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Characteristics of offenders: the HEXACO model of personality as a framework for studying offenders' personality

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What are the personality differences between individuals who commit crime and those who refrain from crime? The HEXACO model of personality combines facets of honesty and humility with those of emotionality, extraversion, conscientiousness, agreeableness, and openness to experience within a unifying framework of personality. We applied the HEXACO model to examine differences in personality between offenders and nonoffenders. Criminal offenders differed from nonoffenders on five of the six dimensions of personality proposed by the HEXACO model. Compared to nonoffenders, offenders exhibited stronger tendencies toward greed and unfairness, but were also more anxious and fearful. Conversely, the offenders scored lower than nonoffenders on a number of facets of sociability, liveliness, and social boldness. The present findings indicate that offenders may in part be characterized by increased negative emotions but decreased sociability and liveliness. The HEXACO model of personality provides a valuable tool for studying this unique and important population.

Keywords: HEXACO; criminal offenders; offender personality

Introduction

There are numerous factors that might lead to criminal behavior. As well as environmental influences (such as socioeconomic status and opportunity; e.g. Gottfredson & Hirschi, 1990), studies have linked personality characteristics to offending behaviors. Individuals who commit criminal acts are often less sociable (Krueger et al., 1994; Schippers, Märker, & De Fuentes-Merillas, 2001), less open (van Dam, Janssens, & De Bruyn, 2005), and more aggressive (Blackburn & Fawcett, 1999) than nonoffenders. Criminal offenders also tend to score higher on dimensions of neuroticism and psychoticism (Eysenck, 1964; Eysenck & Eysenck, 1978; Gudjonsson, 1997), and are more sensation seeking and disinhibited (Caspi et al., 1994; Haapasalo, 1990; Herrero & Colom, 2008).

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Structural models of personality, including the big-five and five-factor models, have proposed five distinct personality dimensions (Costa & McCrae, 1992; Goldberg, 1990), and studies of crime have shown these models to distinguish between criminal offenders and nonoffenders (John, Caspi, Robins, Moffitt, & Stouthamer-Loeber, 1994). Recently, however, Lee and Ashton (2004) proposed a new structural model of personality – the HEXACO model – that describes six rather than five dimensions of personality. Although not previously applied to the study of criminal offending, the HEXACO framework makes a number of key advances in personality research that are highly relevant to the study of criminal behavior. In the current article, we apply the HEXACO model to examine its utility in examining the personality characteristics of offenders and nonoffenders.

The HEXACO model has some similarities with the big-five and five-factor models of personality (Costa & McCrae, 1992; Goldberg, 1990). Three of the six dimensions of the HEXACO model - extraversion, conscientiousness, and openness to experience - are similar to those described by the big-five and five-factor models, whereas the agreeableness and emotionality dimensions have undergone a structural rotation in the HEXACO model (Lee & Ashton, 2004). Definitions of the individual facets of the HEXACO model are provided in Table 1 (see Lee & Ashton, 2004 for more detailed descriptions). Unlike the Emotional Stability factor of the big-five model, the emotionality dimension of the HEXACO model does not contain facets of irritability and temperamentalness, and as such relates more to emotionality than emotional stability (Lee & Ashton, 2004). Adult offenders, and especially delinquent offenders, are shown to experience more intense negative emotions of anger, anxiety, and irritability (Krueger et al., 1994). Sexual offenders display deficits in recognizing and judging emotions (Gery, Miljkovitch, Berthoz, & Soussignan, 2009; Hudson et al., 1993), and offenders convicted for violent crime differ from those convicted for non-violent crime in their processing of emotional information. Using an emotional version of the Stroop task, Smith and Waterman (2004) discovered that sexual offenders are slower to respond when emotional content relates to sexual offending, and that violent offenders respond differently to non-violent offenders when content relates to aggression. This suggests that offenders may differ from non-offenders both in their experience and expression of emotions and in their recognition and processing of emotional information. The facets of the emotionality dimension of the HEXACO model - fearfulness, anxiety, dependence, and sentimentality - distinguish neurotic tendencies of emotionality, and thus should be a valuable tool to distinguish offending from nonoffending individuals.

Studies that have reported more intense negative emotions for criminal offenders have linked this to social isolation among offending groups (Caspi et al., 1994). Offenders then may also score lower on personality scales relating to sociability and expressiveness. While earlier models of crime characterized offenders as Extravert-types (Eysenck, 1964; Eysenck & Eysenck, 1978),

Table 1. Definitions of each personality facet within each personality dimension of the HEXACO model.

Personality facets	Personality dimensions				
Sincerity	Honesty/humility A genuine and sincere disposition. Low scores indicate				
Fairness	manipulative tendencies High scores mark a willingness to take advantage of others, such as by cheating, manipulating, or steeling Indicates a disposition to avoid displaying wealth and privilege. Low scores indicate a motivation to experience and display wealth				
Greed-avoidance					
Modesty	and privilege A humble and unassuming personality. Low scores indicate pretentious tendencies and beliefs of entitlement to privilege				
Fearfulness	Emotionality A tendency to experience fear. High scores are associated with heightened fear emotions				
Anxiety	Associated with experiences of anxiety in various contexts. High scores reflect greater anxiety				
Dependence	Reflects a need for support. High scores indicate greater emotional dependence on others				
Sentimentality	An inclination to form strong emotional attachments with others. Low scores reflect dampened emotional responses to others				
Social self-esteem	Extraversion A confident and self-assure personality. Lower scores indicate a reduced sense of self-worth				
Social boldness	Tendency to be bold and self-assure in social contexts. High scores reflect leadership tendencies				
Sociability	High scores indicate an inclination to engage with others in social contexts. Lower scores relate to introverted tendencies				
Liveliness	An enthusiastic and optimistic character. Lower scores are indicative of reduced energy and optimism				
Forgiveness	Agreeableness Willingness to forgive others. Low scores reflect a tendency to hold a grudge				
Gentleness	A gentle and mild character. Low scores reflect a tendency to make				
Flexibility	critical evaluations of others Willingness to compromise and adjust to others' needs and desires. Low scores are indicative of a stubborn and argumentative				
Patience	character A calm and patient tendency. Low scores are indicative or short-tempered characteristics				
Organization	Conscientiousness Reflects a desire for order and structure. Low scores indicate a tendency to be disorganized and haphazard				

(Continued)

Table 1. (Continued).

Personality facets	Personality dimensions			
Diligence	Indicative or self-discipline and intrinsic motivation. Low scores indicate a lack of self-discipline			
Perfectionism	High scores reflect a character that seeks perfection and has low tolerance for errors			
Prudence	A careful and cautious character. Self-control is indicated by high scores and impulsive tendencies are reflected by low scores			
	Openness to experience			
Aesthetic appreciation	Describes an inclination and appreciation of art and nature. High scores relate to creative tendencies			
Inquisitiveness	High scores are defined by an eagerness for knowledge and openness to new experiences. Low scores indicate little curiosity			
Creativity	A willingness to experiment and engage in original thought. Low scores reflect a reluctance to engage with eccentric and			
Unconventionality	nonconformist people High scores of unconventionality reflect a tendency to accept the unusual. High scores indicate openness to new ideas			

key facets of the extraversion dimension within the HEXACO model – social self-esteem and social boldness – capture individual differences in social comfort and social confidence. Thus, we might expect that offenders will score lower on facets of extraversion within the HEXACO model if reduced sociability is characteristic of offending personality.

An important dimension for our present purposes is the additional honesty/humility dimension proposed by the HEXACO model. Indirect evidence suggests that the facets of honesty/humility – sincerity, fairness, greed-avoidance, and modesty – may be key aspects of offending personality. Sensation-seeking behavior, which is linked to offending (Herrero & Colom, 2008), and risk-taking behavior, including drug use (Zuckerman, 2007), correlates with scores on the honesty/humility dimension of the HEXACO model (De Vries, De Vries, & Feij, 2009). Moreover, the honesty/humility dimension distinguishes between tendencies to be sincere and fair and tendencies to be greedy and pretentious, which we can expect, are key characteristics of offending. Lee and Ashton (2005) report high negative correlations between the honesty/humility dimension and psychopathy, machiavellianism, and narcissism that form the 'Dark Triad' of personality, which describe manipulative tendencies and a sense of self-importance as well as predict criminal offending (Hare, 1991).

By combining facets of honesty and humility with those of emotionality and sociability, the HEXACO model provides a unifying framework for capturing unique personality characteristics of offenders. Psychological testing plays an important role in forensic practice, where clinical assessment tools are used for forensic evaluations of criminal offenders (Archer, Buffington-Vollum, Vauter Stredny, & Handel, 2006). Intelligence tests and personality measures

are used by forensic psychologists and psychiatrists to evaluate individuals' criminal responsibility and their competence to stand trial (Borum & Grisso, 1995), and in evaluations of child custody (Ackerman & Ackerman, 1997). Owing to the ease with which the HEXACO can be applied in its self-report format, the HEXACO may provide a powerful addition to the clinical tools used for making forensic evaluations.

Some personality theorists argue for the HEXACO framework as an alternative structural model to the big-five and five-factor models (Ashton & Lee, 2007; Lee & Ashton, 2004). Lexical studies – in which factor analytic techniques are used to identify the major dimensions among personality-descriptive words (e.g. enthusiastic, timid) in natural language – have revealed six rather than five major dimensions among natural languages (e.g. English, French, Dutch; Ashton et al., 2004). Proponents of the HEXACO model also argue for the HEXACO's predictive advantage over five-factor models for identifying personality dimensions, including those of the 'Dark Triad' (Lee & Ashton, 2005). Our current concern is whether the HEXACO captures unique aspects of criminal personality characteristics.

In sum, with the addition of the honesty/humility dimension, potentially relevant to criminal offending, the HEXACO model makes a key advance in personality research with respect to criminal personality characteristics. Moreover, emotion processing and emotional stability, shown to be poor among criminal offenders (e.g. sexual offenders; Gery et al., 2009), relates more closely to the emotionality dimension of the HEXACO model than to previous models. If differences emerge for the honesty/humility dimension within the HEXACO model, then we expect offenders to score lower on this dimension when compared to nonoffenders, exhibiting more greedy and pretentious tendencies than nonoffenders. Neurotic tendencies, such as anxiety, observed among offending groups should emerge as higher scores on the emotionality dimension within the HEXACO model, whereas lower scores on the extraversion dimension for offenders would be characteristic of reduced sociability among offending individuals.

Method

Participants

We recruited 45 male offenders (M=39.0 years, SD=8.5, youngest=21, and oldest=58) from an organization (Friends on the Outside (FOTO)) whose purpose is to assist newly released prisoners in adjusting to their life outside prison. Offenders in our sample were within 16 weeks of their release date from their previous prison sentence. Nine (20.0%) of the offenders had between one and five previous convictions, six (13.3%) had between six and ten previous convictions, and a majority (30; 66.7%) had previously been convicted ten or more times. Regarding their offenses, 21 (46.7%) had been sentenced in the past for an offense against another person (e.g. murder, violence, or sexual assault),

compared to 16 (35.6%) who had been sentenced for an offense that was not against another person (drugs or burglary). We compared the offenders with a sample of 46 male nonoffenders (M=32.4 years, SD=10.50, youngest=19, and oldest=60) of similar age range. The offenders were, however, significantly older than the nonoffenders (t(86)=3.52, p=.002).

Offenders and nonoffenders also differed in their education level. Eighteen (39.1%) of the nonoffenders compared to 10 (21.7%) of the offenders indicated that their highest educational attainment was the General Certificate of Secondary Education. Of the nonoffenders, nine (19.6%) indicated A-levels as their highest attainment, and two (4.3%) had completed a university degree, compared to none of the offenders. Nonoffenders had an overall higher level of educational attainment than offenders (Mann–Whitney U=565, p<.001).

Materials and procedure

The study protocol was approved by the ethics committee at the University of Plymouth and the participating Institution (FOTO). The offenders were contacted through FOTO, an outreach organization in the southwest of the UK and were tested in the organization's premises. They were paid £8 (in vouchers) for their participation in the study. Offenders who agreed to participate were tested individually in a specified room where they were provided with both oral and written instructions about the nature of the study. During the entire time, one of the research assistants (who were familiar to the offender) was present in the room to assist with any questions. Nonoffenders were recruited from the community and were paid £8 in cash. Nonoffenders were tested individually in a designated room in the university, where they were provided with both oral and written instructions about the study. During the entire experiment, a research assistant was present in the room to address any possible questions. To ensure that none of the nonoffenders had previous offenses, they were asked to indicate whether they had any previous offences, how many and the type of offence. None had indicated that they had committed an offense. Both the offenders and nonoffenders can be considered as a convenience sample.

All participants completed the self-report HEXACO-60 personality inventory in a questionnaire format. The HEXACO-60 consists of 60 items divided into four facets for each of the six main personality dimensions. Participants were asked to rate each of the questionnaire items on a 5-point scale (1='Strongly Disagree', 2='Disagree', 3='Neutral', 4='Agree', and 5='Strongly Agree'). Following the suggestion of Ashton and Lee (2009), we calculated individual facet scores and scores for the six personality dimensions separately for each participant by averaging across ratings for the relevant questionnaire items. The internal consistency reliability of the HEXACO-60 inventory has been demonstrated elsewhere (Ashton & Lee, 2009), where its convergent validity has been confirmed by correlations with measures of self-report and observer report.

Statistical analysis

The Cronbach α statistic was computed to assess the internal consistency reliability of the HEXACO dimensions and the Pearson r statistic was computed to examine associations between the dimensions. Following the statistical procedure advised by Lee and Ashton (2004), the Cohen's d measure of effect size was calculated to assess the size of group differences (i.e. between offenders and nonoffenders) for each of the six HEXACO dimensions and their individual facets. Significant group differences for the dimensions and their facets were inferred using independent t-tests. While the multiple comparisons procedure used presently runs the risk of falsely detecting significant group differences, we did not adjust our target p-value (p=.05) for multiple comparisons due to the large number of comparisons required and our moderate sample size.

Results

The internal consistency reliability of the HEXACO dimensions ranged from .62 to .84 (mean Cronbach's α =.74) for the nonoffending group and from .43 to .81 (mean Cronbach's α =.68) for the offending group. The maximum Pearson correlation between any two dimensions was .41 (mean absolute r=.19) for nonoffenders and .60 (mean absolute r=.31) for offenders. Provided in Table 2 are the means and standard deviations for each of the six HEXACO personality dimensions. We conducted independent samples t-tests to test for statistical differences between offenders and nonoffenders on each of the six personality dimensions and their individual facets. The results of this analysis and the Cohen's d measure of the effect size of the group differences are provided in Table 2. As shown in Table 2, there were significant differences between offenders and nonoffenders on five of the six personality dimensions, and these were largest for the Extraversion dimension (d=.62, p<.01), followed by emotionality (d=-.56, p<.01), openness to experience (d=.55, p<.01)p < .05), honesty/humility (d = .49, p < .05), and conscientiousness (d = .44, p < .05; see Table 2).

Next, we examined each of the individual facets of the six HEXACO personality dimensions. As shown in Table 2, there were significant differences between offenders and nonoffenders for the fairness (d=.50, p<.05) and greed-avoidance (d=.43, p<.05) facets of the honesty/humility dimension, and these differences were largest for the fairness facet. For the Emotionality dimension, group differences were significant for two of the four facets, and were largest for the fearfulness facet (d=-.53, p<.05), followed by anxiety (d=-.47, p<.05). Our earlier analysis revealed that group differences were largest for the extraversion dimension. There were also significant differences for three of the four facets of extraversion, and these were largest for the liveliness facet (d=.71, p<.01), followed by sociability (d=.62, p<.01), and social self-esteem (d=.45, p<.05). Observe that offenders rated lower than nonoffenders on each of the facets of extraversion (see Table 2). Group differences

Table 2. Means and standard deviations for male offenders and male nonoffenders on the HEXACO personality scales.

Personality facets	Nonoffenders M (SD)	Offenders M (SD)	Nonoffenders – offenders d
Honesty/humility	3.18 (.61)	2.91 (.47)	.49*
Sincerity	3.41 (.86)	3.10 (.79)	.38
Fairness	2.72 (1.15)	2.20 (.91)	.50*
Greed-avoidance	3.28 (.72)	2.97 (.75)	.43*
Modesty	3.42 (1.05)	3.63 (.81)	22
Emotionality	2.63 (.63)	2.94 (.47)	56**
Fearfulness	2.17 (.74)	2.54 (.66)	53*
Anxiety	2.99 (1.04)	3.44 (.89)	47*
Dependence	2.63 (1.02)	2.84 (.85)	23
Sentimentality	2.86 (.75)	3.08 (.72)	30
Extraversion	3.50 (.59)	3.15 (.56)	.62**
Social self-esteem	3.49 (.80)	3.13 (.80)	.45*
Social Boldness	3.32 (.84)	3.19 (.76)	.17
Sociability	3.67 (.75)	3.20 (.77)	.62**
Liveliness	3.62 (.80)	3.06 (.78)	.71**
Agreeableness	3.07 (.59)	2.89 (.64)	.29
Forgiveness	2.95 (.95)	2.54 (1.04)	.40
Gentleness	3.03 (.83)	3.08 (.66)	07
Flexibility	3.00 (.56)	2.87 (.83)	.18
Patience	3.37 (1.10)	2.98 (.82)	.40
Conscientiousness	3.36 (.62)	3.07 (.68)	.44*
Organization	3.42 (.97)	3.09 (.96)	.35
Diligence	3.97 (.76)	3.51 (.96)	.53*
Perfectionism	3.57 (.77)	3.15 (.85)	.51*
Prudence	2.71 (.80)	2.70 (.88)	.02
Openness to experience	3.65 (.78)	3.25 (.64)	.55*
Aesthetic appreciation	3.38 (1.22)	2.93 (1.14)	.40
Inquisitiveness	3.57 (1.13)	3.09 (1.01)	.44*
Creativity	3.73 (.94)	3.63 (.70)	.12
Unconventionality	3.80 (.83)	3.20 (.60)	.82**

Note: d is the Cohen's d effect size measure of the difference between offenders and nonoffenders; *p < .05; **p < .01.

between offenders and nonoffenders were largest for the diligence (d=.53, p<.05) and perfectionism (d=.51, p<.05) facets of conscientiousness. Finally, for the openness to experience dimension, group differences were significant for the inquisitiveness (d=.44, p<.05) and unconventionality (d=.82, p<.01) facets, and these were largest for the unconventionality facet.

In sum, there were significant differences between offenders and nonoffenders on five of the six HEXACO personality dimensions. Group differences were largest for the extraversion dimension, followed by emotionality. There were also significant group differences for the individual facets of the main HEXACO personality dimensions.

Discussion

The recently developed HEXACO model of personality captures a broad spectrum of personality dimensions. Although not previously applied to the study of criminal behavior, it made sense to us that the HEXACO model might provide a unifying framework for studying criminal tendencies by combining facets of honesty and humility with those of emotionality, extraversion, conscientiousness, agreeableness, and openness to experience within a single model of personality. Our present results confirm this. The offender sample studied here differed significantly from nonoffenders on five of the six personality dimensions proposed by the HEXACO model.

The extraversion dimension of the HEXACO model emerged as the most important discriminant of offending, followed by emotionality, openness to experience, honesty-humility, and conscientiousness. Only the agreeableness dimension was not significantly different between offenders and nonoffenders. Although earlier models of crime describe offenders with characteristics of extraversion (Eysenck, 1964), it emerged from our data that offenders are actually less extravert than nonoffenders. Within the HEXACO model, the extraversion dimension is described by facets of sociability, shown by others to be reduced among offending groups (Caspi et al., 1994). Indeed, we found that offenders exhibited lower scores on social self-esteem, sociability, and liveliness, where liveliness – measuring enthusiasm and optimism (see Lee & Ashton, 2004) – emerged as a more important discriminant of offending. Offenders were also less inquisitive and had more conventional attitudes than nonoffenders.

Previous studies have found adult offenders, and especially juvenile offenders, to experience more intense negative emotions of anxiety and aggression when compared to nonoffenders (Krueger et al., 1994). Perhaps surprisingly, we also found that adult offenders were more fearful than nonoffenders, and group differences for this facet of emotionality were actually larger than for anxiety. Conversely, the offenders scored lower on facets of the honesty/humility dimension, characteristic of unfair and greedy tendencies. Among groups of nonoffenders, others have found scores on scales of psychoticism - shown to be higher for offenders (Eysenck & Eysenck, 1978) – to correlate negatively with the honesty/humility and emotionality dimensions of the HEXACO model (De Vries, Lee, & Ashton, 2008). Thus, we may have expected to find that offenders scored lower than nonoffenders for both the emotionality and honesty/humility dimensions, despite other evidence to suggest that offenders often experience more intense emotions of anxiety (Krueger et al., 1994). The offenders studied presently were within 16 weeks of release from their previous prison sentence. The demands of social reintegration may be a major source of anxiety, and this could have elevated offenders' scores on the fearfulness and anxiety facets of the HEXACO scale, as well as explain their reduced social self-esteem and optimism. These findings as a whole indicate that the

emotional facets of offending personality are complex and may comprise multiple negative emotions that may or may not relate to psychoticism. A fruitful topic for further research would be to unpick these complex relations and examine whether situational factors are also involved.

In the current study, we report differences between male offenders and male nonoffenders on five of the six personality dimensions of the HEXACO model. Studies of nonoffending groups, however, have reported large gender differences for the emotionality and honesty/humility dimensions of the HEX-ACO model (Lee & Ashton, 2004), found presently to distinguish offenders from nonoffenders. Lee and Aston (2004) report that women score higher on both dimensions when compared to men. We can expect that personality differences may also emerge between female and male offenders, and this comparison may provide further insight into offending personality. Presently, we studied a heterogeneous sample of offenders. While it was important to ascertain whether the HEXACO model could be applied to predict personality differences between offenders and nonoffenders, further research should also examine how the personality characteristics of offenders differ depending on the nature of their crime. For example, sexual offenders and violent offenders differ from other offenders in their processing of emotional information (Gery et al., 2009; Smith & Waterman, 2004) and this likely relates to different underlying personality characteristics among offenders. There was much variation in our sample with regard to the nature of offenders' convictions and their number of previous prison sentences. Our findings do, however, identify the HEXACO framework as an insightful tool for studying offender personality characteristics, which we hope inspires further research into specific groups of offenders.

Further research may benefit from combining the self-report measures used presently with observer reports. While observer report and self-report measures are shown to yield consistent results among nonoffending samples (Ashton & Lee, 2009), offenders may have concerns about self-preservation, and this could have affected our results. Indeed, some studies indicate that offenders have stronger tendencies than nonoffenders to give socially desirable responses to self-report items (Haapasalo, 1990). Despite this, other studies have demonstrated the validity of self-report measures for studying offender groups (Loza, Dhaliwal, Kroner, & Loza-Fanous, 2000; Loza & Loza-Fanous, 2002). For example, in the Loza et al.'s (2000) study, the authors compared prisoners' responses to a self-appraisal questionnaire with their criminal histories, and found that overall scores on the questionnaire distinguished violent from nonviolent prisoners and predicted their number of violent and nonviolent offenses. Moreover, in our current data, the internal consistency reliability of the HEXACO dimensions – indicated by the Cronbach α values – was reasonably similar for the offender and nonoffender samples, indicating that both groups responded to the self-report items in a consistent manner.

Conclusions

We found presently that tendencies to be unfair and greedy – facets of the honesty/humility dimension of the HEXACO model – were characteristic of offenders. While these concepts are not novel to theories of criminal behavior, our present findings indicate that the HEXACO model of personality provides an important tool for studying personality characteristics of offenders, and may provide a valuable addition to the clinical tools used by forensic psychologists, such as when evaluating claims for child custody and competence to stand trial. Moreover, the HEXACO model has an emphasis on social and emotional aspects of personality that may be relevant to identifying potential problems of institutional adjustment and treatment compliance among newly incarcerated offenders.

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