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## Disparities in the moral intuitions of criminal offenders: The role of psychopathy

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### Abstract

The present study examined whether and in what ways psychopathy is associated with abnormal moral intuitions among criminal offenders. Using Haidt et al.'s Moral Foundations Questionnaire, 222 adult male offenders assessed for clinical psychopathy reported their degree of support for five moral domains: Harm Prevention, Fairness, Respect for Authority, Ingroup Loyalty, and Purity/Sanctity. As predicted, psychopathy total score explained a substantial proportion of the variance in reduced support for Harm Prevention and Fairness, but not the other domains. These results confirm that psychopathy entails a discrete set of moral abnormalities and suggest that these abnormalities could potentially help to explain the characteristic antisocial behavior of individuals with psychopathy.

### Keywords

psychopathy; morality; moral judgment; forensics; personality disorders

## 1. Introduction

Psychopathy is a personality disorder characterized by antisocial personality traits and behavioral patterns including manipulateness, lack of empathy and remorse, grandiosity, and impulsivity (Hare & Neumann, 2008). Although psychopathic individuals comprise less than 1% of the general adult population, their prevalence in U.S. prisons may exceed 20% (Hare, Hart, & Harpur, 1991). Furthermore, psychopathy is recognized as the single best predictor of violent recidivism (Steadman et al., 2000).

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Scientists have long sought to understand whether, and in what ways, the moral reasoning patterns of psychopathic individuals differ from those of healthy adults. Some accounts, for instance, suggest that antisocial behavior characteristic of psychopathy derives from a failure in moral judgment (see Blair, 1995), which in turn may result from a difficulty in recognizing and thus empathizing with others' distress (see Blair, Jones, Clark, & Smith, 1997). Others suggest that psychopathic individuals demonstrate fairly normal moral reasoning abilities (e.g., Link, Sherer, & Byrne, 1977), but lack a level of anxiety normally required to learn to inhibit one's actions in the face of punishment (see Lykken, 1957; Newman, MacCoon, Vaughn, & Sadeh, 2005). Both accounts assume that aberrant affective processing influences motivational processes in individuals with psychopathy. However, they differ in the role that moral judgment plays in this sequence of events, with the former suggesting a direct mediating role. By examining the moral intuitions of psychopathic individuals, we can better understand their role in the psychological process that gives rise to psychopathic antisocial behavior.

To understand the moral intuitions of individuals with psychopathy, it is important to outline what qualifies as a moral wrong. Early perspectives have conceptualized morality as a unitary concept defined primarily by the presence of harm toward others (Hare, 1981; Weston & Turiel, 1980). Recent theoretical and empirical work has challenged this assumption. One challenge maintains that harm is neither necessary nor sufficient to inspire intuitions of moral wrongness (Sinnott-Armstrong, 2008). For instance, harmless acts like cannibalism of a recently deceased tissue donor are usually considered wrong even though study participants often cannot identify harm in these scenarios (Haidt, Bjorklund, & Murphy, 2000; Haidt, 2001). Conversely, many acts that often cause suffering, such as dental visits, are not considered to be morally wrong.

To more fully describe these nuances in moral reasoning, researchers have more recently proposed models characterized by several discrete moral domains, which include the harm domain as just one of several moral concerns (Graham, Haidt, & Nosek, 2009; Graham, Nosek, Haidt, Iyer, Koleva, & Ditto, 2011; Rozin, Lowery, Imada, & Haidt, 1999). One model that encompasses the multi-faceted nature of morality is Jonathan Haidt and colleagues' Moral Foundations model (Graham et al., 2011; Haidt & Graham, 2007). The model defines five categories of moral intuitions theorized to guide moral judgment. These consist of the concern to: (1) prevent harm to others, (2) preserve fairness, equal rights, and justice, (3) practice loyalty toward one's ingroup relative to treatment towards outgroups, (4) respect authority within hierarchical relationships, and (5) practice purity or sanctity of body, mind, and soul. While a full information-processing account of these core foundations is still in its infancy, research has nonetheless consistently found that healthy adults organize their moral intuitions in these particular ways (e.g., Haidt & Joseph, 2004). This model has shown predictive validity, scale reliability (range: .65 – .84), survived cross-cultural testing (Graham et al., 2011), and garners support from evolutionary theory (e.g., Lieberman, 2007; Rozin, Haidt, & Fincher, 2009).

In light of the mixed results regarding psychopathic moral judgment, this research has prompted some investigators to examine psychopathic moral intuitions using the Moral Foundations model (Glenn, Iyer, Graham, Koleva, & Haidt, 2009). These authors administered Levenson's Self-Report Psychopathy Scale (LSRP; Levenson, Kiehl, & Fitzpatrick, 1995) and the Moral Foundations Questionnaire (MFQ; Graham et al., 2011) to 2,172 respondents via the Internet. Their results showed that, compared to individuals low in psychopathy, those high in psychopathy were less likely to endorse intuitions of Harm Prevention, Fairness, and Purity/Sanctity, and unexpectedly more likely to endorse the intuition of Ingroup Loyalty, discussed below. They did not observe an effect of psychopathy on the Respect for Authority foundation. As the authors suggest, it is possible

that a failure to endorse the moral norms related to harm, fairness, and purity may help account for the destructive behavioral patterns central to psychopathy.

### The Current Study

While the Glenn et al. study sheds new light on moral judgment in non-clinical/non-forensic individuals high in psychopathic personality traits, it is limited to a community sample. As the authors acknowledge, it remains unknown whether individuals who meet clinical criteria for psychopathy judge moral scenarios in the same manner as subclinical samples. The current investigation expands this research by examining moral judgment in a clinical, forensic sample. Addressing how the moral intuitions of high psychopathy offenders differ from their low psychopathy counterparts may help develop new methods of behavioral education and treatment for these individuals.

To isolate the role of psychopathy in a forensic sample, it is important to examine whether their moral endorsements result from their psychopathic traits specifically or are common to criminal behavior more generally. To demonstrate that any effects in high-psychopathy offenders are due to psychopathy per se, a necessary control group should consist of low-psychopathy offenders. When comparing the moral intuitions of offenders who vary in psychopathy, we make separate predictions for each MFQ foundation.

**Harm Prevention**—Evidence suggests that compared to low-psychopathy offenders, offenders with psychopathy are distinctly callous and remorseless (Hare, 2000). In physiological studies, psychopathic individuals exhibit reduced electrodermal responses when viewing slides depicting other people in distress, suggesting a physiological insensitivity to harm (Blair et al., 1997). Therefore, with respect to Haidt's taxonomy, high-psychopathy inmates are expected to exhibit less regard for the Harm foundation than low-psychopathy inmates.

**Fairness**—High psychopathy individuals are likelier to defect in economic cooperation games than those low in psychopathy (Mokros et al., 2008). They also make lower offer amounts and less frequently accept others' unfair offers (Koenigs, Kruepke, & Newman, 2010). These patterns suggest low regard for fairness norms. Therefore, high-psychopathy inmates are expected to show less support for the Fairness foundation than low-psychopathy inmates.

**Respect for Authority**—Psychopathic individuals often exhibit high levels of grandiosity (Hare & Neumann, 2008), suggesting a self-serving, dominance orientation that might predict low respect for authority figures (see also Glenn et al., 2009). Consistent with this prediction, the disproportionate tendency for psychopathic individuals to commit crime (Steadman et al., 2000) lends some indirect evidence that they may exhibit weak support for the Respect for Authority foundation. However, low respect for authority should also be characteristic of low-psychopathy offenders since both groups are defined by a history of criminal activity. Thus, any differences in respect for authority as a function of psychopathy should be weak or absent.

**Ingroup Loyalty**—Evidence regarding psychopathic support for ingroup loyalty is mixed. Psychopathic individuals are classically characterized as highly manipulative and having few close friends (Hare, 2003). Contrary to Glenn et al.'s (2009) findings, this would predict a negative association between psychopathy and the MFQ's Ingroup Loyalty variable. Glenn et al. provided evidence of a strong social dominance orientation to explain the positive association they observed. Another explanation might involve a social desirability response bias, which will be considered in greater detail throughout. As a whole, the conflicting

evidence on ingroup loyalty limits predictions about the effect of psychopathy in either direction.

**Purity/Sanctity**—There is also limited research addressing whether psychopathic offenders will, like Glenn and colleagues' (2009) community sample, endorse attitudes of purity/sanctity. Most of this research derives from investigations of the disgust response. Researchers have theorized that because psychopathy is characterized by antisocial behavior, low regard for others' welfare, and sexual promiscuity, among other things, such individuals will exhibit less disgust toward social and sexual referents than those low in psychopathy (Tybur, Lieberman, & Griskevicius, 2009). These investigators found that participants higher in psychopathic traits reported less disgust when presented with sexual and moral transgressions. Because the Purity/Sanctity foundation includes items related to chastity and social decency standards, high-psychopathy participants might be expected to exhibit less support for this foundation than low-psychopathy participants (see Wheatley & Haidt, 2005). However, this prediction is tempered by a lack of evidence among forensic and clinical samples.

**Social Desirability**—As with all self-report measures, precautions should be taken to minimize the possibility of socially desirable responding. Controlling for variance attributable to impression management permits a more honest estimate of participants' responses to the MFQ.

## 2. Methods

### 2.1. Participants

Study participants consisted of 222 adult male inmates (ages 18–61) from a medium-security prison in North America. Ethnic affiliation was primarily Hispanic (51%) and Caucasian (43%). The remaining participants (6%) were Native American, African American, Asian, or chose not to answer this question. All participants were native English speakers. Participation was voluntary. Of 264 recruits, 42 were excluded because of a history of traumatic brain injury (11), brain seizures (1), evidence of psychosis in self or 1<sup>st</sup>-degree relative (16), a below-fourth-grade reading level (8), or standard IQ score less than 70 (6). The study was approved by Institutional and University ethics review committees, and all participants provided written informed consent.

### 2.2. Materials and Assessment

Psychopathy was assessed using the Psychopathy Checklist–Revised (PCL-R; Hare, 2003), which included criminal record reviews and multi-hour, semi-structured interviews. The PCL-R is a reliable, valid instrument for the assessment of psychopathy in incarcerated, forensic, psychiatric, and normal populations (e.g., Hare, 1991; see Fulero, 1996, for a review). Total scores of 30+ (out of 40) are conventionally interpreted to denote clinical psychopathy (Hare, 1991; See Table 1). Consistent with our expectations, the present sample included 37 participants (17%) who met this criterion. The PCL-R mean for the present sample was 21.54 (7.34); Range: 3.2 – 37.9.

Moral intuitions were assessed using the 30-item MFQ (See Table 1).<sup>1</sup> Scores range from zero to five. Each of the five moral foundations (Harm, Fairness, Ingroup, Authority, and

<sup>1</sup>The present version of the MFQ differed from the most recently published version in two minor ways: (1) It contained one filler question measuring the extent to which a belief in astrology is relevant to participants' wrongness judgments. The purpose of this question was to disqualify participants who provided an extreme positive response, however none required disqualification. (2) One of the Fairness items read: "Justice, fairness and equality are the most important requirements for a society" instead of the newer "Justice is the most important requirement for a society."

Purity) was assessed using self-report items that asked participants to (1) evaluate the extent to which each statement is “relevant to their thinking” when making decisions about right and wrong (e.g., “Whether or not someone was cruel”) and (2) indicate their agreement or disagreement with normative declarations such as “One of the worst things a person could do is hurt a defenseless animal.” Responses on these two sections have been shown to be positively correlated (Graham et al., 2011) and will be analyzed in combination, yielding six items per foundation.

Impression management (IM) was assessed using the Balanced Inventory of Desired Responding, a forty-item self-report scale (BIDR; Paulhus, 1984). The validity and reliability ( $\alpha > .8$ ) of the BIDR have been demonstrated in both general and forensic samples (e.g., Kroner & Weekes, 1996; Paulhus, 1984).

Intelligence was assessed using portions of the Wechsler Adult Intelligence Scale (WAIS-3; Wechsler, 1997) evaluating verbal and matrix reasoning. Reading ability was assessed using the Wide Range Achievement Test (WRAT-3; Wilkinson, 1989).

Demographic information including age and race was collected using a traditional survey format.<sup>2</sup>

## 2.2. Statistical Approach

Linear effects of psychopathy can be examined using linear regression, as presented in subsection 3.2. This approach is in line with conceptions of psychopathy as a dimensional construct (e.g., Glenn et al., 2009; Lilienfeld, 1998). Categorical comparisons (i.e., high vs. low psychopathy) were not justified by our sample distribution, which contained a disproportionate number of low-psychopathy individuals.

## 2.4. MFQ Reliability Analysis

Means and inter-item reliability coefficients were computed for each of our measures. (See Table 2.) Three of the MFQ foundations (Fairness, Ingroup, and Authority) yielded somewhat low Cronbach’s alpha coefficients ( $\alpha$ ), indicating relatively modest inter-item reliabilities. Thus, any null effects associated with these factors should be interpreted within this potential limitation.<sup>3</sup>

## 3. Results

### 3.1. Contribution of Demographic Variables

Demographic variables of our sample including IQ and age were differentially related to scores on the PCL-R. (Table 2.) IQ was not correlated with PCL-R score or with any of the moral foundations. Therefore, IQ was excluded from subsequent analyses. Age was negatively correlated with PCL-R score such that younger participants were determined to be slightly higher in psychopathy than older participants. Age was positively related to moral foundations ratings whereby older respondents supported four of these foundations more strongly than did younger participants. Because we made no a priori predictions about the effect of age on the relationship between psychopathy and the moral foundations, age was entered as a covariate into our subsequent hypothesis tests. Last, ethnicity showed a

<sup>2</sup>Our sample consisted primarily of Caucasian and Hispanic participants. Other race affiliations were too infrequent to provide statistical control. Therefore, our race control variable represents Caucasian and Hispanic only.

<sup>3</sup>Initially, we evaluated whether or not to disqualify participants from analysis based on their answers to the control question (“Whether or not someone believes in astrology”). While 25 participants rated 3 or higher on this item, removing these participants from subsequent analyses did not significantly alter any of the observed effects. Therefore, all reported effects will describe the complete sample.

significant relationship with PCL-R score such that Hispanic participants ( $M = 22.84$ ,  $SD = 7.06$ ) on average scored slightly higher in psychopathy than Caucasian participants ( $M = 20.24$ ,  $SD = 7.35$ ),  $t(205) = 2.58$ ,  $p < .05$ . Hispanic participants also showed reduced support for one of the moral foundations (Harm). However, Hispanic inmates ( $M = 32.48$ ,  $SD = 10.13$ ) were also younger than Caucasian inmates ( $M = 35.79$ ,  $SD = 9.13$ ),  $t(204) = 2.45$ ,  $p < .05$ . Indeed, in our hypothesis tests shown in subsection 3.2, all moderating effects of ethnicity disappear when age is controlled, suggesting that age alone must be co-varied in order to isolate the independent effect of psychopathy on the five foundations.

### 3.2. Regression Analysis: PCL-R Total Score and Moral Foundations

As expected, IM scores ( $N = 218$ ) were negatively correlated with PCL-R scores,  $r = -.17$ ,  $p < .05$ . Therefore, to test our primary hypotheses, we assessed the extent to which total PCL-R score predicts ratings on each of the five moral foundations, controlling for both IM and age. (See Table 2 for zero-order correlations.) Using separate linear regressions, we regressed each of the five moral foundations on total PCL-R score. These tests yielded the following effects: First, shown by a semipartial correlation ( $sr$ ), psychopathy uniquely explained a significant proportion of the variance in support for Harm Prevention (18.9%) and Fairness (16.0%),  $R^2 = .16$ ,  $p < .001$  and  $R^2 = .13$ ,  $p < .001$ , respectively. As predicted, individuals higher in psychopathy supported both Harm and Fairness less strongly than did their lower-psychopathy counterparts,  $\beta = -.20$ ,  $t(211) = -2.98$ ,  $p < .01$  and  $\beta = -.17$ ,  $t(211) = -2.48$ ,  $p < .05$ .<sup>4</sup> We found no evidence associating psychopathy with any of the other foundations; Ingroup Loyalty:  $t(211) = -.50$ ,  $p = .62$ .; Respect for Authority:  $t(211) = -1.49$ ,  $p = .14$ .; Purity/Sanctity:  $t(211) = -1.45$ ,  $p = .15$ .<sup>5</sup> (See Figure 1.)

## 4. Discussion

### 4.1. Conclusion

Compared to most individuals in society, incarcerated criminal offenders are known for their antisocial tendencies. Yet, even among these individuals, the current study suggests that the variation in some of their self-reported moral intuitions can be explained by their level of psychopathy. As predicted, high-psychopathy offenders less deeply endorsed the desire to prevent harm and promote fairness than offenders low in psychopathy. Regarding Fairness, this pattern held true despite the modest inter-item reliability of this factor. These patterns held true even after controlling for the tendency toward impression management.

These results are consistent with existing scientific literature. First, the reduced support for Harm Prevention and Fairness extends the finding of Glenn et al. (2009), who found in a community sample that psychopathic traits explained reduced support for these foundations. This pattern also complements clinical findings that individuals with psychopathy exhibit abnormalities in the way they classify moral violations (Blair, 1995) and in their ability to recognize others' distress (Blair et al., 1997). Finally, the observed reduction in support for Fairness accords with evidence that high psychopathy individuals are more likely to defect in cooperation games (Koenigs et al., 2010; Mokros et al., 2008).

Other moral rating patterns were not consistent with earlier research. Unlike Glenn et al.'s subclinical sample (2009), the current study did not find significant associations between psychopathy and Ingroup Loyalty, Respect for Authority, or Purity/Sanctity. This disparity between the studies could have resulted from psychological differences between the two

<sup>4</sup> $t$ -values indicate whether  $\beta \neq 0$ .

<sup>5</sup>A supplemental analysis of participant anxiety using Spielberger's State Trait Anxiety Inventory (Spielberger, Sydeman, Owen, & Marsh, 1999) was conducted to evaluate the influence of anxiety levels on Fairness judgments. However, neither state nor trait anxiety were correlated with psychopathy or fairness, all  $r < \pm .08$ , all  $p > .27$ . Therefore, further analyses of anxiety were not conducted.

subject populations, from the different methods by which psychopathy was assessed in these two studies, or from the modest inter-item reliabilities of these foundations. As regards Purity, impression management may also play an explanatory role. This foundation, which was negatively associated with psychopathy in previous studies (Glenn et al., 2009; Tybur et al., 2009), did not survive when controlling for IM in the present study. Because these earlier studies did not seek to control for IM, this remains an alternative explanation for the effect they observed. Ultimately, the null effects of latter three foundations, if real, suggest that these domains of moral judgment may be unexceptional in those with clinical psychopathy.

Taken together, our results support the conclusion that high-psychopathy offenders—as assessed in a clinical and forensic research context—do show abnormally low support for some moral domains and not others; and remarkably, it is possible to observe such patterns at the self-report level, even with some degree of control over impression management. Impression management concerns pose a special problem in the context of offender treatment programs whereby offenders are incentivized to “fake good” to shorten their sentences. The ability to assess moral judgment while controlling for measures of impression management could assist clinicians design treatment programs that more effectively identify offenders’ actual treatment needs.

These results contribute to the philosophical view that abnormal moral judgment is a characteristic feature of psychopathy (e.g., Blair, 1995), but possibly in a fairly limited respect (i.e., harm prevention and fairness concerns). The other three foundations yielded normal scores, suggesting that antisocial behaviors associated with these concerns may not result from abnormal moral judgment but instead from a motivational abnormality (e.g., Lykken, 1957; Newman et al., 2005).

#### 4.2. Limitations and Future Directions

As with any scientific study, the current study should be interpreted within the context of its methodological limitations. One limitation of this study lies in its ability to permit causal inferences between moral judgment, antisocial behavior, and the diagnosis of psychopathy. Our more proximate goal was only to identify whether explicit moral judgments differ as a function of psychopathy. To the extent that they do, these differing judgments would be available to differentially shape behavior. Thus, future experimental research should evaluate the causal model that the behavioral selection process among psychopathic individuals is mediated by abnormal moral judgment. Such efforts might consider collecting specific information on criminal histories to investigate whether abnormal MFQ performance predicts increased criminal behavior and whether increased criminality, in turn, predicts abnormal moral judgment as well as or better than other features of psychopathy.

Another limitation of this study is that its sole focus was adult male offenders. The decision to focus on this population was based on the fact that models of psychopathy are better established among adult males than youth or female offenders. As we develop our understanding of how psychopathic traits manifest in juveniles and adult females, these investigations should examine their core moral intuitions and the extent to which they align with those of adult male offenders.

Last, it might be tempting to infer that weaker support for the moral foundations necessarily means that such respondents’ moral reasoning is compromised, as if they pathologically lack the skills or understanding to reason normally about moral propositions (e.g., Glenn et al., 2009). However, we emphasize that nothing in the MFQ’s design permits this inference because this instrument only aims to measure respondents’ subjective intuitions, not their objective abilities. In order to assess whether psychopathic moral reasoning is compromised

in this way, researchers would have to demonstrate that respondents have difficulty reasoning otherwise, or lacked specific knowledge about the normative standards regarding a particular moral proposition. Future studies on moral reasoning should carefully consider how to assess and interpret psychopathic moral knowledge and abilities because these may have strong implications for how courts and laypeople ascribe responsibility to such individuals (see Aharoni, Funk, Sinnott-Armstrong, & Gazzaniga, 2008).

Heeding these limitations, the present study observed several consistent effects that, together, suggest abnormal processing of particular moral intuitions as a function of psychopathy in a forensic sample. These abnormalities concern the degree to which high-psychopathy individuals appreciate the desires to prevent harm to others, to promote fairness, and possibly other moral norms. Whether these abnormalities can help explain and predict future problem behavior in these individuals will be a crucial step in the development of interventions that effectively curtail this behavior.

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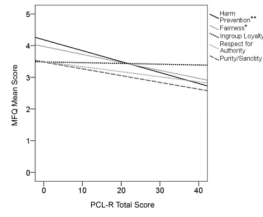
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**FIGURE 1.** Linear relationship between psychopathy total score and mean ratings on each of the five moral foundations. Psychopathy is negatively associated with support for Harm Prevention and Fairness. \* $p < .05$ ; \*\* $p < .01$ .

**TABLE 1**

(A) Items of Psychopathy Checklist-Revised (Hare, 2003). (B) Example items of each MFQ domain (Graham et al., 2011).

(A) PCL-R Items	(B) Example MFQ Items
1 Glibness/Superficial charm	HARM - Compassion for those who are suffering is the most crucial virtue.
2 Grandiose sense of self-worth	FAIRNESS - When the government makes laws, the number one principle should be ensuring that everyone is treated fairly.
3 Pathological lying	INGROUP - It is more important to be a team player than to express oneself.
4 Conning/Manipulative	AUTHORITY – If I were a soldier and disagreed with my commanding officer's orders, I would obey anyway because that is my duty.
5 Lack of remorse or guilt	PURITY - I would call some acts wrong on the grounds that they are unnatural.
6 Shallow affect	
7 Callous/Lack of empathy	
8 Failure to accept responsibility for own actions	
9 Need for stimulation/Proneness to boredom	
10 Parasitic lifestyle	
11 Lack of realistic, long-term goals	
12 Impulsivity	
13 Irresponsibility	
14 Poor behavior controls	
15 Early behavioral problems	
16 Juvenile delinquency	
17 Revocation of conditional release	
18 Criminal versatility	
19 Promiscuous sexual behavior	
20 Many short-term marital relationships	

**TABLE 2**

Means, alpha reliability coefficients, and Zero-order Pearson correlations reflecting the associations between IQ (N = 218), Age (N = 216), PCL-R scores, and the MFQ foundations (N = 222).

Measure	Mean (SD)	$\alpha$	PCL-R ( <i>r</i> )	Harm ( <i>r</i> )	Fairness ( <i>r</i> )	Ingroup Loyalty ( <i>r</i> )	Authority ( <i>r</i> )	Purity ( <i>r</i> )
PCL-R	21.54 (7.34)	0.74	--	--	--	--	--	--
MFQ								
Harm	3.44 (.99)	0.69	-.26**	--	--	--	--	--
Fairness	3.43 (.83)	0.57	-.22**	.67**	--	--	--	--
Ingroup	3.43 (.74)	0.45	-.02	.26**	.33**	--	--	--
Authority	3.15 (.81)	0.49	-.15*	.51**	.48**	.58**	--	--
Purity	3.02 (.89)	0.62	-.18**	.55**	.59**	.38**	.61**	--
IQ	96.44 (13.69)	--	0.01	0.07	0.06	0	-0.02	-0.03
Age	34.15 (9.92)	--	-.19**	.39**	.31**	-0.05	.24**	.35**

\*  $p < .05$ ;

\*\*  $p < .01$ .