. *Educ Res.* 2016;**28**(4):18–26. doi: [10.3102/0013189x028004018](https://doi.org/10.3102/0013189x028004018).
16. Hardy SA. Identity, reasoning, and emotion: An empirical comparison of three sources of moral motivation. *Motiv Emot.* 2006;**30**(3):205–13. doi: [10.1007/s11031-006-9034-9](https://doi.org/10.1007/s11031-006-9034-9).
17. Azimpour A, Neasi A, Shehni-Yailagh M, Arshadi N, Beshlideh K. [Designing and testing a model of important precedents of prosocial behavior in student of Shahid Chamran University]. *J Psychol Achiev.* 2012;**19**(3):15–44. Persian.
18. Aquino K, Freeman D, Reed A, Felps W, Lim VK. Testing a social-cognitive model of moral behavior: the interactive influence of situations and moral identity centrality. *J Pers Soc Psychol.* 2009;**97**(1):123–41. doi: [10.1037/a0015406](https://doi.org/10.1037/a0015406). [PubMed: [19586244](https://pubmed.ncbi.nlm.nih.gov/19586244/)].
19. Millon T, Davis RD. *Manual for the millon clinical multi-axial inventory-III (MCMI-III)*. Minneapolis: National computer systems; 1987.
20. Groth-Marnat G. *Handbook of psychological assessment*. Tehran: Sokhan; 1997. Translated by Pasha Sharifi H, Nickho MR. Persian.
21. Sharifi AA, Karimi A. [A guide for the millon clinical multi-axial inventory III.]. Tehran: Ravansanji Publishing; 2007. Persian.
22. Aquino K, Reed A. The self-importance of moral identity. *J Pers Soc Psychol.* 2002;**83**(6):1423–40. [PubMed: [12500822](https://pubmed.ncbi.nlm.nih.gov/12500822/)].
23. Azimpour AR, Naisi AK, Shahni YM, Arshadi N, Beshlideh K. [Validation the measure of “the self-importance of moral identity” on university students]. *J Pers Individ Differ.* 2014;**3**(4):19–38. Persian.
24. Nordstokke DW, Zumbo BD. A cautionary tale about Levene's tests for equal variances. *J Educ Res Policy Stud.* 2007;**7**(1):1–14.
25. Figueiredo Filho DB, Paranhos R, Rocha EC, Batista M, Silva J. J. A., Santos MLWD, et al. When is statistical significance not significant? *Braz Polit Sci Rev.* 2013;**7**(1):31–55. doi: [10.1590/s1981-38212013000100002](https://doi.org/10.1590/s1981-38212013000100002).
26. Akbari Zardkhaneh S, Atari M. [Necessity of measurement and reporting effect size measure in psychological studies]. *J Rooyesh-e-Ravanshenasi.* 2016;**5**(14):29–46. Persian.
27. Huebner B, Dwyer S, Hauser M. The role of emotion in moral psychology. *Trends Cogn Sci.* 2009;**13**(1):1–6. doi: [10.1016/j.tics.2008.09.006](https://doi.org/10.1016/j.tics.2008.09.006). [PubMed: [19058993](https://pubmed.ncbi.nlm.nih.gov/19058993/)].
28. Carlo G, Mestre MV, Samper P, Tur A, Armenta BE. Feelings or cognitions? Moral cognitions and emotions as longitudinal predictors of prosocial and aggressive behaviors. *Pers Individ Differ.* 2010;**48**(8):872–7. doi: [10.1016/j.paid.2010.02.010](https://doi.org/10.1016/j.paid.2010.02.010).
29. Jolliffe D, Farrington DP. Empathy and offending: A systematic review and meta-analysis. *Aggress Violent Behav.* 2004;**9**(5):441–76. doi: [10.1016/j.avb.2003.03.001](https://doi.org/10.1016/j.avb.2003.03.001).