A Criminological and Psychological Approach to Criminal Offender Personality Traits

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Abstract

This thesis aims to create personality profiles based on several different types of criminal behaviour. Additionally, the thesis seeks to demonstrate that 1) these personality profiles would significantly differ from those of a normative population and 2) the personality profiles would significantly differ across the offending groups themselves.

Between the Czech Republic and Australia, the personality profiles of 171 offenders and ex-offenders were measured using the HEXACO-PI-R. These offenders were allocated to one of four primary offence categories, 'violent offenders', 'substance abuse & drug-related offenders', 'property & financial offenders' and 'sexual offenders (paedophilia)'. A secondary analysis was performed on offenders who had committed crimes that spanned multiple categories. These offenders were allocated to one of three specific offender groups, 'violent and substance abuse & drug-related offenders', 'violent and property & financial offenders' and 'sexual (paedophilia) & violent offenders'.

From the results, seven offender personality profiles were developed. These profiles demonstrated how the personalities of each offending group compared with the normative population at a factor and facet level. A consistent finding in the offender personality profiles was higher levels of Agreeableness and lower levels of Openness to Experience.

Seven offender personality matrices were also developed. These matrices highlighted how the personalities of the offenders differed within the sample. In summary, when the offenders were compared to each other 1) the violent offenders scored lower on Emotionality, 2) the substance abuse & drug-related offenders scored higher on eXtraversion, 3) the property & financial offenders scored lower on Honesty-Humility, and 4) the sexual offenders (paedophilia) scored lower on eXtraversion.

The findings indicate that significant personality trait differences exist between 1) the normative population and criminal offenders and 2) the types of criminal offenders. Future research could examine the responsiveness of these specific personality traits to established rehabilitation programs.

Table of Contents

List of Tables

Offender Personality Profile and Matrix Index

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Chapter 1: Background & Theoretical Review

Chapter 1 provides the background and context of where the PhD was placed amongst the literature. This clarification is necessary as the subject matter branches across two distinct fields of study, criminology and psychology. An extensive body of academic literature exists that explores the many theoretical explanations as to why individuals commit a crime (Bernard, Snipes, & Gerould, 2010). This literature includes classical approaches to criminology, such as the Rational Choice Theory, which suggests that offenders want to advantage themselves by committing crimes (Pease, 2006). Rational Choice Theory stipulates that decisions to commit crime are made with a rational mind. Further, for a crime to occur, a motivated offender requires a suitable victim in an appropriate time and place and in the absence of a capable guardian (Felson, 1997). Alternatively, positivism approaches criminology from biological, psychological and sociological perspectives. Positivism also advocates the use of scientific approaches to research that are drawn from the natural sciences (for example, the scientific method) (Muncie, 2006). This thesis focuses on the psychological approach to criminology.

1.1 The Psychological Approach

The decision to adopt a psychological approach to criminology was based upon rehabilitation literature, including the Good Lives Model (GLM) and the Risk-Needs-Responsivity Model (RNR). The GLM is a strengths-based approach to rehabilitation that seeks to equip individuals with the internal and external resources they require to live a better life (Ward & Gannon, 2006; Laws & Ward, 2011). Concerning offending, the offender's criminogenic needs are considered internal or external barriers towards living a good life and achieving their 'primary human goods'. Ward, Yates, and Willis (2011, p. 95) outline 11 categories of primary goods: 1) life (including healthy living and functioning), 2) knowledge, 3) excellence in play, 4) excellence in work (including mastery experiences), 5) excellence in agency (i.e., autonomy and self-directedness), 6) inner peace (i.e., freedom from emotional turmoil and stress), 7) friendship (including intimate, romantic, and family relationships), 8) community, (9) spirituality (in the broad sense of finding meaning and purpose in life), 10) happiness, and 11) creativity.

The GLM proposes that all individuals will develop their life plans to live a good life in alignment with their core values (Ward, Yates, & Willis, 2012). As a result, the GLM claims that offending occurs from the limitations within an individual's life plan that relate to them not achieving their primary goods (Ward, Yates, & Long, 2006; Ward, Yates, & Willis, 2012). For example, an individual with a limited skillset may not achieve the good of agency (i.e., autonomy and self-directedness) and accordingly may rob stores for the money to try and achieve this good. Alternatively, Ward, Yates, and Willis (2012) suggest that an adult individual who cannot achieve the primary good of friendship – and, more specifically, intimacy – may instead attempt an inappropriate secondary means to achieve this good (for example, a relationship with a minor).

Andrews, Bonta, and Wormith (2011), however, have criticised the GLM model, stating that it encourages weak assessment approaches, a return to unstructured professional judgements, and greater confusion in service planning. They propose instead the use of the RNR model. The RNR model emphasises the importance of focusing on the individual needs of the offender. The 'risk principle' utilises research that demonstrates that treatment rehabilitation programs are most effective when they align with the re-offending risk that an offender presents (for example, if they are impulsive or quick to anger) (Andrews & Bonta, 2006). Secondly, the 'needs principle' asserts that rehabilitation programs are most effective when they address the 'criminogenic needs' of the offender (Andrews & Bonta, 2006). These criminogenic needs can refer to the personality traits, problems or issues that relate directly to the offender's likelihood of re-offending. Thirdly, the 'responsivity principle' includes delivering services that match areas of an individual's 'motivation, intellectual abilities, gender, culture, and personality characteristics' (McGrath et al., 2009, p. 8).

When comparing the GLM and RNR models, the therapeutic focus of the GLM is essential because it highlights the need to perceive the offender not as a criminal beyond redemption but, rather, as an individual who lacks what they need to achieve a good life. The RNR model proposes a comparatively more evidence-based and structured approach than the GLM. While seemingly more calculated and process-driven approach, the model still views offenders at a more individual level and uses psychological principles (including personality) to help provide them with what they need to desist from crime.

Bonta and Wormith (2013) discuss the role of personality and its assessment in treatment and rehabilitation. The authors view the RNR model as derived from the General Personality and Cognitive Social Learning (GPCSL) theory and as being helpful in offender rehabilitation. The GPCSL theory stipulates that criminal behaviour is reflective of a fundamental personality disposition and the learning of criminal behaviour from the expectations an individual holds, alongside the consequences of their behaviour (Andrews & Bonta, 2006; 2010). Accordingly, personality and its relevance in treatment and rehabilitation are apparent in all three stages of the RNR model. Firstly, the offenders' personality may influence the level of risk that they will commit certain types of offences. Secondly, after committing a specific offence, the needs of an offender need to be considered at an individual level in order to target suitable treatments. Finally, the aspect of responsivity concerns maximising the likelihood that offenders will engage and learn from the rehabilitation interventions by tailoring them to the offender's personality, learning style, cognitive capabilities, and motivations.

Additionally, forensic mental health and social learning theory are two theoretical perspectives that have influenced offender assessment instruments (Bonta & Wormith, 2013). Forensic mental health perceives offending behaviour as a result of psychological dysfunction and personality disorders (Bonta & Wormith, 2013). Accordingly, assessment and rehabilitation should place an emphasis on both pathology (for example, anxiety or mood swings) and personality traits linked to criminal behaviour. As such, a greater understanding of personality profiles and offending behaviour could better aid rehabilitative treatment.

Social learning theory – in particular, GPCSL theory (Andrews & Bonta, 2006; 2010), discussed above – considers eight central risk-need factors that influence criminal behaviour. These are: 1) criminal history, 2) pro-criminal attitudes, 3) antisocial personality patterns, 4) pro-criminal associates, 5) education/employment, 6) family/marital, 7) substance abuse, and 8) leisure/recreation. The first four of these factors are considered the most influential and best predictors of criminal behaviour (Bonta & Wormith, 2013). A limitation of the GPCSL is that it is a general theory of criminal behaviour the central eight factors apply to a wide variety of criminal behaviours (Bonta & Wormith, 2013). As a result, general personality

constructs are presented (for example, low self-control or hostile) instead of specific personality profiles based on certain offences.

This thesis expands upon the risk–needs–responsivity model by seeking to identify what personality traits are present in individuals who commit criminal offences and whether personality traits differ between the types of criminal offending. As such, the present chapter has four main goals. The first is to highlight the relationship between criminality and personality. Secondly, the chapter seeks to explain why personality is a suitable method of understanding and categorising offending behaviour. The third goal of the chapter is to establish how the trait-based approach to personality was established and why it is more appropriate than a type-based approach to personality when examining the personality of offenders. The final goal of the chapter is to establish why the Five-Factor Model (FFM) of personality and the Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience (HEXACO) Six-Factor Model of personality are the most suitable theories to review in detail when examining what is currently known regarding the personality traits of offenders.

1.2 A Brief History of Trait Personality Theory and Research: From Allport to Goldberg

The psychological study of personality was first established in the 1930s (McAdams, 1997). While the first issue of the academic journal *Character and Personality* was released in 1932, it was not until Allport's (1937) article titled 'Personality: a psychological interpretation' that the field was formally recognised.

In psychology, the term *personality* refers to a set of enduring, distinct and integrated psychological characteristics (Lefton & Brannon, 2006). These sets of psychological characteristics are also known as personality types or traits, which aid in defining an individual's personality (Lefton & Brannon, 2006). The primary difference between trait and type personality theories is that type theory views people as falling within discrete categories, while trait theory measures the same characteristics as part of a spectrum. The field of personality theory carefully examines the components of personality, how they develop and their measurement. The core of personality theory, however, is its attempt to

understand the attitudinal and behavioural variances that result from these factors (Lefton & Brannon, 2006).

Barenbaum and Winter (2008) present three reasons why understanding the development of personality theory is essential when considering research in the field. Firstly, the origins of any field are often crucial in how the theory develops into its more recent forms. Secondly, an understanding of the field and past versions of academic theories can help researchers avoid making similar mistakes in the future. Finally, they propose that no science is divorced from the context in which it sits chronologically. By understanding how theories were developed and advanced in specific periods, researchers can have a deeper appreciation of how the past has influenced contemporary society's understanding of the field.

The first academic literature in the area of 'personality and character' appeared in 1921 in the USA (Allport & Allport, 1921). The following decades saw numerous prominent figures expand the field and provide the underpinnings of personality theory that are still, in many aspects, utilised today. Gordon Allport worked in defining the field of personality in a more systematic manner than had previously existed (Barenbaum & Winter, 2008). His was later self-described as the pioneering work on 'the question of component traits of personality' (Allport, 1967, p. 9). The essence of Allport's work, however, centred on the reconciliation of the analytical and interpretative views that surrounded personality theory in the 1920s and 1930s. Additionally, his views that traits existed as neuro-psychic systems with dynamic or motivational properties (Barenbaum & Winter, 2008), and that they could be collated as a lexical study, have earned him the title by some as the father and critic of the Five-Factor Model of personality (John & Robins, 1993).

Allport and Odbert (1936) conducted a lexical study that used an unabridged English dictionary to highlight all the terms that could 'distinguish the behaviour of one human being from that of another' (p. 24). Their search resulted in over 18,000 words being selected, the refining of which influenced most research in personality theory for over 60 years (John, 1990; John, Angleitner, & Ostendorf, 1988). The collective work of Allport and Odbert highlighted four broad categories: personality traits (for example, aggressive or optimistic), temporary states (for example, joyful or scared), evaluative judgements of personal conduct

(for example, excellent or irritating), physical characteristics (for example, short or thin), and capacities and terms that they believed would not be relevant to personality (John, Naumann, & Soto, 2010). While various scholars in the field, such as Norman (1963), debated the number and nature of the categories presented by Allport and Odbert, it is still recognised that their approach was the foundation of modern theories of personality. Allport's (1921) work and contribution to the field of personality theory can be summarised by his concepts of 'cardinal traits' (i.e., persistent characteristics within an individual that can determine the direction that a person's life follows), 'central traits' (i.e., the aspects of an individual that determine their daily interactions), and 'secondary traits' (i.e., aspects of an individual's character that emerge under specific circumstances, events and situations).

These classifications, and the research that surrounded their theory, provided the basis for the work of Raymond Cattell. Cattell wished to create a more practical taxonomy that could 'provide a systematic framework for distinguishing, ordering, and naming individual differences in people's behaviour and experiences' (John et al., 2010, p. 118; John et al., 1988). Cattell (1943) accomplished this by culling the 18,000-word list provided by Allport and Odbert, starting with the 4,500 trait terms (Cattell, 1945a, 1945b; John et al., 2010). Using a combination of research and statistical analyses, particularly factor analysis, Cattell refined the 4,500 words into a list of 35 variables (John et al., 2010). Following this, using factor analysis, he eventually produced a list of 12 variables, which later became part of his 16 Personality Factor Questionnaire (Cattell, Eber, & Tatsuoka, 1970). Cattell's claim that his factors showed high levels of correspondence across different methods (for example, self-reports and objective tests), however, has been called into question (Becker, 1960; Nowakowska, 1973).

Regardless, this considerably shortened list prompted other researchers, such as Tupes and Christal (1992), to continue the work of examining the different dimensions and structural frameworks of traits. The summation of this work resulted in Tupes and Christal (1992) stipulating that there were 'five relatively strong and recurrent factors and nothing more of any consequence' (p. 14). The resulting 'Five-Factor Model' (FFM) was also built upon in the preceding decades by Borgatta (1964), Digman and Takemoto-Chock (1981) and Norman (1963) (John & Srivastava, 1999). The factors within the 'Five-Factor Model' or the 'Big Five'

(Goldberg, 1992) were most commonly described by these authors as extraversion–introversion, agreeableness–antagonism, conscientiousness–undirectedness, neuroticism–stability, and openness to experience (Lefton & Brannon, 2006). These factors were labelled as the 'Big Five' in recognition of their broad dimensions, not as a statement that personality differences can be reduced to five traits. The definition of each term can be seen in Table 1.

Table 1.

Definitions of the Five-Factor Model categories

Neuroticism–Stability	The extent to which people are worried or calm, nervous or at ease, insecure or secure.
Extraversion–Introversion	The extent to which people are social or unsocial, talkative or quiet, affectionate or reserved.
Openness to Experience	The extent to which people are open to experience or closed, independent or conforming, creative or uncreative, daring or timid.
Agreeableness–Antagonism	The extent to which people are well mannered or irritable, courteous or rude, flexible or stubborn, lenient or critical.
Conscientiousness–Undirectedness	The extent to which people are reliable or undependable, careful or careless, punctual or late, well organised or disorganised.

(Lefton & Brannon, 2006, p. 474)

The five factors of the FFM, or the 'Big Five', are regarded as the overarching trait categories that broadly express the main dimensions of every personality (Borkenau & Ostendorf, 1998; Busato et al., 1999; McCrae & Costa, 1999; McCrae et al., 2002). Furthermore, this research does not only pertain to western ideologies; an increasing number of cross-cultural studies have also found support for the FFM (Hofstede & McCrae, 2004; McCrae & Allik, 2002; McCrae et al., 2002).

No theory, however, is without its criticisms. Critics such as Block (1995), Eysenck (1997) and Pervin (1994) have raised similar arguments that the Five-Factor Model is not a

complete theory of personality. These criticisms further the notion that the original Big Five was not meant to be an in-depth measure of personality but, rather, an overarching framework that was descriptive rather than explanatory (Goldberg, 1993) –a framework of personality that looks at similarities in behaviour and variables, rather than at the individual as a whole (John et al., 2010). As explained by Small, Zeldin and Savin-Williams (1983), however, much of the criticism being levelled against trait theory may have been due to the limitation of methodological approaches in the field of personality research. With the newer and more digitally precise techniques of statistical analyses that became available over time (for example, correlation and multiple linear regression) (Gravetter & Wallnau, 2009) trait theory became a dominant theoretical model regarding personality inventories in both research and practice.

In contrast to trait theory, multiple other schools of thought within the school of psychology have emerged to try and explain the construct of 'personality'. Early theorists, such as Freud, who took a psychodynamic approach to personality, stated that individuals wanted to maximise gratification while lessening, as much as possible, punishment. Freud's position held that it was a person's unconscious urges, which were based on human instinct, that led individuals to certain types of behaviours (Lefton & Brannon, 2006). From a behaviourist approach, Skinner (1938) saw personality and patterns of behaviour as being the consequence of learned experiences from an organism's engagement with its environment. Faulty behaviour or personality traits were the product of substandard or inappropriate engagements between a person and their environment concerning their responses to stimuli.

More recent theorists, such as Rogers (1959) and Mischel (1999), have approached the concept of personality through humanistic and cognitive lenses. Rogers' view of personality deems an individual's desire for fulfilment as the key factor in personality development (Rogers, 1961). It argues that internal agreement on how one perceives their own behaviour and characteristics (i.e., self-concept) and how they would like to be (i.e., ideal self) is crucial to personality development (Rogers, 1959). For such internal agreement to occur, however, an individual must experience a relationship with another that includes empathetic responses and an unconditional, non-judgmental, positive regard. If these conditions are met, an individual will reach a state of 'self-actualisation' wherein their self-concept and

ideal self are in agreement and thus provide the means for personality development to occur (Rogers, 1959). Similar theories concerning self-actualisation and personality have also been developed by prominent psychological figures such as Maslow (1950, 1970).

Conversely, Mischel's (1999, 2004) cognitive model of behaviour and personality centres on the idea of 'self-regulation'. It is this construct that he claims supports his cognitive-affective system of personality, where people interpret the situations they are in and that interpretation may prompt specific responses. Furthermore, it is this interaction with personality traits, rather than traits alone, alongside past experiences, that cause a person to assess a current situation and act accordingly.

On a conceptual level, the Dark Triad is one of the most recent theories of personality and criminal behaviour. The Dark Triad is an area within psychology that focuses explicitly on the personality constructs of Machiavellianism, narcissism and psychopathy (Paulhus & Williams, 2002). Jakobwitz and Egan (2006) accurately define each. Machiavellianism is the use of interpersonal strategies, deception, and manipulation to promote self-interest. Narcissism refers to the individual's perceived self-worth and behavioural grandiosity. Psychopathy, however, is more complicated. The Psychopathy Checklist (Revised) (Hare, 1991) measures two factors of psychopathy. The first factor, primary psychopathy, examines aspects such as selfishness, superficial charm, and remorselessness, while factor two, secondary psychopathy, measures anti-social lifestyle and behaviours (Jakobwitz & Egan, 2006).

While distinct constructs, there is substantive overlap between the three constructs of the Dark Triad (Paulhus & Williams, 2002). This overlap implies that, collectively, the three constructs measure the tendency to manipulate and exploit others for personal gain (Lee et al., 2013). Section 2.1 provides a more in-depth evaluation of the Dark Triad theory of personality and its application to criminal behaviour.

While evidence has been compiled for and against the 'Big Five' and trait-based measures of personality, increasing pressure was seen in the field of personality questionnaires (Oliver & Pervin, 2001) due to the fact that, while a convergence and degree of unity and stability were becoming apparent in the FFM, a divergence was separately forming in the questionnaire-

based models. Eysenck (1991) aptly summarises the situation (at that time) by stating that 'where we have literally hundreds of inventories incorporating thousands of traits, largely overlapping but also containing specific variance [and] each empirical finding is strictly speaking only relevant to a specific trait… this is not the way to build a unified scientific discipline' (p. 786). The situation started to shift in the 1980s and 2000s, however, as several major personality inventories that had been developed in the previous decades came to the forefront; the *Revised Neuroticism–Extraversion–Openness Personality Inventory* (NEO-PI-R), the *Myers-Briggs Type Indicator* (MBTI), the *Sixteen Personality Factor Test* (16 PF), the *Trait Descriptive Adjectives* (TDA), the *Big Five Inventory* (BFI), and the *Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience Personality Inventory-Revised* (HEXACO-PI-R).

These personality inventories are discussed in greater detail in Section 1.4, together with an. explanation of why two personality approaches – the Five-Factor Model of personality and the HEXACO Six-Factor Model of personality – have been selected as the focus of the literature review in Chapter 2.

1.3 The Relationship between Criminality and Personality

Section 1.2 above discusses the history of personality and trait-based personality in greater detail. The importance of recognising the influence of an individuals' personality and the link to criminality, however, occurred in the 1970s. Eysenck's (1997) work on personality and crime was the foundation of exploration of the different personality dimensions and their connection to deviant behaviour (Eysenck, 1959, 1997; Eysenck & Eysenck, 1968). Eysenck (1950) originally proposed that personality could be defined under two main dimensions (i.e., Extraverted or Introverted & Neuroticism or Stable). He later added the third dimension of Psychoticism (Eysenck, 1966). Eysenck argued that it is combinations of these dimensions that cause personality characteristics to form. On a more biological level, Eysenck's theory proposes that individual differences in cortical and autonomic nervous system functioning resulted in individuals having differing capabilities concerning learning, or being 'conditioned' by their environment, to social norms (Hollin, 2013). For example, an extravert is cortically under-aroused and requires continued stimulation to maintain an optimum level of arousal, whereas an individual classified as an introvert, who is cortically

over-aroused, will seek to avoid additional cortical stimulation to maintain their optimum level of arousal (Hollin, 2013).

These physiological differences translate into a difference in behaviour and personality traits. Extraverts tend to display more assertive, exciting and risk-taking behaviours; this is in stark contrast to their quieter and more reserved introvert counterparts (Hollin, 2013). Eysenck's theory also argues that in conditioning socialising behaviours, individuals classified as extraverts have far more difficulty than introverts (McEwan, 1983). This difference manifests in a clear difference in the learning and acceptance of information or proposed changes in social behaviour – and in how substantial behavioural changes and cognitive processes are manifested across the different personality classifications in Eysenck's theory of personality.

These relationships between the nexuses of personality differences, psychological traits, behavioural conditioning and criminality are complex. In its most simple form, Eysenck held the principal assumption that, at a young age, children learn to control their anti-social behaviour by developing a socially constructed 'conscience' (Eysenck & Gudjonsson, 1989). This conscience is the result of conditioned responses that relate to environmental events (Eysenck & Gudjonsson, 1989). As previously mentioned, however, the speed and efficiency of this conditioning rely heavily on where the individual lies on the personality dimension spectrum. For example, an individual with high extraversion and high neuroticism would be less likely to be able to learn social controls due to a deficiency in their capacity to be socially conditioned. As such, Eysenck predicted these individuals would be over-represented in offender groups later in life (McEwan, 1983). Alternatively, individuals with low levels of extraversion and neuroticism, who are far more effective at socialisation, would be less represented in offender groups (McEwan, 1983).

In support of this suggestion, a study by McGurk and McDougall (1981) performed a cluster analysis on a group of 100 delinquent and 100 non-delinquent college pupils. After measuring the extraversion, neuroticism and psychoticism scores of the participants, four personality clusters emerged between the groups. Both groups contained individuals that had high extraversion/low neuroticism and low extraversion/high neuroticism scores. As predicted, the clusters related to criminality (i.e., high extraversion/high neuroticism & high

psychoticism/high neuroticism/high extraversion), were found in the delinquent sample alone. Furthermore, the low extraversion/low neuroticism group (i.e., the group the theory proposed would be most socialised) was only found in the non-delinquent sample.

While providing substantial support for Eysenck's theory, certain limitations need to be acknowledged. Firstly, not all studies that have performed similar cluster analyses have demonstrated such clear findings (Eysenck & McGurk, 1980). Secondly, while empirical findings do support the relationship between personality and crime, they do not offer an explanation of the types of crimes committed (for example, violent, non-violent, sexual, substance abuse or property) (McEwan, 1983). Furthermore, at the time of Eysenck's research, the field of psychology was still developing, and theorists were not able to take proper advantage of criminological and psychological schools of thought. This lack of refinement resulted in broad overarching classifications of the criminal groupings (Howitt, 2009). While crucial in the infancy of personality and crime research, Eysenck's work has now been surpassed as the measures and research in the field of personality have become more sophisticated.

More recent research has continued to match types of offending to personal styles of behaviour. Youngs (2004) utilised a questionnaire on a sample of men aged 14–28 years that matched offending behaviour (for example, high school students cheating on school tests or regularly drinking excessively under the age of 16) to personal characteristics. Two main styles of offending were observed: expressive and instrumental. Expressive behaviours were those such as breaking and entering, sex in public and arson; instrumental behaviours included offences such as shoplifting, burglary and forging cheques. The findings support the notion that a relationship between offending style and personality does exist, with the variation in offence style related to broad personality variables such as control or openness. For example, those linked to 'expressive person' crimes that typically included violence or a weapon reported higher levels of the need for power or dominance (expressed control) in their interpersonal relationships. More sophisticated personality measures such as the NEO-PI-R and HEXACO-PI-R, however, have refined how personality is measured (see Section 1.3). The literature surrounding personality and criminality has also progressed. For example, personality traits that are high or low in an individual and that have been

associated with criminal behaviour include impulsiveness, neuroticism, extraversion, negative affect, sensation seeking, conscientiousness, empathy, altruism and moral reasoning (Walsh & Lee, 2007).

Dennison, Stough and Birgden (2001) explore three personality variables in their research regarding sexual offences against children. They find that, compared to the non-offender control group, the sex offender groups had significantly higher levels of neuroticism and significantly lower levels of extraversion and conscientiousness. The specific type of sexual offending also elicited specific high and low personality variables in the offender samples. The participants (64 males, mean age of 47 years, *SD* = 9.94) were divided into four groups defined by their sexual offences against children. The crimes included: incest amongst immediate family members (17 offenders), incest amongst step-family members (11 offenders), sexual offences against children outside the family (32 offenders) and other crimes not clearly defined (3 offenders). When compared to the non-offender sample, both the incest/step-family sample and extra-familial sample scored higher on neuroticism and vulnerability.

Additionally, the extra-familial grouping scored higher on anxiety and all sex offender samples scored higher on depression and self-conscious scales than the non-offender group. Overall, this outcome demonstrates that this sample of sex offenders had low self-esteem and low self-confidence. This finding is not, however, a predictive measure that assumes that all individuals with low self-esteem and self-confidence will become sex offenders.

Additionally, both incest samples scored lower on the 'openness to values' measure compared to the non-offender sample. This finding suggested that offenders who commit offences against children within the family unit are slightly more close-minded and conservative than non-offenders. Considering the offender groups themselves, factors such as depression, self-consciousness, modesty and competence are essential when discriminating between the offender samples. Overall, this result demonstrates that personality aspects are also consistent and meaningful when differentiating offences from within the same offence category (for example, incest amongst immediate family member, incest amongst step-family members, or sexual offences against children outside the family). Collectively, this section highlights that academia and society are now more aware of the

benefits of psychology in rehabilitation and reintegration, and that contemporary research in criminology, psychology and personality has provided more focused and individual rehabilitation treatment options. Also, the studies presented all highlight that a link between criminal offending and personality exists. Section 1.2 explores personality theory in greater detail and explains how the trait-based approach to personality was developed.

1.4 Trait & Type Personality Inventories: Overviews

Personality inventories are psychological tests that comprise questions and statements to which individuals respond (Lefton & Brannon, 2006). The inventories are generally based on specific theories of personality - for example, the Five-Factor Model is the core underlying theory of the NEO-PI-R (Lefton & Brannon, 2006). It is important to have a general understanding of the key major personality inventories to appreciate the findings that they provide. The *Revised NEO Personality Inventory* (NEO-PI-R), *the Big Five Inventory* (BFI) & the *Ten Item Personality Inventory* (TIPI), the *Myers-Briggs Type Indicator* (MBTI), and the *HEXACO Personality Inventory-Revised* (HEXACO-PI-R) will each be briefly discussed below.

The Revised NEO Personality Inventory (NEO-PI-R) & the NEO Five-Factor Inventory (NEO-FFI)

The NEO Personality Inventory-Revised (NEO-PI-R) is a 240-item questionnaire that measures the Big Five theory's major factors of personality (i.e., neuroticism, extraversion, openness, agreeableness and conscientiousness), as well as six facets that define each factor (Costa & McCrae, 2008). Collectively, the five factor scales and 30 facet scales in the NEO-PI-R provide a comprehensive and detailed assessment of normal adult personality. Facet scales are more sensitive and specific indicators within each of the main personality factors. For Neuroticism these are anxiety, angry hostility, depression, self-consciousness, impulsiveness and vulnerability; for Extraversion, warmth, gregariousness, assertiveness, activity, excitement seeking and positive emotions; for Openness, fantasy, aesthetics, feelings, actions, ideas, and values; for Agreeableness, trust, straightforwardness, altruism, compliance, modesty and tender-mindedness; and for Conscientiousness, competence, order, dutifulness, achievement striving, self-discipline and deliberation (Costa & McCrae, 1995).

In the NEO-PI-R self-reporting format, the internal consistency coefficients range from .86 to .95 for factor scales and from .56 to .90 for facet scales (Costa Jr & McCrae, n.d.). This result is indicative of good internal reliability within the inventory. Finally, the NEO-PI-R is perceived as one of the best-validated questionnaires in relation to the Big Five factors and facets (John & Srivastava, 1999). As a 240-item questionnaire can be quite time-consuming, Costa and McCrae (2008) developed the NEO-FFI, which is a 60-item questionnaire based on their 1985 version of the NEO-PI. The downside of this reduction, however, was that the facets within each personality dimension were no longer balanced. For example, within the 'Agreeableness' dimension five items from the 'Altruism' facet are presented, versus only one item from the 'Tender-Mindedness' facet in the inventory (John & Srivastava, 1999). As the main Big Five factors were not influenced by the facets being unbalanced (the facets that most strongly correlated with the primary personality dimension were given preference) (John & Srivastava, 1999), the NEO-FFI is perceived as an effective and easier inventory to use for most research within the FFM theoretical framework.

The Big Five Inventory (BFI) & the Ten-Item Personality Inventory (TIPI)

The BFI is situated within the FFM conceptual framework. It is similar to the NEO-PI-R in the sense where it measures the 'Big Five' personality factors as well as the six facets within each (Goldberg, 1993; John, Donahue, & Kentle, 1991). Where it is different, however, is that it achieves the required data from a 44-item inventory compared to the NEO-PI-R's 240 items. It achieves this by using short 'phrases based on the trait adjectives known to be prototypical markers of the Big Five' (John & Srivastava, 1999, p. 115).

Additionally, even though the measure is considerably shorter, it does not appear to sacrifice validity or reliability. In the American and Canadian samples, the Cronbach's alpha reliabilities of the BFI scales ranged from .75 to .90 (with an average of .80 and above) (John & Srivastava, 1999). Furthermore, test-retest reliability had a mean value of .85, meaning that participants responded similarly each time the inventory was taken. In relation to the validity of the inventory, the BFI has substantive convergent and divergent ratings with other Five-Factor Model-based personality inventories (John & Srivastava, 1999). Although

similar to the NEO-FFI, the disadvantage of this inventory is the unbalancing of the items that measure the facets within each factor.

Shorter still, the TIPI uses a ten-item questionnaire that is designed to measure the Big Five personality dimensions (Gosling, Rentfrow, & Swann, 2003). Two items exist for each of the five factors, and the participant can usually complete the task in a few minutes (Gosling et al., 2003). This again, however, comes at the cost of validity and reliability compared to other questionnaires (such as the NEO-PI-R) (Rammstedt & John, 2007) and neglects the traits at the facet level.

The Myers-Briggs Type Indicator (MBTI)

The Myers-Briggs Type Indicator is based on the theory of personality type, introduced by Carl Jung in the 1920s (Myers & Myers, 2010). The primary difference between a trait and type personality theory is that type theory views people as falling within discrete categories, while trait theory measures the same characteristics as part of a spectrum. In the MBTI inventories, participants are asked to select a dichotomous response to a question or statement involving preferences or inclinations (Briggs, 1976). These decisions are then scored to place the participant predominantly on one pole or the other on four separate spectrums; extraversion–introversion, sensing–intuition, thinking–feeling and judging–perceptive (Myers, 1962). These results then form one of 16 combinations (for example, ISTJ, ESFP, ENTJ), each of which has its own summation (Myers, 2012).

While the MBTI usually is perceived as easy to use, it has faced numerous criticisms. Firstly, the MBTI scales only adequately measure four out of the five major dimensions of the Big Five theory of personality (McCrae & Costa, 1989). The lack of an apt measurement of emotion stability (i.e., neuroticism) is a substantial drawback as this is the dimension most often associated with depression and anxiety disorders. Additionally, McCrae and Costa (1989) find no evidence that the MBTI truly measures dichotomous preferences or qualitatively distinct personality types. Instead, they conclude that it is an instrument that simply measures four separate dimensions of personality. Further, the MBTI has seen substantial questions surrounding statistical validity and critical scrutiny, with many of the studies that endorse the MBTI being unscientific or methodologically poor (Coffield et al.,

2004; Gardner & Martinko, 1996). Finally, the test-retest reliability of the MBTI is a cause for concern. As the inventory uses a dichotomous approach, an individual could be on the cusp of any two personality categories yet be definitively categorised as having a specific personality type. The same person a few weeks later may respond in a manner that leads them to be classified in another category. It is for these reasons that type theories of personality theory were excluded from the literature review in Chapter 2 and why a type-based inventory was not selected for use in the thesis.

The HEXACO Personality Inventory-Revised (HEXACO-PI-R)

The HEXACO-PI-R is a personality inventory that is a measure of six major dimensions of personality at a domain (i.e., a factor) level and 25 at a facet level (Lee & Ashton, 2009a). As it is the personality inventory used in the data collection for this study, these will be explained briefly now and then in greater detail in the Methodology section. The six major dimensions of personality and their associated facet scales that the inventory measures are Honesty-Humility (sincerity, fairness, greed-avoidance and vulnerability); Emotionality (fearfulness, anxiety, dependence and sentimentality); Extraversion (social self-esteem, social boldness, sociability and liveliness); Agreeableness (forgiveness, gentleness, flexibility and patience); Conscientiousness (organisation, diligence, perfectionism and prudence); and Openness to Experience (Lee & Ashton, 2009b). The 25th facet measure, altruism (versus antagonism), is a scale measured from Honesty-Humility, Agreeableness and Emotionality factors and is designed to measure soft-heartedness and the tendency to be sympathetic towards others (Lee & Ashton, 2009b).

Aside from strong psychometric properties when compared with the NEO personality inventories (Gaughan, Miller, & Lynam, 2012; Lee & Ashton, 2013) and its use in multiple languages, the HEXACO-PI-R offers numerous benefits that make it the best candidate for the current research. Firstly, specific aspects such as honesty, conscientiousness, sincerity, social self-esteem, flexibility and altruism are useful indicators when working with offenders and ex-offender populations. Additionally, the HEXACO model has been used and discussed in multiple studies in relation to bullying and aggression (Book, Volk, & Hosker, 2012), sexual behaviour and sexual harassment (Holden et al., 2014; Lee, Gizzarone, &

Aston, 2003; Mogilski & Welling, 2017), and risk-taking and sensation-seeking (De Vries, De Vries, & Feij, 2009). Finally, multiple cross-cultural studies have utilised the HEXACO model of personality, highlighting its international relevance and applicability to both western and non-western samples (Aghababaei, Wasserman, & Nannini, 2014; Ashton & Lee, 2005; Costello, Wood, & Tov, 2018; Ion et al., 2017; Volk et al., 2018; Wasti et al., 2008).

The HEXACO-PI-R was selected for use in the current thesis instead of the NEO-PI-R as the factors and facets that it measures – particularly the dimension of Honesty-Humility – were deemed more suitable for the research project. Furthermore, the NEO-PI-R is perceived to lack the ability to measure aspects such as slyness, greediness and deceit – again, factors that may be more salient in offender populations. The literature review in Chapter 2, does, however, include research from the Five-Factor Model theory of personality and its related measures. This was done in order to provide as thorough a review as possible regarding what is currently known concerning offender personality traits and offending.

1.5 Research Question, Aims, and Significance of the Project

Chapter 1 aimed to provide a primer explaining the concepts used in the thesis and where it is situated in the literature. In considering the literature in Chapter 1, this thesis seeks to address the following exploratory research question:

> 'How do the personality traits of criminal offenders differ from non-offenders and by offence type?'

The thesis first seeks to answer this research question by determining which personality traits are salient in the types of offences committed by offenders and ex-offenders (for example, violent, sexual, substance abuse and financial crimes). Accordingly, the aim of Chapter 2 is to provide an understanding of what was currently known in the academic literature about the personality traits of offenders.

There are multiple reasons why this project was required and provides a substantial contribution to the academic literature. Firstly, recidivism rates in many countries across the world are high, including Australia at 46.4% (Sentencing Advisory Council, 2020) and, specifically, Western Australia at 40.1% in 2016–17 (Department of Corrective Services,

2016). The thesis contributes to efforts to reduce recidivism by expanding upon the risk–needs–responsivity model. It achieves this outcome by further elucidating the potential risks that are more likely among some offenders (for example, being quicker to anger or having a lower sense of self-worth). The research provides a more comprehensive understanding of the personality traits of offenders in order to help those who design or provide rehabilitation programs better target their approaches based upon the personality of the individual themselves and the programs to which they may be more responsive.

Secondly, the findings should apply on an international level. While individuals may vary in language, culture and behaviour, the concept of personality is academically supported as universal (McCrae & Costa, 1997). Thirdly, the thesis holds significance by collating most of the modern academic research on criminal offending and the FFM and HEXACO-based models of personality into one thorough literature review. This literature review is presented in Chapter 2.

Chapter 2: Literature Review on Personality Traits and Criminal Offending

2.1 Background

As discussed in Chapter 1, research exploring individual personality and criminality has a historical foundation as well as contemporary support. Eysenck's (1959, 1997) foundational work demonstrated that a connection between personality and criminality does exist. In part, this finding was attributed to significant differences between Eysenck's personality classifications in behaviour and cognitive processes. For example, individuals with higher levels of Extraversion and Neuroticism tended to behave in a more assertive, excitement-seeking, and risk-taking manner (Hollin, 2013). It was these groups that would have more difficulty learning social controls as their capacity to be socially conditioned was low. In comparison, those with low levels of Extraversion and Neuroticism would be less represented in offender populations (McEwan, 1983; McGurk & McDougall, 1981).

More recent research by Youngs (2004) also provides support that differences between personalities and crime exist. Certain specific traits appear to be more prevalent in certain types of crimes (Walsh & Lee, 2007). Furthermore, Dennison, Stough and Birgden (2001) demonstrate that differences within types of crimes (for example, sexual offences against children) are also apparent. In their research, child sexual offenders had significantly higher levels of Neuroticism and significantly lower levels of Extraversion and Conscientiousness compared to the non-offender group. Additionally, the type of sexual offence against the child committed (i.e., incest amongst immediate family members, incest amongst stepfamily members, and sexual offences against children outside the family) revealed higher and lower scores in specific personality areas (for example, Self-Esteem, Openness and Modesty).

This research suggests not only that differences between personality and types of crimes exist but also that those personality aspects are also important when differentiating offences from within the same offence category. No expansive literature review based on multiple criminal offending types and the Big-Five and HEXACO trait-based personality models, however, exists. As such, this review of the literature examines research based upon

personality traits and criminal offending, with a focus on the personality traits established by the HEXACO model of personality. The HEXACO model is chosen as the focus of the literature review to highlight the essential contributions this newer trait theory of personality has made, as well as to justify its use in the thesis study design. Research studies that included the Five-Factor Model (FFM) of personality are also included in order to note the contribution and existing body of research that has been established concerning trait-based personality traits and criminal offending.

2.2 Objectives of the Literature Review

The primary research question in this literature review was:

> 'Which personality traits are linked to criminal behaviour?'

Four secondary research questions were proposed to explore the primary research question:

1. Which personality traits are linked to violent offences?
2. Which personality traits are linked to sexual offences?
3. Which personality traits are linked to substance abuse and drug offences?
4. Which personality traits are linked to property and financial offences?

These primary and secondary research questions were answered to a) fill an existing gap in the areas body of knowledge, and b) aid in working towards developing a more comprehensive and cohesive personality-offender framework that could be used to further rehabilitation research and practice. The selection of and focus on these four broad offence types for the literature review was a two-part process. An initial list of the 16 Australian and New Zealand Standard Offence Classification (ANZSOC) divisions was used as a basis for a preliminary general overview of the literature. These divisions are: 1) homicide and related offences, 2) acts intended to cause injury, 3) sexual assault and related offences, 4) dangerous or negligent acts endangering persons, 5) abduction, harassment and other offences against the person, 6) robbery, extortion and related offences, 7) unlawful entry with intent/burglary, break and enter, 8) theft and related offences, 9) fraud, deception, and related offences, 10) illicit drug offences, 11) prohibited and regulated weapons and explosive offences, 12) property damage and environmental pollution, 13) public order offences, 14) traffic and vehicle regulatory offences, 15) offences against government procedures, government security and government organisations, and 16) miscellaneous

offences. Each offence division term was initially searched to gauge the level of personality trait-related research conducted on it. This general search of the literature found that much of the academic research on personality traits and criminal behaviour was focused on the four selected offending types, with slight variations in phrasing (for example, white-collar crime compared to financial offences).

As discussed in Chapter 1, the findings of this literature will contribute to a framework that is designed to guide and more accurately highlight the relationship between personality traits and types of offending. Subsequently, this framework will contribute to future research examining which rehabilitation programs are more suited for offenders, based on the type of offence they have committed.

2.3 The Methodology of the Literature Review

This section of the literature review demonstrates the process by which articles were selected for inclusion. It outlines the search terms used in the various searches, how these searches were conducted to maximise relevant searches being returned, and the inclusion and exclusion criteria applied to ascertain which returns would be included in the review.

Search Terms Used

Search One:	HEXACO, Personality, Offender (OneSearch)
Search Two:	HEXACO, Personality, Offender (Google Scholar)
Search Three:	Personality, Violent, Offender (OneSearch)
Search Four:	Personality, Sex, Offender (OneSearch)
Search Five:	Personality, Drug, Offender (OneSearch)
Search Six:	Personality, Alcohol, Offender (OneSearch)
Search Seven:	Personality, Substance Abuse, Offender (OneSearch)
Search Eight:	Personality, Property, Offender (OneSearch)
Search Nine:	Personality, White Collar, Offender (OneSearch)

Literature Search Strategy

Two search engines were initially used in the current literature review: OneSearch (University of Western Australia, 2020) and Google Scholar. The decision to use both search engines when searching the literature was twofold. Firstly, as highlighted by Shultz (2007), different search engines and databases can retrieve various sources that may be missed by others. Secondly, while Google Scholar is expansive and has similar coverage to other search engines and databases (Halevi, Moed, & Bar-llan, 2017), it is not human-curated. In contrast, academic search engines such as OneSearch examine multiple databases at the same time, including prominent databases such as Web of Science, SAGE, ProQuest and Academic Search Premier (EBSCO). This human-curated approach means that humans, not computers, select the journals for inclusion or exclusion based on quality control and scholarly criteria (Michigan State University, 2020). In the literature review, all available intervention studies, meta-analyses, observational studies and systematic reviews that met the required criteria were considered for inclusion. All alternative types of literature, such as book reviews, book chapters, thesis submissions and case studies, were excluded.

The first and second searches used the terms 'HEXACO', 'Personality' and 'Offender'. In OneSearch, 93 peer-reviewed results were returned. A preliminary title and abstract scan were conducted on each of these entries. Of the initial 93 search results, 14 sources were determined to be appropriate for further review under the inclusion and exclusion criteria.

In Google Scholar, 813 results were returned. A preliminary title and abstract scan was conducted on each of these entries. Out of the initial 813 search results, 27 unique sources (i.e., not overlapping with previous searches) were determined to be suitable for further review under the inclusion and exclusion criteria. Following these two initial broad searches, more specific searches (i.e., searches Three to Nine) were performed in OneSearch by article title to maximise the likelihood that relevant and applicable research would be included in the review.

Search Three (i.e., Personality, Violent, Offender) returned 96 peer-reviewed results, with 20 unique sources determined to be suitable for further review. Search Four (i.e., Personality, Sex, Offender) returned 44 peer-reviewed results, with 18 unique sources determined to be

suitable for further review. Search Five (i.e., Personality, Drug, Offender) returned two peer-reviewed unique sources; both were determined to be suitable for further review. Search Six (i.e., Personality, Alcohol, Offender) returned one peer-reviewed unique source that was determined to be suitable for further review. Search Seven (i.e., Personality, Substance Abuse, Offender) returned four peer-reviewed unique sources; two were determined to be suitable for further review. Search Eight (i.e., Personality, Property, Offender) returned six peer-reviewed unique sources; one was determined to be suitable for further review. Search Nine (i.e., Personality, White Collar, Offender) returned one peer-reviewed unique source that was determined to be suitable for further review.

Search Summary

The nine searches returned a total of 1,060 results. The 85 articles that were obtained from these nine searches were then subject to a more detailed review process based upon both inclusion and exclusion criteria. This review process included assessing each article and identifying whether the following inclusion or exclusion criteria were present.

Inclusion Criteria

1. The study must have been peer-reviewed and include a focus on offenders or use a sample that examines deviant or delinquent behaviour (for example, dishonesty or aggression).

2. The study must include a focus on the Five-Factor Model of personality, the HEXACO Six-Factor Model of personality, or a related trait (for example, Emotionality).

3. The study must have been published after the year 2000 as two decades was deemed to be sufficient to encompass the most current research findings.

Exclusion Criteria

1. Studies that have no clear indication of including assessments of the personality of offenders based on a Five-Factor Model of personality or the HEXACO Six-Factor Model of personality.

2. Studies that focused only on the Dark Triad and its associated categories (i.e., Machiavellian, Narcissistic and Psychopathic) when measuring the personality of offenders.

3. Studies that were not in English and that had not been translated into English.

Article Review Summary

From the 85 articles obtained from the collective searches, 49 met the criteria for inclusion. A further six sources were obtained from within these searches upon reading them.

2.4 Key Review Findings

The key findings of the literature review are presented below to demonstrate both the general criminal offender personality traits and specific offender traits (i.e., violent offenders, sexual offenders, substance abuse offenders, and financial and property offenders). Discussion will then turn to what is currently known about the differences in personality traits between violent, sexual, and general offenders.

General Criminal Offender Personality Traits

The literature from this review indicated that a degree of ambiguity exists when trying to ascertain what personality traits are commonly and reliably found in a 'typical offender'. Broadly, a common consensus appears to indicate that individuals who break the law display higher levels of Neuroticism and lower levels of Emotionality, Agreeableness and Conscientiousness (Book et al., 2016; de Vries & van Kampen 2010; Jones, Miller, & Lynam, 2011; Le Corff & Toupin, 2009; Međedović & Petrović, 2015; Miller & Lynam, 2001). It is essential at this point, however, to reconcile a part of the terminology utilised in the literature and the differences in labels used by the Five-Factor and HEXACO Six-Factor models of personality.

The personality factors of Extraversion (or eXtraversion in the HEXACO model of personality), Conscientiousness and Openness to Experience do not substantially differ between the FFM and HEXACO models of personality. The FFM factors of Agreeableness and Neuroticism, however, differ from the HEXACO's versions of Agreeableness and

Emotionality. A relevant example to offenders pertains to the quicker loss of one's temper. In the FFM model, this propensity would be associated with a higher level of Neuroticism. In contrast, in the HEXACO model, the individual would be considered likely to have a lower score in the Agreeableness factor. A lower Agreeableness score would typically indicate an individual that is more aggressive, quick-tempered and resentful (Ashton, Lee, & de Vries, 2014).

Another difference between the FFM and HEXACO models of personality is the inclusion of the Honesty-Humility personality factor in the HEXACO model. While the HEXACO model provides for a separate personality factor (i.e., Honesty-Humility) for aspects such as modesty and trustworthiness, the FFM incorporates these as part of the Agreeableness factor. In turn, traits pertaining to narcissism and willingness to manipulate are measured by the HEXACO's Honesty-Humility personality factor (Lee & Aston, 2009). As such, from a HEXACO model of personality perspective, a typical offender profile would include low Honesty-Humility, Emotionality, Agreeableness and Conscientiousness (Međedović, 2017). These findings have also been relatively consistent in the literature regarding delinquency (Ashton & Lee, 2008; de Vries, & van Gelder, 2015; Dunlop, Morrison, Koenig, & Silcox, 2012; Lee, Ashton, & de Vries, 2005).

Međedović's (2017) work notes that a common consensus in the literature is that 'the relation between Honesty-Humility and delinquency had the highest magnitude, suggesting that Honesty-Humility is the best predictor of criminal behaviour' (p. 160). A possible explanation for this finding, however, could be that the research focused on deviant workplace behaviour (de Vries & van Gelder, 2015) and self-reported delinquency in a sample comprising university students who were studying psychology (Dunlop et al., 2012). Accordingly, in both studies it is logical that the type of behaviour assessed would be more akin to organisational deviant behaviour or types of behaviour that involve higher levels of dishonesty (e.g., stealing from the workplace or cheating on university assignments). As such, a stronger relationship between Honesty-Humility and deviant behaviour in these situations is likely.

Međedović's (2017) study was a primary focus in this literature review that advances upon these previous personality findings. This is because Međedović (2017) provides an article

that helps to unify and expand upon what was currently known about criminal personality traits under the opus of the HEXACO personality model. The study aimed to solidify what the existing literature highlighted as the typical personality profile of the adult male offender and to demonstrate that criminal behaviour should be predicted by low Honesty-Humility, Emotionality, Agreeableness and Conscientiousness.

The sample included 265 male incarcerated Serbian offenders with a mean age of 35 years ($SD = 9.65$). Offenders were selected from two prisons, and participation was voluntary. Three demographics were noted: participant level of education, length of sentence and type of offence. The majority of the participants had completed high school (41.8%) or higher education (26.2%), and all could read and write. Regarding the duration of sentencing, 59.7% of the participants were sentenced to 1–5 years in prison, 23.7% to 5–10 years, and 16.6% longer than 10 years.

Approximately half of the participants (51.6%) were sentenced for criminal acts involving violence (e.g., murder or attempted murder, robbery using violence, or grievous bodily harm). The remaining participants' offences were a combination of criminal offences, including robbery, fraud, and possession or distribution of narcotic substances.

Appropriately, the study recognises that the type of offence could confound the results and tested the interactions between personality and the type of criminal offence committed. No significant effects are found, and Međedović (2017) stipulates that the principal offender personality findings in the study were not dependent on the type of offence committed by an offender. The study, however, categorises this offence distinction by violent or non-violent crimes. This dichotomous categorisation may not have been sensitive enough to detect a potential difference in personality traits by offending type.

Aside from the above potential limitation, Međedović's (2017) results concur with the previously established findings on personality and criminal behaviour by expressing that the criminal offender personality profile should be based in the negative poles of Honesty-Humility, Emotionality, Agreeableness, and Conscientiousness traits. Separately, however, from de Vries & van Gelder (2015) and Dunlop et al. (2012), Međedović's (2017) analysis

indicates that Agreeableness is the most relevant personality factor when explaining criminal behaviour. Again though, this finding may be influenced by sampling.

Over half of the sample in Međedović (2017) consisted of violent offenders. Also, lower scores of Agreeableness typically indicate higher levels of aggressiveness and a shorter temper (Ashton, Lee, & de Vries, 2014). As such, with such a high number of violent participants it is logical that the personality trait of Agreeableness would be salient. Similarly, given where the samples were drawn from in de Vries and van Gelder (2015) and Dunlop et al. (2012) (i.e., workplaces and universities), it also stands to reason that the personality factor of Honesty-Humility would be seen in those studies as the most relevant.

Collectively, these findings begin to promote the need for a greater exploration of personality traits in offending based on specific offending types. Also, they prompt the question of what is to be considered a lower score in these identified criminal personality traits (i.e., Honesty-Humility, Emotionality, Agreeableness, & Conscientiousness). Rolison, Hanoch and Gummerum (2013) pioneered some of the earliest research into addressing this question. Rolison et al. (2013) seek to examine the personality differences between offenders and non-offenders. In their findings, criminal offender scores deviate from non-offenders scores on five out of the six HEXACO personality factors. Table 2 presents Rolison et al.'s (2013) findings (p. 78).

Table 2.

Means and standard deviations for male offenders and male non-offenders on the HEXACO personality scales

Personality facets	Non-Offenders *M*(SD)	Offenders *M*(SD)	Non-Offenders – 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*
Organisation	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**

*$p < .05$, **$p < .01$, d = Cohen's d effect size measure of the difference between offenders and non-offenders.

Rolison et al.'s (2013) study provides a clear picture of the nature of the differences in personality between offenders and non-offenders. A particular strength of their work is the ability to note, through the use of Cohen's *d* (Cohen, 1988), the strength of the approximate difference between the offender and non-offending groups. These Cohen *d* scores aid in providing an understanding of how much higher or lower offenders are scoring in these personality scales compared to non-offenders.

In summary, 16 HEXACO personality scales out of the total 30 were significantly different between the offender and non-offender group. The following expresses, alongside the Cohen's *d* effect size measure of strength (i.e., small (.20), medium (.50) and large (.80), (Cohen, 1988)), where offenders scored significantly lower than the non-offenders in the personality scales: Honesty-Humility (medium), Fairness (medium), Greed-Avoidance (small to medium), Extraversion (medium), Social Self-Esteem (small to medium), Sociability (medium), Liveliness (medium to large), Conscientiousness (small to medium), Diligence (medium), Perfectionism (medium), Openness to Experience (medium), Inquisitiveness (small to medium) and Unconventionality (large). Conversely, offenders scored significantly higher than non-offenders on Emotionality (medium), Fearfulness (medium) and Anxiety (small to medium).

Rolison et al.'s (2013) study highlighted that the most salient personality factor concerning offending was Extraversion. In descending order after Extraversion, the personality factors relating to criminal offending were noted as Emotionality, Openness to Experience, Honesty-Humility and Conscientiousness. These findings, however, present a slightly different profile to the one depicted by Međedović (2017). The differences include that Rolison et al.'s (2013) profile indicates lower levels of Extraversion, higher levels of Emotionality and no differences in the Agreeableness personality factors compared to Međedović's (2017) findings. Međedović (2017) notes that this disparity might be due to Rolison et al. (2013) having a small sample, not controlling for participant age or education, the increased risk of a Type 1 error from multiple *t*-tests, and the potential that cultural factors may have also influenced the personality-crime relationship.

Despite these limitations, Rolison et al.'s (2013) study provides an essential starting point for comparing offenders with non-offenders. This starting point was critical in understanding

what a low or high personality trait score is by comparing it with a normative set of non-offenders. Additionally, researchers such as Eriksson, Masche-No and Daderman (2015) have also deviated from the offender profile portrayed by Međedović (2017).

In Eriksson et al. (2015), two separate samples of Swedish high-security offenders and non-offenders are compared. The study utilised a Swedish version of Goldberg's (1999) International Personality Item Pool Questionnaire (IPEP-NEO, Bäckström, 2007; 2010). A key focus in this study was the personality factor of Conscientiousness and its related factors. This focus arose because previous researchers, including Trninić, Barančić, and Nazor (2008) and Thiry (2012), had found that offenders in their samples displayed higher levels of Conscientiousness compared to non-offenders, contrary to Međedović's (2017) findings.

Eriksson et al. (2015) replicate this finding via three studies. Studies one and two compared data for 46 male inmates to both normative data based on 800 males and a student sample. In both, offenders scored higher than non-offenders on the personality factor of Conscientiousness. Study three examined these differences within the Conscientiousness personality factor at a facet level. The authors find that a sample of 131 male and female inmates scored higher on the traits of Order and Self-Discipline compared to the 136 student sample. This finding is explained by Eriksson et al. (2015) as possibly being due to the need to adjust to the prison environment, rather than a good indicator of criminality.

When considering these three studies indicating that Conscientiousness scores are higher among offenders compared to the normative population, a similar limitation is apparent in all three: the sampling of offenders. This issue includes both how the samples were selected and how many participants were included in the study.

In a study by Trninić, Barančić and Nazor (2008), not all prisoners in the sample had been convicted of the crime of which they were accused. As such, part of the offender sample may have potentially included non-offenders. Furthermore, Thiry's (2012) study included participants who were being considered and assessed for early release from prison. This motivation to obtain early release could have resulted in participants wanting to appear in a more favourable light (i.e., more conscientiously). Eriksson et al. (2015) correct for many of the limitations in the two other studies, but their study has a relatively small sample.

When considering other variations on Međedović's (2017) profile of a criminal offender, another notable difference emerges concerning Openness to Experience. Rolison et al.'s (2013) study finds that the Openness to Experience factor and the Inquisitiveness and Unconventionality facet mean scores were significantly lower in the offender sample compared to the non-offender sample. A similar variation was reported when considering levels of extraversion. O'Riordan and O'Connell (2014) report higher levels of Extraversion predicted justice sanctions, but Mõttus et al. (2012) do not. These discrepancies, aside from methodological and sampling differences, may also be due to a lack of specificity when examining the deviant or offending behaviour itself.

The studies discussed so far have focused on an offender profile in two key ways. The first is the traits themselves and what the researcher considered to be a low, medium or high score. The second is comparing the offenders' personality scores to a normative sample, and this second approach is an essential step in the right direction. It has, however, also resulted in anomalies that the body of research in this field has so far found challenging to explain.

Studies such as those conducted by Međedović (2017) and Rolison et al. (2013) have established baselines for comparison for research concerning HEXACO-based personality traits and general criminality. What they do not do, however, is differentiate sufficiently between the offenders themselves. Both studies divide their samples into smaller groups, but the division was an ambiguous 'violent' versus 'non-violent' set of groupings.

The literature regarding specific types of offending and criminal behaviour is more insightful than that focusing only on general offending, but also more limited when concerning the FFM and HEXACO models of personality. These models are the focus of the second part of this literature review.

2.5 Key Review Findings: Offending Types and Personality Traits

Violent Offending

Lower scores of Emotionality typically indicate an individual who is less likely to express fear, anxiety or empathy and to have meaningful relationships with others (Ashton, Lee, & de Vries, 2014). Research concerning violent offenders has often reflected this correlation

(Melde, Berg, & Esbensen, 2019; Pajevic, Batinic, & Stevanoic, 2017) as well as other personality traits such as higher impulsivity (Loper, Hoffschmidt, & Ash, 2001; Rogier, Marzo, & Velotti, 2019), higher aggression (Dinić & Wertag, 2018; Pajevic et al., 2017; Sokolovska, Dinić, & Tomašević, 2018), and lower levels of Agreeableness (Dinić & Wertag, 2018; Pajevic et al., 2017; Sokolovska et al., 2018; Westhead & Egan, 2015).

Studies such as that by Melde, Berg and Esbensen (2019) examine particular personality elements tangentially, or alongside the answers which they seek to address through their research questions. For example, the focus of Melde et al. (2019) is on the concept of an individual's 'nerve' as a protective measure against violent victimisation and then its subsequent role in violent offending. While Melde et al. (2019) expand substantially on the definition of 'nerve', a concise version of an individual demonstrating nerve is being able to remain fearless even if there is a high probability of being victimised (Anderson, 1999). The results of their study indicated that nerve is positively linked to violent offending. In the context of the current thesis, the reason behind this finding is less important than the notion that this higher level 'nerve' (or lower level of Fearfulness) is represented in violent offenders. While such interpretations can be problematic, as the research did not intend to answer these questions, the lack of specific FFM- and HEXACO-focused studies on violent offending leaves few choices.

Similarly, researchers such as Loper, Hoffschmidt and Ash (2001) and Rogier et al. (2019) do not focus on the FFM or HEXACO model of personality. They do, however, focus on the personality trait of Impulsivity and its connection to violent behaviours. The HEXACO model of personality does not, however, have a direct trait referred to as impulsivity. Instead, personality factors such as eXtraversion break down elements in which a social person may score highly; elements such as prudence then account for impulsiveness in behaviour (Lee & Ashton, 2009b).

From these two studies, however, Loper et al. (2001) and Rogier et al. (2019) highlight several other traits associated with the HEXACO model of personality. Firstly, those individuals who engaged in violent offences had lower levels of empathy, which is reflected in the HEXACO model as a lower score on the Emotionality factor scale (Lee & Ashton, 2009b). Secondly, and in a similar vein to Melde et al. (2019), they were less prone to feelings

of anxiety. Collectively, these studies begin to highlight that the personality factor that seems to be most associated with violent offending, within the HEXACO model, is lower scores of Emotionality.

Additionally, Dinić and Wertag (2018) and Sokolovska et al. (2018) emphasise the role of the personality factor of Agreeableness in aggressive behaviour. Dinić and Wertag (2018) stipulate that reactive aggression is most aptly predicted by Agreeableness. Sokolovska et al. (2018) reinforce this view by stating that the multifaceted components of aggressiveness were accounted for by the facets within the Agreeableness factor. Most notably, they also highlight the importance of the facet of Patience within the personality factor of Conscientiousness.

Sokolovska et al.'s (2018) findings demonstrate that the facet of Patience had the strongest correlation to anger. This finding is not surprising given the focus of previous research highlighting the role of impulsivity in aggression. Also, this correlation is evident in lower scores of Patience being related to higher levels of impulsiveness (Lee & Ashton, 2009b). Furthermore, the HEXACO personality factor of Honesty-Humility was also associated with aggressive behaviour. The type of aggressive behaviour reflected in lower Honesty-Humility scores, however, was more indirect and subtle – again unsurprising given that the facets within the Honesty-Humility factor are Sincerity, Fairness, Greed-Avoidance and Modesty (Lee & Ashton, 2009b). While these studies collectively provide valuable insight into the nature of aggressive and violent behaviour, none provides a specific focus on violent offending and the HEXACO model of personality. This issue is resolved, in part, by Pajevic et al. (2017) and Dinić and Wertag (2018).

In their studies, both Pajevic et al. (2017) and Dinić and Wertag (2018) blend a focus on the HEXACO model of personality with either the Dark Triad (Dinić & Wertag, 2018) or associated traits such as psychopathy (Pajevic et al., 2017). In Dinić and Wertag (2018), a focus of the research was to explore the contribution of the Dark Triad in favour of the HEXACO model when explaining aggression. Their results demonstrated, however, that while the Dark Triad had predictive applicability concerning aggression, it was the HEXACO personality factors that were the most salient. In their findings, Agreeableness emerged as the most crucial predictor of aggression in both males and females.

Subsequently, Emotionality also was significantly associated with reactive aggression, but only in the female sample.

This finding, however, may have been due to Dinić and Wertag's use of the HEXACO–60 item personality inventory instead of the 100-item inventory. The HEXACO 60-item questionnaire is apt for measuring personality at a factor level, but not at a facet level. Also, the study does not measure violent offenders but, rather, aggression in an adult sample from the general population. As such, the linking of aggression and personality to actual violent criminal acts is still not directly addressed.

Pajevic et al.'s (2017) research represented one of the few peer-reviewed studies that included the HEXACO model of personality on a violent offending sample. They also, however, include a focus on the psychopathic traits as measured by the Minnesota Multiphasic Personality Inventory – 202 (Biro, 2001, as cited in Pajevic et al., 2017). Their sample included 127 male offenders who had committed a homicide or homicide-related offence. These participants were obtained from three-maximum security prisons in Serbia. Of the participants, 52 (40.3%) had been convicted of murder, 42 (32.6%) of aggravated murder (i.e., the victim was murdered in a particularly cruel or malicious manner; Krivični, 2014, as cited in Pajevic et al., 2017), and 35 (27.1%) of attempted murder.

The results of Pajevic et al.'s (2017) study allowed differentiation of the participants into clusters separated by level of psychopathy. The first cluster had moderate levels of psychopathy; the second cluster represented the highest level of psychopathy, and the third cluster the lowest level of psychopathy. Their findings indicated a difference between these three clusters in the HEXACO personality factors of Agreeableness, Honesty-Humility and Emotionality but not in eXtraversion, Openness to Experiences or Conscientiousness. When compared, the group with the highest psychopathic traits had the lowest Agreeableness and eXtraversion scores. In contrast, the lowest psychopathic group displayed the highest levels of Honesty-Humility and Agreeableness. These differences further highlighted that, despite varying levels of psychopathy, certain personality traits were consistent within the violent offending type of behaviour. While this study provides an invaluable insight into the personality traits of violent offenders, it is not without its limitations. Firstly, the study also utilised the 60-item HEXACO personality inventory. Not only did this result in lower alpha

coefficients compared to what the 100-item HEXACO-PI-R typically produces, but it also limited the ability to measure personality traits at a facet level. Secondly, the study has a similar limitation to that of Međedović (2017) and Rolison et al. (2013) in that it does not account for the differences in offenders who commit multiple types of crimes (for example, a violent crime involving theft) compared to those who only commit one type of crime.

In Pajevic et al.'s (2017) study, one-third of the offenders had committed an offence that overlapped with another offence. If this offence were also violent, then that would minimise the likelihood for overlap; however, this is not made clear. What is stated, though, is that 44% of the violent offences committed by the participants in this study were committed while they were under the influence of alcohol or drugs. Again, it is unclear what effect this may have had on the personality traits highlighted as being indicative of violent offending.

In summary, the literature on aggressive behaviour and violent offending indicates that lower traits of Emotionality and Agreeableness are most likely to be apparent. Additionally, the factor of Honesty-Humility was the subject of varied findings in the studies reviewed. This discrepancy, however, may be due to two reasons. Firstly, many of the studies only examined aggression in their samples, not criminal offending. Also, the study that did examine offenders (Pajevic et al., 2017) utilised individuals who had committed homicide-related offences. These offences, while having a violent component, are different from typical assault-type offences that do not result in the death of the victim.

Secondly, similar to the problems encountered by Trninić, Barančić and Nazor (2008) and by Thiry (2012), it was unclear whether the groups who self-reported lower psychopathic traits – and consequently higher Honesty-Humility and Agreeableness traits – were being influenced in some capacity to try and appear more positively.

Overall, the focus on violent offending and associated components such as aggression and impulsivity helps to narrow which personality traits are more salient to violent offending groups compared to the more general offender profile compiled by Međedović (2017) and Rolison et al. (2013).

Sexual Offending

A more considerable body of research exists concerning sexually based offending and the HEXACO model of personality. This research is separated into two main areas. The first is sexual behaviour such as sexting (Morelli et al., 2020), sexual coercion or harassment (Koscielska, Flowe, & Egan, 2019; Lee, Gizzarone, & Ashton, 2003; Ménard, Shoss, & Pincus, 2010), sexual aggression, assault and rape (Carvalho & Nobre, 2013; Voller & Long, 2009). The second is paedophilia, both the viewing of child exploitation material and actual sexual assault.

Behaviours such as sexting (i.e., the sending and receiving of sexually suggestive content via messaging platforms) and personality are explored by Morelli et al. (2020). In that study, a total of 5542 participants (M_{AGE} = 20.36, SD = 3.67) across ten countries (Poland, the USA, Turkey, the Czech Republic, Belgium, Italy, Ireland, Russia, China and Uganda) completed the 60-item HEXACO-PI-R. Of the participants, 60.4% were female and 30.6% male.

Morelli et al.'s (2020) study was the first cross-cultural study to examine the varying types of sexting behaviour and personality, accounting for both a participant's country and their socio-demographic variables. The results indicate that those who scored higher in Honesty-Humility, Emotionality, and Conscientiousness were less likely to engage in all types of sexting behaviours (i.e., experimental, risky and aggravated sexting). Conversely, those who scored higher in Extraversion and lower in Agreeableness were more prone to sexting and riskier sexual behaviour. When examining the personality factor of Openness to Experience, the findings were less definitive. The results do suggest, however, that lower levels of Openness to Experience may be indicative of more aggressive sexting behaviour. This finding on low Openness to Experience, however, may also represent the 'typical offender', as highlighted by Rolison et al. (2013).

Morelli et al. (2020) provide another essential step in the right direction for research on criminality and personality, in that their research focuses on a specific type of behaviour in a cross-cultural and consistent manner. This approach allows for meaningful comparisons, despite the study not being able to provide causal inferences. A limitation, however, was

that the study also used the 60-item HEXACO-PI-R. The use of this measure limited the ability to explore which traits at a facet level may be motivating the deviant behaviour.

Three studies met the requirements of the literature reviews criteria to be considered when examining behaviours concerning sexual coercion, sexual coaxing or sexual harassment (Koscielska, Flowe, & Egan, 2019; Lee, Gizzarone, & Ashton, 2003; Ménard, Shoss, & Pincus, 2010). Firstly, Koscielska, Flowe and Egan's (2019) study focuses on the Dark Triad in examining sexual coaxing and coercion. Concerning FFM-related personality traits, however, it does highlight that lower scores of Emotionality were a predictive variable in sexual coercion. This finding is augmented by Ménard, Shoss and Pincus (2010), who report that lower scores in Agreeableness and Conscientiousness were predictive of sexual harassment and sexual coercion.

In the third study, Lee, Gizzarone and Ashton (2003) explore personality traits using the International Personality Item Pool (IPIP; Goldberg, 1999). They do, however, include the Honesty-Humility scale from the HEXACO Personality Inventory (Lee & Ashton, 2002). The results from this study highlight that the personality factor of Honesty-Humility was more strongly related to sexual harassment behaviour than any of the other FFM scales. This finding further supports the need to use Lee and Ashton's HEXACO model of personality when exploring deviant and criminal behaviour.

So far in this section of the literature review (i.e., sexual offending), the studies examined have explored personality traits and deviant sexual behaviours, including sexting, sexual coercion, sexual coaxing and sexual harassment. These studies have collectively indicated that the personality profiles of individuals engaging in this type of behaviour typically displayed lower levels of Honesty-Humility, Emotionality, Conscientiousness and Agreeableness. None of these studies, however, focus on offenders who had been convicted. Understandably, this finding may be due to the difficulty in obtaining access to the convicted sex offender population. Three studies have sought to address this limitation, those by Becerra-García et al. (2013), Voller and Long (2010) and Carvalho and Nobre (2013).

Becerra-García et al. (2013) examine the FFM and personality differences between adult sex offenders, child sex offenders, non-sex offenders and non-offenders using the 60-item NEO-

PI-R (Costa & McCrae, 1992). Their findings indicate that while Neuroticism was higher in all of the offender groups compared to the non-offender group, the sex offender samples had lower scores of Extraversion compared to the non-sex offender sample. Additionally, the two sex offender groups did not significantly differ in the Agreeableness factor compared to the non-offender sample. In contrast, the non-sex offender group scored lower in this factor.

In a more comprehensive study, Voller and Long (2010) utilise a sample of 521 men (M_{AGE} = 20.24 years, SD = 2.83) in an American college who were required to complete the Sexual Experiences Survey, alongside the Revised NEO Personality Inventory (Costa & McCrae, 1992). They explore the differences in personality traits at both a factor and facet level between three groups: non-perpetrators, sexual assault perpetrators and rape perpetrators. The term 'perpetrators' was used instead of 'offenders' as the participants were self-reporting the behaviour and were not convicted offenders.

Individuals who had self-reported as committing rape were found to have lower scores of Agreeableness and Conscientiousness compared to sexual assault perpetrators and non-perpetrators. Additionally, scores of Extraversion were significantly lower in the rape perpetrator sample compared to the non-perpetrator sample. As discussed earlier in the review, differences exist in what is measured in the Agreeableness personality factor, compared to the HEXACO personality model. As such, an examination of the traits at a facet level was warranted to aid in meaningful comparisons between the FFM and HEXACO models of personality.

At a facet level, when compared to non-perpetrators rape perpetrators were found to have lower levels of tender-mindedness, excitement seeking, warmth, positive emotions, feelings, altruism, competence and dutifulness, and higher levels of vulnerability. When mapped onto the HEXACO model of personality, these scales would be indicative of lower scores of Honesty-Humility, Emotionality, eXtraversion, Agreeableness and Conscientiousness. While applying Voller and Long's (2010) findings from the FFM to the HEXACO model of personality in this manner is more a generalisation, the results align with the previous findings on sexually deviant behaviour. Additionally, they include that perpetrators of rape displayed significantly lower levels of Extraversion than the sexual offender perpetrators

and non-perpetrators. In noting this, Voller and Long (2010) also report that sexual assault perpetrators had a personality profile more similar to non-perpetrators than to rape perpetrators.

Regarding limitations of the study, Voller and Long (2010) note the common issues that apply to self-report measures concerning various response biases. For example, participants may over-report or under-report committing offences to maintain their image of themselves or may be unable to recall what happened correctly. Additionally, the use of an online method of data collection, while providing a higher degree of anonymity, may have prompted a lower level of careful consideration in participant responses. The most notable limitation of the study, however, is that the participants were not offenders who had been convicted of a crime. In the sample, 38 men (7.29%) reported committing rape, 31 men (5.95%) reported committing sexual assault and 424 (81.38%) reported that they had committed neither. As such, while providing invaluable information at a personality factor and facet level, the applicability to offenders is limited. This issue in offender sampling is addressed by Carvalho and Nobre (2013).

Carvalho and Nobre (2013) utilise three samples in their study regarding the FFM and sexual aggression and crimes. The first sample included 26 non-convicted male students who had self-reported sexual aggression against women. The second sample included 32 convicted rapists, and the third comprised 33 convicted child-related sex offenders. The male students were recruited from a Portuguese University and the convicted sex offenders from across seven Portuguese prisons. All of the participants completed the NEO Five-Factor Inventory (Costa & McCrae, 1992), the Brief Symptom Inventory (Derogatis & Spencer, 1982), the Sexual Experiences Survey (Koss et al., 2007) and the Socially Desirability Response Set Measure (Hays, Hayashy, & Stewart, 1989). This battery of inventories was used to help detect and control for potentially confounding variables such as self-response bias or emotional maladjustment.

The results indicated that, compared to the non-convicted sexual offender sample, the convicted rape and child-related sex offenders displayed significantly higher levels of Neuroticism. In the HEXACO model of personality, this would be representative of a lower score on the Agreeableness factor. Regarding the personality factor of Openness, child-

related sex offenders scored significantly lower than both the rape offenders and the non-convicted sexual aggression and assault offenders. This finding of lower Openness differed from previous results found by Madsen, Parsons and Grubin (2006) and Dennison, Stough and Birgden (2001). They did not find that lower scores of Openness were prevalent in their child-related sex offender samples. Additionally, the non-convicted sample scored lower on Conscientiousness than the convicted sample.

Furthermore, Carvalho and Nobre (2013) note that the non-convicted sexual perpetrators and the convicted rape sample both scored higher on hostility than did the child-related sex offender sample. The use of the 60-item NEO Five-Factor Inventory, however, presents the same limitations as previously noted, in that it only reliably measures the personality traits at the factor level, not the facet level. Finally, the authors note that the FFM dimensions, specifically Neuroticism, Openness and Consciousness, appeared to vary depending on the different type of sexual offence. This finding may be explained by the inherently different nature of crimes such as rape and child-related sexual offences.

While not initially included in the literature review search criteria, the relevance of examining the personality traits of offenders convicted of child-related sexual offences became apparent when discussing the personality traits that relate to personality and sexual deviancy and crimes. The inclusion of this group of offenders is due to the differences highlighted by Becerra-García et al. (2013) and Carvalho and Nobre (2013). From these sources, four additional studies examining the relationship between child sex offenders and personality were deemed to fulfil the requirements of the literature review criteria with the expanded inclusion of this offender category.

Dennison et al. (2001), Egan, Kavanagh and Blair (2005), and Madsen et al. (2006) all examine personality traits in child sex offenders utilising measures of personality based on the NEO Five-Factor Inventory. In each of these three studies, the participants consisted of incarcerated males who had been convicted of child-related sexual offences. The consensus between Dennison et al. (2001) and Egan et al. (2005) was that offenders who committed child-related sexual offences tended to score higher on the personality factor of Neuroticism and lower on the factors of Extraversion and Agreeableness. When compared to a non-

offender population, Dennison et al. (2001) also found that the offender groups scored lower on the Conscientious personality trait compared to the non-offender sample.

In their study, Dennison et al. (2001) utilise the more comprehensive 240-item Revised NEO-Personality Inventory to measure personality differences between non-offenders and child sex offenders. These offenders had committed one of three types of offences – incest within the immediate family, incest within the stepfamily, or extra-familial offenders – and their personality was measured at a factor and facet level. The findings indicate that, compared to the non-offenders, all three offender groups scored higher in the Anxiety, Depression, Self-Consciousness and Vulnerability scales and lower in the Gregariousness, Assertiveness, Values, Competence and Deliberations scales. Collectively, the results support the notion that, regardless of the type of offending behaviour, all groups of child sex offenders in the sample had low self-esteem and confidence. A limitation of the study was that the non-offender sample consisted of only 33 participants who were compared to the 64 males in the offender sample; as such, comparing the scores of the offenders to a larger normative sample could have provided greater confidence in these findings.

Madsen et al. (2006) also utilise the 240-item Revised NEO-Personality Inventory. They were able to examine, at a personality and facet level, the potential personality differences between child sex offenders who had or did not have a personality disorder. In their sample, 21(48%) of the offenders had a DSM-IV diagnosed personality disorder. Their findings indicate that the child sex offenders who had a personality disorder scored higher on the personality factor of Neuroticism and lower on Agreeableness.

As previous research had already highlighted the relevance of the Neuroticism and Agreeableness factors, Madsen et al.'s (2006) research indicates that the presence of a personality disorder may strengthen this link. More specifically, child sex-offenders with a personality disorder displayed higher facet trait levels of Anger-Hostility, Impulsivity and Vulnerability, and lower levels of Trust, Straightforwardness and Compliance. Collectively, these three studies further highlight how general personality profiles, as established by Rolison et al. (2013) and Međedović (2017), lack the required specificity to differentiate between offending types.

More recent research by Becerra-García et al. (2013) utilises the NEO Five-Factor Inventory in order to achieve two goals. Their first goal is to examine the personality traits of convicted child-related sex offenders. Their second goal is to compare these offenders' personality traits between two countries. The sample included 112 males (M_{AGE} = 44.88 years, SD = 11.05) from either the United Kingdom or Spain. All of the offenders had been charged with child sex offences that involved contact (for example, the touching of the genitals or breasts, skin-to-skin contact, genital to genital contact, or genital to anus contact). None of the participants in this sample had been convicted of non-contact offences – for example, the possession or dissemination of child pornography. The British sample comprised 76 men (M_{AGE} = 43.76 years, SD = 11.45) and the Spanish sample 36 men (M_{AGE} = 47.22years, SD = 9.87).

The results indicate that the Spanish child sex offenders scored significantly higher in all of the NEO personality Big Five factors compared to the British sample. These included Cohen's d (Cohen, 1988) effect sizes of 0.56 (Neuroticism), 1.49 (Extraversion), 1.57 (Openness), 1.45 (Agreeableness) and 2.26 (Conscientiousness). Becerra-García et al. (2013) attribute these substantial differences, in part, to the difference in cultures between the countries. Their rationale is that Spain has a more collectivist culture, whereas the United Kingdom has a more individualistic culture. While these findings provide valuable insights into the potential differences in personality by culture for similar offending types, care in the interpretation of these findings must be taken.

For example, research by Gannon and Polaschek (2005) and Gannon (2006) has highlighted that many child-related sex offenders express themselves as wanting to display more socially desirable views. Given the previous findings that this population of offenders also typically has low self-esteem and confidence, response bias on self-report items such as the NEO inventories needs to be considered. Also, as the study utilised the 60-item NEO Five-Factor Inventory, facet level measurements were not provided. As such, it is possible that specific facet level scales (rather than the whole personality factor itself) were notably higher for the Spanish sample, or lower for the British sample.

In summary, the findings regarding the personality traits of child sex offenders differ from those concerning sexual offenders. From the HEXACO model of personality's framework, sexual offenders were more often shown to have lower levels of Honesty-Humility,

Emotionality, eXtraversion, Agreeableness and Conscientiousness. Child sex offenders were found to have similar personality traits but displayed lower scores on the Openness to Experience factor and higher scores on the Emotionality factor. Additionally, they were found to express less hostile traits and seemed more concerned with being perceived well by society.

Substance Abuse & Drug-Related Offending

From a criminal justice standpoint in Western society, harm reduction perspectives have overtaken more punitive approaches when addressing individuals who have substance abuse and drug-related problems or addictions (Southwell et al., 2019). Additionally, in most countries the consumption of alcohol is not a crime in itself; rather, the criminal behaviour that may be committed while under the influence of alcohol is a crime. Personality traits such as higher levels of Extraversion, Neuroticism, Impulsivity and Sensation-Seeking have been linked to excessive alcohol use (Coskunpinar, Dir, & Cyders, 2013; Lyvers, Boileau, & Thorberg, 2019; Shin, Hong, & Jeon, 2012). Conversely, higher levels of Conscientiousness are negatively associated with risky drinking (Kuntsche, von Fischer, & Gmel, 2008).

Numerous studies (Boden, Fergusson & Horwood, 2012; White et al., 2015; White et al., 2012) recognise the link between offences such as violent crimes and excessive alcohol consumption. They do not, however, measure or consider the personality traits underlying excessive alcohol use. Certain studies, however, do consider the role of personality in substance abuse and criminal offending.

Zawacki et al. (2003) examine how perpetrators of alcohol-involved sexual assaults differ in personality from non-alcohol-involved sexual assaults and non-perpetrators. Their sample consisted of 356 male college students from an American university. Within this total, 151 (42%) of the participants self-reported as never sexually assaulting a woman and were classified as non-perpetrators. The remaining 205 participants (58%) reported committing a sexually-based assault to various degrees (for example, forced sexual contact, sexual coercion, attempted rape or rape). From these 205 participants, 91 indicated that no alcohol was consumed at the time they committed the sexual assault (i.e., non-alcohol-involved) and

111 reported that alcohol had been consumed (i.e., alcohol-involved). Within the alcohol-involved sexual assaults, 96% of the time the man had consumed alcohol, 84% of the time both the man and woman had consumed alcohol, and 4% of the time only the woman had consumed alcohol.

Zawacki et al.'s (2003) findings indicate that the personality aspects measured between the two groups (i.e., non-alcohol-involved & alcohol-involved) were similar to the sexual offender profiles discussed previously in this review, including higher levels of aggression and more anti-social personality traits (i.e., lower Agreeableness). They did, however, differ in that alcohol-related perpetrators had higher levels of Impulsivity, alongside greater alcohol consumption in sexual situations and more considerable misconceptions of alcohol (for example, that it heightened their sexual drive).

While the study utilised a cross-sectional design that prevented the establishment of causal relationships, the research provides support for the view that offenders who commit criminal behaviour and have maladaptive alcohol-related consumption or beliefs may differ in personality from those who do not.

The search results and criteria of this review led to the inclusion of multiple studies on alcohol and drug consumption while driving (Ames, Zogg, & Stacy, 2002; Brown et al., 2015; Marti-Belda et al., 2019). Concerning alcohol consumption and offending, the results are consistent with previous studies: offenders who drive under the influence of alcohol are typically more impulsive and have higher sensation-seeking tenancies (Brown et al., 2015; Marti-Belda et al., 2019). Also, these traits appeared to be more indirect in males concerning driving under the influence and more predictive of alcohol misuse leading to drunken driving in females. Additionally, sensation-seeking behaviour was diminished in offenders who were under the influence of marijuana while driving (Ames, Zogg, & Stacy, 2002). In this instance, positive memory associations had an indirect influence on driving while under the influence of the drug.

Marti-Belda et al. (2019) utilise the FFM in their study on personality as a predictor of driving disqualification. The measure was the 200-item Zuckerman-Kuhlman-Aluja Personality Questionnaire, which, while not as well established as the NEO or HEXACO

measures, does satisfy validity and reliability requirements (Aluja et al., 2013). Their sample included 358 drivers, of whom 232 (64.80%) were traffic offenders who, following a court order or the accruement of penalty points resulting in the loss of their licence, had been required to participate in a driving education course, and 126 (35.2%) were frequent drivers drawn from the population as a control group. In the offending group, 107 men and 20 women had been barred from driving due to a court order and 100 men and five women banned from driving due to the accrual of penalty points. Of interest to this review, 120 (94.5%) of the 127 offenders who had been banned from driving via court order had alcohol as the primary reason for the driving ban.

The results of the study indicate that, compared to the non-offender sample, the drivers banned via court order sample displayed higher levels of Neuroticism and Sensation Seeking alongside a greater likelihood of demonstrating aggressive behaviour while driving. Similar to Zawacki et al. (2003), the use of a cross-sectional design in this study limits the ability to draw valid conclusions between risk factors and outcomes.

In the context of the literature review, however, the findings of Marti-Belda et al. (2019) further assist in building a more complete idea of the complexities associated with criminal offending and substance abuse and drug consumption. From the literature reviewed, the consensus regarding offenders who consume excessive amounts of alcohol appears to indicate higher levels of Extraversion, Neuroticism, Impulsivity and Sensation-Seeking personality traits. None of the studies found, however, utilised the HEXACO model of personality when measuring substance abuse or drug-related offending.

Financial and Property-Related Offending

Studies that pertain to financial and property-related offending and personality often focus on occupational or white-collar crimes (Gelder & deVries, 2016; Gonzalez & Kopp, 2017; Ribeiro, Guedes, & Cruz, 2019; Turner, 2014). This focus is not surprising given that over a third of the organisations surveyed in the Global Economic Crime Survey, which includes 95 participating countries, reported some manner of economic-based crime (for example, fraud, bribery, corruption, or asset misappropriation) (Gelder & deVries, 2016). From a Big Five and HEXACO model perspective, the most salient traits for this type of offending are lower

scores in the Honesty-Humility, Agreeableness and Conscientiousness factors (Gonzalez & Kopp, 2017; Turner, 2014).

Previously, the Conscientiousness personality factor was considered to be the most reliable measure of anti-social behaviour and workplace delinquency (Miller & Lynam, 2001; Gelder & deVries, 2016). With the implementation of the HEXACO framework, however, the personality factor of Honesty-Humility has become the most salient predictor of unethical business decision making (Ashton & Lee, 2008) and workplace delinquency (Lee, Ashton, & deVries, 2005; Lee, Ashton, & Shin, 2005).

In an Australian study, Turner (2014) explores the influence of personality on an individual's likeliness to engage in white-collar criminal behaviour. The participants – 357 undergraduate participants who were enrolled in a Bachelor of Commerce (Accounting) course – were provided with a hardcopy survey that comprised three parts: 1) demographic information (for example, age & gender), 2) the 44-item Big Five Inventory, and 3) two scenarios pertaining to accounting fraud that had been adapted from previous studies (O'Leary & Cotter, 2000; O'Leary & Mohamad, 2006).

The results of the study provide support for the position that individuals who score lower in Agreeableness and Conscientiousness have a higher willingness to engage in white-collar criminal activity. No significant main effects were found regarding the personality factors of Extraversion, Neuroticism or Openness to Experience.

While Turner's (2014) study aids in solidifying previous work and its application to an Australian context, it has three limitations. Firstly, the choice to utilise the FFM personality framework instead of the HEXACO framework is questionable. The HEXACO model of personality includes the Honesty-Humility factor, which previous research has shown to be relevant in predicting white-collar criminal behaviour. Secondly, the use of the 44-item inventory limited the results by measuring only personality factors rather than using both the factor and facet scales. This shorter inventory was sufficient to demonstrate the broader relevance of the Agreeableness and Conscientiousness factor traits; however, as with previous research in the area it did not specify which specific facet traits were lower within these scales. Finally, the use of university students instead of offenders limited the

generalisability of the study, given that there is a difference in what an individual may do in the hypothetical sense and what they have been convicted of doing by the criminal justice system. Many of these limitations, however, have been relatively common in the literature reviewed. Given the difficulty of obtaining access to offenders in prisons and the longer completion times required to administer more comprehensive personality measures such as the HEXACO-PI-R, it is an understandable limitation that many studies appear to have faced.

Ribeiro, Guedes and Cruz's (2019) article partially addresses these limitations by utilising a sample comprising solely of offenders within prisons. Additionally, the authors compared white-collar crime offenders to other offending behaviours. A total of 137 participants were drawn from seven prisons across Portugal. Within this total, 74 participants had been convicted of white-collar crimes and 63 of crimes involving violence against the person. The crimes that the comparison group had committed, however, were not detailed in the same manner as the white-collar offender sample and the group was subsequently referred to only as common offenders.

The results of the study indicate that while characteristics such as age, education and marital status differed between the two groups, personality trait differences were less apparent. The only significant difference found between the two groups was that white-collar criminals scored higher in the Openness to Experience personality factor. Given the personality profile findings previously found in these offending types, these findings are inconsistent, which may reflect the fact that while Ribeiro et al.'s (2019) study took many positive steps concerning sampling and the consideration of how personality traits could be different between offending groups, the study had two key drawbacks.

Firstly, the use of the 60-item NEO Five-Factor Inventory limited the potential findings. Given the previously established findings on the importance of the Honesty-Humility factor, research that focuses on aspects such as dishonesty should include this personality factor. If authors, for their own reasons, would prefer to use the FFM of personality when measuring personality and finance-related offences, then the HEXACO Honesty-Humility factor should at least be imported and utilised given its demonstrated significance.

Secondly, a more specific distinction of offending behaviour in the comparison group may have elicited more precise comparison findings. When referring to the comparison group collectively as either 'common offenders', or in the participant section as 'offenders who had committed a crime against the person', similar issues as were apparent in Rolison et al. (2013) emerged in this study. As such, the question of how white-collar criminals differ from the other offending groups (for example, violent offenders, sexual offenders and substance abuse & drug offenders) was not suitably addressed.

Overall, a review of the literature on financial and property crime draws two firm conclusions. Firstly, the HEXACO Honesty-Humility factor was highly relevant when examining behaviour that involves dishonesty, as is often the case for white-collar crimes. Secondly, the most consistent traits of this type of offending are lower scores in the Honesty-Humility, Agreeableness and Conscientiousness factors.

Comparisons between Violent Offenders, Sexual Offenders & General Offenders

There is a small body of research that meets the requirements for inclusion in this literature review and that compares some offence types against each other. Fiqia et al. (1987) examine personality differences between violent offenders and sexual offenders using the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975). Their findings indicate that sex offenders were more likely to have higher levels of social anxiety and fears of being negatively viewed by others, and less directly aggressive behaviour compared to violent offenders. This study is outside of the criteria for inclusion in this review and accordingly is utilised more as a historical example. It does demonstrate, however, that some of the findings – such as aggression levels being more indirect in sexual offenders – have remained constant throughout the decades.

A more recent study by Craig et al. (2004) notes differences in the personality of offenders that focused on the likelihood of reconviction. Craig et al. (2004), using the Special Hospitals Assessment of Personality and Socialisation (SHAPS, Blackburn, 1982), find that the personality trait of Impulsivity was the most important predictor of reconviction for violent and general offender groups when compared to the sexual offender group. This study, however, had a similar limitation to those previously noted, with the grouping of offenders

simplified into 'sexual offenders' who were compared to a collective 'violent and general offender' sample.

This sampling design limitation was rectified in Craig et al. (2006). In this study, the researcher divided the sample of 153 male offenders into three groups: 85 (56%) sexual offenders, 46 (30%) violent offenders and 22 (14%) general offenders. As the study focuses more on reconviction likelihood and risk than on personality trait differences between the three groups, only select findings apply to this review (i.e., those that are reflected in the FFM or HEXACO model of personality). Among these findings were that violent offenders scored significantly higher in the traits of Hostility, Impulsivity, and Aggression compared to both the sexual offenders and general offenders, while the personality profiles of sexual offenders and general offenders were more similar. This finding of similarity may reflect the lack of specificity regarding what type of offenders constituted the general sample. For example, it is unknown whether sexual offenders and financial crime offenders share personality trait similarities or differences and whether they were in the 'general offender' group being measured.

Of the literature reviewed in Chapter 2, Gudjonsson and Sigurdsson's (2000) study design most closely resembles the sampling approach and distinction by offence type that was adopted in this thesis. In their study, they measure personality similarities and differences between 91 adult male convicted offenders. The 32 violent offenders (M_{AGE} = 25 years, SD = 6.30) had been convicted of serious acts of violence, including grievous bodily harm and homicide. The 36 sexual offenders (M_{AGE} = 26 years, SD = 8.70) comprised 26 offenders convicted of rape, five of having sexual intercourse with a woman unable to provide consent due to alcohol intoxication or mental handicap, and five for attempted rape or conspiracy to commit rape. The 23 child-related sex offenders (M_{AGE} = 29 years, SD = 8.70) were not further separated by their offending behaviour. Additionally, in all samples and instances of offending, the authors noted whether alcohol intoxication had been present at the time of offending.

Concerning personality measurement, the study utilises the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975). Their results indicate that the sex offender and child-related sex offender samples were both significantly more introverted than the violent

offenders. In the HEXACO model of personality, this would be indicative of a lower score on the eXtraversion personality factor. Additionally, the child-related sex offender sample displayed higher scores on social desirability, indicating that they cared more about how they were perceived than did the other groups. Regarding alcohol consumption, offenders in the child-related sex offender sample were rarely intoxicated, while intoxication as an element of the offending behaviour was more common among the violent and sexual offender groups.

As highlighted by Zawacki et al. (2003), sexual offenders who consumed alcohol were more likely to display higher levels of impulsivity. Additionally, offenders who often consumed higher levels of alcohol were more likely to score higher in the Extraversion trait. This finding regarding alcohol consumption could explain why in Gudjonsson and Sigurdsson's study, the child-related sex offender sample – who were rarely intoxicated at the time of offending – was found to be more introverted (i.e., lower in Extraversion). These types of comparisons between both older and newer theories, models, and measures of personality, however, leave too much room for speculation.

2.5 Limitations of the Literature Review

A potential limitation of this literature review was the requirement to limit its focus to the FFM and HEXACO models of personality and to exclude studies focused on the Dark Triad. The Dark Triad theory of criminal offending does present some potentially applicable insights into the area of the criminal personality. However, it also focuses on the negatives and implied 'wickedness' of all offenders. The omission of research focused on the Dark Triad is thus both a limitation and a strength of the review.

Firstly, it is beyond the scope of a single PhD to examine all existing theories, models, and measures of personality when examining criminality and associated personality traits. By focusing on the FFM and the more offender-specific HEXACO model of personality, the thesis was able to provide a higher degree of focus and specificity.

Additionally, the FFM and HEXACO approach examines the personality of those who have committed crimes in a holistic manner. They do not only focus on the 'dark traits' of an offender, as the Dark Triad theory does. In summary, it is the position of this thesis that the

limitation of breadth due to the exclusion of the Dark Triad and its associated studies is outweighed by the greater focus on the FFM and HEXACO's more holistic and 'everyday person' approach to measuring offender personality.

A second limitation of the current literature review was the scope of the endeavour being undertaken. The review included examining what the existing body of research had to say regarding general criminal offenders, violent offenders, sexual offenders, substance abuse and drug offenders, and financial and property offenders. It then expanded to account for the potential personality profile differences in child-related sexual offenders. The literature found and reviewed across all of these different offending types was extensive. This broader scope resulted in the need to exclude areas already discussed, including the Dark Triad, but also personality disorders and lesser-known theories and models of personality, in order to maintain a focus on the traits-based FFM and HEXACO models of personality.

A third limitation of the literature review was that studies from the Czech Republic or that used a Czech sample and focused on the Big Five or HEXACO personality traits and criminal offending could not be utilised as they were not in English. This issue was amplified as access to prisoners in the Czech Republic is typically very restricted, with governmental approvals required, resulting in fewer studies that utilise Czech offenders. Future research could address this limitation via collaborative research projects between English and Czech speaking researchers.

2.6 Literature Review Summary

This literature review sought to address five questions:

1. Which personality traits are linked to criminal behaviour?
2. Which personality traits are linked to violent offences?
3. Which personality traits are linked to sexual offences?
4. Which personality traits are linked to substance abuse and drug offences?
5. Which personality traits are linked to property and financial offences?

Based on the literature reviewed, the following six answers were reached:

1. Generally, criminal offenders would have lower scores on the Honesty-Humility, Emotionality, eXtraversion, Agreeableness, and Openness to Experience personality factors.
2. Violent offenders typically had lower scores in the personality factors of Emotionality and Agreeableness.
3. Sexual offenders typically had lower scores in the personality factors of Honesty-Humility, Emotionality, eXtraversion, Agreeableness and Conscientiousness.
4. Child sexual offenders (paedophiles) typically had higher scores in the Emotionality factor and lower scores in eXtraversion, Conscientiousness and Openness to Experience. They also were less likely to display aggression than sexual offenders who committed crimes against adults.
5. Substance abuse or drug offenders typically had higher scores in the eXtraversion factor and lower scores in the Conscientiousness factor. They were also found to be more impulsive and sensation-seeking generally, and aggressive after consuming excessive amounts of alcohol.
6. Financial or property offenders typically had lower scores in the Honesty-Humility, Agreeableness and Conscientiousness factors.

These findings, however, came from the need to examine studies that utilised both the FFM and HEXACO models of personalities. The inclusion of studies that utilised both personality models was unavoidable given the relatively new development of the HEXACO model compared to the FFM. Also, the changes mean that what is measured by the Honesty-Humility, Agreeableness and Emotionality factors in the HEXACO model differs from the Agreeableness and Neuroticism factors in the FFM. Subsequently, discrepancies occurred in the literature, for this reason and two others.

Firstly, sampling approaches in the studies reviewed differed. These differences resulted in groups that ranged from non-offenders in varying environments (for example, schools or universities), to self-reported perpetrators who were never convicted, to accused persons yet to be convicted, and through to convicted offenders. Comparing personality trends across these groups generated ambiguity within one model of personality, let alone trying to reconcile the findings between two (i.e., HEXACO and FFM).

Secondly, while all studies examined personality factors, many did not include the more precise personality facets. This distinction is important to note given that in, for example, the HEXACO model of personality, four facets constitute a personality factor. That does not mean, however, that all four need to be higher or lower in a given offending type. This level of specificity could highlight that while a factor, such as Honesty-Humility, appears to be significantly higher or lower, in fact it may be that only two facet level traits are significantly different.

Another conclusion from this literature review is that the HEXACO model of personality is more apt to measure the personality traits of criminal offenders than the traditional FFM. While the FFM represented an essential step in the development of reliable and valid personality measurement, the adjustments made by the HEXACO mean that the latter performs better when considering a criminal population. For example, the inclusion of the Honesty-Humility personality factor in the HEXACO model highlights aspects (for example, fairness) that are more pertinent to offender populations. Additionally, Ashton and Lee (2020) provide a comprehensive overview of the 16 most common objections to the HEXACO and provide justifications or refutations for each. Three of these objections and subsequent refutations closely apply to this thesis' research design, and rationale for utilising the HEXACO model of personality over the Big Five.

The first objection is that there is no need to measure the HEXACO factors as Honesty-Humility is included within the 'Dark Triad' variables, so the Dark Triad can be added to the Big Five. In response, while it was recognised that the Dark Triad addresses some of the deficiencies in Big Five measures, the dimensions of the HEXACO are more nearly orthogonal and have a more apparent theoretical basis than a Big-Five-plus-Dark Triad model.

The second objection states that it is pointless to measure honesty-humility via a self-report measure as dishonest individuals will simply claim to be honest. In response, Ashton and Lee (2020) claim that the use of honesty-humility self-reported measures in low-stake settings strongly correlates to independently made observer-reports by those closely acquainted with the person and other relatively objectively measured behaviour.

Additionally, the HEXACO scales have more minor variance due to self-report responding styles (for example, desirable versus undesirable) than the Big Five scales.

The third objection queries whether, in some languages, the lexical studies approach to personality structure does not recover the six-factor HEXACO model. In response, no universality amongst languages and applicability of a six-factor model of personality has ever been made. However, this is more typically the case with smaller populations that do not have or have not long had written traditions or who have been less exposed to questionnaires. Additionally, the six-factor structure of personality characteristics is the most widely replicated model.

From the above reasoning and the literature reviewed, it was concluded that the HEXACO model of personality was a more apt measure of the personality traits of criminal offenders than the traditional FFM. Also, with such variation in the current literature, it was not possible to recommend a consistent set of HEXACO personality traits based on offending type. Accordingly, Section 2.8 below highlights the refined research question and hypotheses of the thesis.

2.7 Research Question, Aims & Hypotheses

The research question outlined in Section 1.6 and basis of the literature review was

> 'How do the personality traits of criminal offenders differ from non-offenders and by offence type?'

The lack of consistency in the methodological approach and the lack of facet-level specificity found when reviewing the literature, however, did not provide a consistent answer to this question. Also, while there is literature assessing the relationship between personality variables and crime, no comprehensive set of personality profiles was found that collectively presented the relationship between personality traits and multiple types of criminal offences at a factor and facet level. It was for this reason that the decision to focus on personality traits alone at a factor and facet level was made.

The thesis aims to address this gap in the literature by developing HEXACO-based personality profiles of individuals who have committed specific criminal offences. The focus

of these profiles is on developing a degree of consistency in the measurement of different personality types of offenders, using the HEXACO model of personality, at a factor and facet level. The thesis also aims to demonstrate that the personality profiles differ between the offending groups and when compared to a normative population. The specific hypotheses are as follows.

1) Factor mean scores in the HEXACO-PI-R will be significantly different between the normative sample and the combined Czech Republic offender and Australian ex-offender sample.
2) Facet mean scores in the HEXACO-PI-R will be significantly different between the normative sample and the combined Czech Republic offender and Australian ex-offender sample.
3) Factor mean scores in the HEXACO-PI-R will be significantly different between the primary offence categories.
4) Facet mean scores in the HEXACO-PI-R will be significantly different between the primary offence categories.
5) Factor mean scores in the HEXACO-PI-R will be significantly different between the specific offender groups.
6) Facet mean scores in the HEXACO-PI-R will be significantly different between the specific offender groups.

The methodology, participant group distinctions and study design adopted to test these hypotheses are presented in Chapter 3.

Chapter 3: Method

Chapter 3 presents the methodology that the thesis followed to answer the hypotheses presented in Chapter 2.7. It explains 1) how the participants were selected and recruited, 2) the basis and process for how participants were allocated into offending categories, 3) the materials used (for example, the HEXACO-PI-R), 4) and the procedures followed for ethical

approval and data collection, and 5) the data coding process and selected data analysis techniques.

3.1 Participants

Three hundred participants were sought for the thesis study. These included 100 offenders within prisons in the Czech Republic, 100 non-Indigenous offenders within prisons in Perth, Western Australia (WA), and 100 non-Indigenous ex-offenders in Perth, WA. Ethical clearance for including participants who identify as Aboriginal, Indigenous or Torres Strait Islander follows a separate policy and procedure and was not sought or provided for the current study.

In summary, the two sample groups and approvals that were obtained were as follows.

1) The first sample was male offenders between the ages of 18 and 65 within prisons in the Czech Republic. The Director-General of the Czech Republic Ministry of Justice granted permission to access this sample. Additionally, the Prison Service of the Czech Republic assisted by selecting possible prisons and prisoners from its offender database.
2) The second sample included male ex-offenders between the ages of 18 and 65 who had been released from prison and were currently in the community. These individuals were contacted through Outcare, Perth, WA. Outcare is a government-funded organisation that assists prisoners post-release. As an incentive, a $20 JB Hi-Fi gift card was offered to participants, as well as a summation of their personality inventory. The WA Department of Justice, however, did not support the use of gift cards to reimburse ex-offender participants for their time and this expense was made utilising the funding provided by the University for the Project. Participants were engaged both at the Outcare Perth office and through community outreach alongside Outcare case managers. The written summation of offences committed by a participant was, after consent was obtained, provided by Outcare.

Permission to access offenders within WA prisons via collaboration with Outcare was sought and obtained from the former WA Department of Corrective Services (DCS), now the Department of Justice. Due to time constraints on data collection and logistics, however, only participants who were ex-offenders in the community and who were linked with

Outcare services were able to be approached to request participation in the study. For this reason, an initial proposal to include a WA prisoner sample was removed from the study.

Sampling Design and Group Composition

Participants from the Czech Republic were included to ensure the thesis findings would have international applicability. While research (i.e., Costello, Wood, & Tov, 2018) demonstrates that western and non-western countries may fundamentally differ in certain traits, particularly extraversion, they also emphasise that their results suggest a high level of similarity in how culturally different samples reported they would act and the personality traits and preferences that those actions revealed. As such, the decision to include a sample from the Czech Republic was made in order to compare the offender types by country and to determine whether the personality profiles and matrices had international applicability.

All participants from the Czech Republic were currently serving prison sentences. The selection of the participants for the Czech Republic prisoner sample followed a stratified design. This sampling design allowed for the division of the samples into smaller target groups that could be selected based on their most serious offence ever committed (i.e., the primary offence category [POC]). A liaison within each of the Czech prisons selected possible participants that would match the target groups within their prison being sought and who may be interested in participating. The target groups within the samples being sought included: 25 offenders where the most severe offence committed was violent; 25 offenders where the most severe offence committed was sexual; 25 offenders where the most severe offence committed primarily involved substance abuse or a drug-related offence (referred to from now as substance abuse offences); and 25 offenders where the most severe offence committed was a property or financial related offence. These ratios were selected as they provided equal groups for data analysis. The Australian ex-offender sample followed the same stratified sampling group numbers as closely as possible.

Incarcerated Offenders in the Czech Republic: Participant Raw Data & Response Screening

One hundred and fifty-six offenders across six prisons were invited to participate in the study. These prisons were located in Vinařice, Ostrov, Jiřice, Všehrdy, Kuřim and Liberec.

Forty offenders from Vinařice prison were invited to participate in the study. Thirty-nine out of the 40 invited accepted the invitation and participated. These included, by primary offence category (POC), 18 offenders charged with a violent offence, three offenders charged with a sexual offence, five offenders charged with a substance abuse offence and 13 offenders charged with a property offence. Twenty-one offenders from Ostrov prison were invited to participate, and all accepted. These included, by POC, eight offenders charged with a violent offence, seven offenders charged with a substance abuse offence and six offenders charged with a property offence. Nineteen offenders from Jiřice prison were invited to participate, and all accepted. By POC, all 19 of these offenders had been charged with a property offence. Twenty-five offenders from Všehrdy prison were invited to participate, and all accepted. By POC, nine of these offenders had been charged with property offences and 16 with a substance abuse offence. Twenty-eight offenders from Kuřim prison were invited to participate, and all accepted. These included, by POC, 21 who had been charged with sexual (paedophilia) offences and 7 offenders charged with a sexual (non-paedophilia) offence. Twenty-five offenders from Liberec prison were invited to participate in the study. Twenty-four out of the 25 invited accepted the invitation and participated. By POC, 13 offenders had been charged with a violent offence, two with a substance abuse offence, and nine with a property offence.

In the Czech Republic dataset, five offender responses were removed from the data collected at Vinařice prison due to too many items in the inventory not being answered (i.e., three or more items left blank). These were ID numbers 7, 11, 20, 21 and 29. One offender response, Czech Republic ID number 60, was removed from the data collected at Ostrov prison due to multiple responses (for example, both a '2' and a '4') being selected for single question. Five offender responses were removed from the data collected at Jiřice prison as they were not completed correctly or too many items in the inventory were not answered. These were Czech Republic ID numbers 63, 65, 69, 77 and 78. Four offender responses were removed from the data collected at Všehrdy prison as they were not completed correctly or too many items in the inventory were not answered. These were Czech Republic ID numbers 82, 83, 90 and 102. Five offender responses were removed from the data collected at Kuřim prison as they were not completed correctly or too many items in the inventory were not answered. These were Czech Republic ID numbers 106, 108, 111, 118 and 129. Three offender responses

were removed from the data collected at Liberec prison as they were not completed correctly or too many items in the inventory were not answered. These were Czech Republic ID numbers 134, 150 and 153. In total, 23 out of 156 of the responses (14.74%) in the Czech Republic dataset were removed from the dataset before analysis.

Incarcerated Offenders in the Czech Republic: Refined Participant Data

After the invalid responses had been removed, a total of 133 male incarcerated offenders in the Czech Republic had participated in the study. One hundred and thirty-two of the participants provided their age. The mean age and standard deviation (SD) score of the participants were 35.60 (*SD = 9.60*). The minimum age of the participants was 20, and the maximum was 64. Table 3 outlines the total number of participants per prison, mean age and standard deviation of the participants per prison and number of participants by POC.

Table 3.

Descriptive data and POC count of the Czech Republic incarcerated offenders by prison

Prison	n	Mean Age (SD)	Violent Crime	Sexual Crime	Substance Abuse Crime	Property Crime	Sexual Crime (Paedophilia)
Vinařice	34	35.24 (8.71)	16	3	4	11	0
Ostrov	20	31.30 (10.84)	8	0	7	5	0
Jiřice	14	40.15 (6.52)	0	0	0	14	0
Všehrdy	21	35.76 (9.04)	0	0	14	7	0
Kuřim	23	39.65 (9.77)	0	6	0	0	17
Liberec	21	32.85 (9.69)	11	0	2	8	0
Total	133	35.60 (9.60)	35	9	27	45	17

The decision was made at this point of the data screening that a fifth primary offence category, 'Sexual Crime (Paedophilia)' needed to be included in the primary offence

category groupings. This decision was made as, unexpectedly, a sample of offenders who had committed this type of offence was made available during the data collection process.

Ex-Offenders in Western Australia: Participant Raw Data & Response Screening

Eighty ex-offenders from Perth, WA, participated in the study. They included 55 ex-offender participants (45 male, 10 female) linked with Outcare support services and 25 ex-offender Outcare clients who were attending the START Court program. A female sample was included as Outcare had a sufficient number of female clients available to participate. As the jurisdictional and ethical requirements of the START Court Outcare clients were different from those of the rest of the Outcare clients, however, the 25 START Court client responses had to be removed from the dataset before processing. This removed the following responses, by Australian ID number, from the dataset: 18, 27, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 46, 47, 48, 50, 54, 56, 57 and 58. From the remaining 55 Outcare participants, seven responses (12.72%) were removed from the data set as the inventories were not completed properly or too many items in the inventory were not answered. These were Australian ID numbers 1, 6, 12, 20, 21, 59 and 83.

Ex-Offenders in Western Australia: Refined Participant Data

After the invalid responses had been removed, a total of 38 male 10 female ex-offenders from Perth participated in the study. Of these, 34 male participants and 10 female participants provided their age. The mean age and standard deviation (SD) of the male and female participants respectively were 42.62 ($SD = 10.32$) and 42.62 ($SD = 10.32$). The minimum age of the male participants was 24, and the maximum was 73. The minimum age of the female participants was 21, and the maximum was 67.

Concerning the male Australian ex-offender sample, by POC, 22 offenders had been previously charged with a violent offence, seven with a substance abuse offence, five with a property offence and four with a sexual (paedophilia) offence. Concerning the female Australian ex-offender sample, by POC, six offenders had been previously charged with a violent offence, two with a substance abuse offence and two with a property offence. As the majority of data collected was from male respondents, however, and only 10 female

responses were obtained, the female responses were removed from the analysis. This decision was made as numerous mean score differences existed by gender at both the personality factor and facet level (Lee & Ashton, 2018).

3.2 Offence Category Designation Matrix

Offence Category Designation Matrix: Theoretical Underpinning

The matrix used in the current study to determine into which group or groups an offender was categorised was based upon the third edition of the Australian and New Zealand Standard Offence Classification (ANSOC) system, which was implemented in 2011 (ANZSOC, 2018). The ANZSOC was developed for use within Australia and New Zealand as a uniform national statistical framework to assist with the production and analysis of crime and criminal justice statistics (ANZSOC, 2018). The two primary purposes of the ANZSOC are:

1. to provide a standardised statistical framework for organising key behavioural characteristics of criminal offences; and
2. to overcome differences in legal offence definitions across states and territories.

(ANZSOC, 2018, para. 3)

The ANZSOC is divided into three levels: Divisions (the broadest level), Subdivisions (the intermediate level), and Groups (the most granular level). At the division level, 16 categories exist: 1) Homicide and related offences, 2) Acts intended to cause injury, 3) Sexual assault and related offences, 4) Dangerous or negligent acts endangering persons, 5) Abduction, harassment and other offences against the person, 6) Robbery, extortion and related offences, 7) Unlawful entry with intent/burglary, break and enter, 8) Theft and related offences, 9) Fraud, deception and related offences, 10) Illicit drug offences, 11) Prohibited and regulated weapons and explosives offences, 12) Property damage and environmental pollution, 13) Public order offences, 14) Traffic and vehicle regulatory offences, 15) Offences against government procedures, government security and government operations, and 16) Miscellaneous offences (ANZSOC, 2018, para. 8). From this list, five Primary Offence Categories (POCs) were developed by the researcher based upon the ANZSOC, the findings of the literature review in Chapter 2, and the data collected. It was also based upon the

finding of the literature review that the decision to separate sexual offenders from sexual offenders (paedophilia) was made given the differences noted in personality traits and in victims that the offender seeks out.

This approach to the assignment of prisoners to groups was selected as the majority of academic research previously conducted had been focused upon the five offence types examined in the literature review. Also, multiple classifications of the ANZSOC had similar singular core themes – for example, Division 1 (homicide and related offences) and Division 2 (acts intended to cause injury) had a similar core theme of violence. The implication of this approach is that the design and results reflect a more exploratory and omnibus methodological approach. The findings from the literature review in Chapter 2, however, and the unavailability of a set of data that provided a consistent personality approach (for example, the HEXACO model of personality) across a wide variety of criminal offences necessitated this approach. In turn, this omnibus approach would also allow future research to better focus on more specific types of crimes within the broader offence categories to further indicate what personality traits may be of importance. In addition, this exploratory approach led to the decision to initially separate and then aggregate the Australian and Czech Republic samples. It was not initially known how similar or different the personality scores within offending types between the two countries would be, as no previous research concerning a comparison between the two countries had been conducted. The exploratory approach and initial segregation of the data allowed the results to be utilised in either case, whether they were similar or significantly different. As no significant differences, except in one instance, were found in the personality profiles by offence type between the countries (see Chapter 4.1), the data aggregation allowed for larger samples to be tested, resulting in greater confidence in the results. This consideration was especially important given the inherent difficulty in obtaining offender and ex-offender data.

Offence Category Designation Matrix: Practical Application in the Current Study

With written consent from the participant, each individual's offence summary was provided to the researcher. For the Czech Republic sample, these were formal records from each prison; for the Australian ex-offender sample, Outcare provided the summaries. The

Outcare records, however, were offences that had been disclosed by the client and not obtained from a government agency. All participants in the study were allocated to one of five POCs. Table 4 displays these five POC categories, alongside descriptions and examples.

Table 4.

Descriptions and examples of the Primary Offence Categories

Primary Offence Category Number	**Description of Crime**	- Examples
1	Violent Crimes	- Murder - Attempted murder - Grievous bodily harm - Assault
2	Sexual Crimes	- Rape - Sexual Assault
3	Substance Abuse and Drug-Related Crimes	- Possession - Supply - Possession with intent - Under the influence of an illicit substance
4	Property and Financial Crimes	- Theft - Fraud - Burglary, where violence was not involved
5	Sexual Crimes (Paedophilia)	- Molestation - Possession of illegal images - Underage sexual penetration

The most severe of the reported or recorded offences for which the participant had ever been imprisoned for determined the POC under which the offender was categorised. When an offender or ex-offender had committed any sexual-based offence, however, they were categorised into the 'sexual crimes (2)' or 'sexual crimes (5)' category automatically. If an offender had committed a crime or crimes that spanned multiple categories, a Secondary Offence Category (SOC) number was provided, and they were also designated with a 'Specific Offender Group' (SOG) group number. This number was allocated from the combination of two of the POC numbers. Table 5 displays the three categories that were developed as Specific Offender Group (SOG) categories.

Table 5.

Descriptions and examples of the Specific Offender Groups

Primary Offence Category Number	Secondary Offence Category Number	Specific Offender Group	Examples
1 (Violent Crimes) 3 (Substance Abuse and Drug-Related Crimes)	3 (Substance Abuse and Drug-Related Crimes) 1 (Violent Crimes)	6 (Violent and Substance Abuse Crimes)	- Violence and in possession of illegal drugs - Assault while under the influence of a substance - Destruction of property or theft while under the influence of a substance
1 (Violent Crimes) 4 (Property and Financial Crimes)	4 (Property and Financial Crimes) 1 (Violent Crimes)	7 (Violent & Property and Financial Crimes)	- Aggravated Robbery where violence was involved - Theft with a history of violent behaviour
5 (Sexual Crimes: Paedophilia)	1 (Violent Crimes)	8 (Sexual (Paedophilia) & Violent Crimes)	- Rape or sexual penetration of a minor

The POC and SOG classifications were utilised alongside the HEXACO Personality Inventory (Revised) to develop personality profiles by offending type. This approach to offender categorisation was not without limitations and on occasion required a degree of judgement in the Australian sampling, as less information about the offending behaviour was available. This limitation was less significant with the Czech Republic sampling as the formal offending reports were detailed and the offenders were often already grouped within the prisons based upon the offence or offences they had committed.

The most salient drawback to this approach to sampling was that the level of severity within the offence categories themselves could not be considered (for example, both homicide and aggravated assault were grouped under violent crime). Also, categories such as sexual crimes and sexual crimes (paedophilia) have a broad spectrum of offending behaviour and varying degrees of severity and seriousness. However, given the previously discussed inability to recommend a consistent set of HEXACO personality traits based on offending type (see Chapter 2), the decision was made to maintain an exploratory approach in order to allow future research to use the findings to focus on specific offending types and the varying

levels of offence severity. This future approach would likely necessitate both a quantitative and qualitative study design where offenders could be interviewed to obtain information other than their offending history.

3.3 Materials

HEXACO Personality Inventory (Revised): Key Definitions and Scoring

There are three versions of the HEXACO Personality Inventory (Revised) (HEXACO-PI-R). These include the 60-item version, the 100-item version and the 200-item version (Lee & Ashton, 2009c). The 60-item version is recommended for use when time is limited as it can be completed in approximately 12 minutes (Lee & Ashton, 2009c). The 60-item version, however, does not equally weigh the measurement of each of the facet traits within each personality factor. As such, while all six of the personality factors in the 60-item version are measured by 10 questions each, the four facet traits within each of these factors are not balanced. For example, within the factor of Emotionality, Fearfulness and Sentimentality are measured with three questions each, whereas Anxiety and Dependence with only two. Overall, this difference leads to less confidence in the reliability and validity of the facet trait results when compared with the 100 or 200-item HEXACO-PI-R versions.

The 100-item HEXACO-PI-R is recommended for use in most research studies (Lee & Ashton, 2009c). It requires approximately 20 minutes to complete and provides psychometrically stable results at both a personality factor and facet level (Lee & Ashton, 2018). Each of the six factors is measured by 16 items, half of which are reverse scored. Within each factor, four facets are measured by four items each, half of which are reverse scored. Additionally, the interstitial facet scale of Altruism is measured by the final four items in the inventory (i.e., items 97, 98, 99 and 100). For studies where higher internal-consistency reliability is required at the facet level, the 200-item HEXACO-PI-R can be used. It does, however, require approximately 40 minutes to complete.

All versions of the HEXACO-PI-R inventory (i.e., 60-, 100- and 200-item) measure the six major dimensions of personality in the HEXACO model at both a factor and facet level (Lee & Ashton, 2009c). These are Honesty-Humility, Emotionality, Extraversion, Agreeableness (versus Anger), Conscientiousness and Openness to Experience (referred to henceforth to as

Openness). The inventory also includes 24 facet-level scales (for example, Fairness, Sociability and Patience) and one interstitial scale (Altruism versus Antagonism) (Lee & Ashton, 2009b). Appendix A defines these personality factors and facets verbatim from the authors.

The measure used in the current study was the 100-item HEXACO Personality Inventory (Revised). As such, unless explicitly stated otherwise, any future reference to the HEXACO-PI-R in the current thesis pertains to the 100-item version of the inventory. This decision was made for three reasons. Firstly, the 40 minutes required to complete the 200-item questionnaire was deemed too long. Prisons in the Czech Republic supplied multiple participant groups during a single day. As such, the resources required to maintain multiple groups at 40 minutes each, in addition to preparation time, briefing and debriefing, were too great. Secondly, as discussed later in the chapter, the psychometric properties of the 100-item HEXACO-PI-R were determined to be suitable at both a personality factor and facet level. Finally, the 100-item HEXACO-PI-R included a version that had been previously translated into the Czech language and was supported as a research tool by the authors of the questionnaire (Lee & Ashton, 2009c).

HEXACO Personality Inventory (Revised): Psychometric Properties

Due to the HEXACO-PI-R being the sole measure of personality used in the current thesis study, it is essential to justify its selection. The 100-item English language HEXACO-PI-R has robust reliability and validity in its psychometric properties. In support of this claim, Lee and Ashton (2018) examine the psychometric properties of this version of the HEXACO-PI-R using two samples. The first sample utilised online respondents (N = 100,318) who completed the self-report version of the inventory. The second sample consisted of undergraduate students (N = 2,868) and comprised both self- and observer reports. As the current thesis uses the self-report version of the HEXACO-PI-R, those are the psychometric property results that will be reported. Within and between the HEXACO–100 scales, Lee and Ashton (2018) measured alpha reliabilities, principal component analyses, and intercorrelations. Table 6 provides the means, standard deviations and alpha reliabilities of the HEXACO–100 scales (Lee & Ashton, 2018).

As Table 6 demonstrates, alpha reliabilities were above .80 for all personality factor scales and averaged above .70 for the facet-level scales. These values indicate that the reliability of the questionnaire at both a factor and facet level was acceptable (Field, 2009).

To assess validity, Lee and Ashton (2018) conducted a principal component analysis with varimax rotation on both the student sample (self-report) and online sample (self-report). In both analyses, the scree plots of the eigenvalues demonstrated a break between the six and seventh personality factors. Also, the findings of the six-component solution, after varimax rotation, indicated that all 24 personality facets in the HEXACO-PI-R most highly loaded onto their respective factor. The loadings of the 25th facet, Altruism, were divided between Honesty-Humility, Emotionality, and Agreeableness as expected.

Table 6.

Means, standard deviations and Cronbach's alpha for the HEXACO–100 scales for the student sample (self-report) and online sample (self-report)

	Student Sample: Self-Report Total (*N* = 2,868)		**Online Sample: Self Report Total (*N* = 100,318)**	
	M (SD)	α	*M (SD)*	α
Factor-level Scales				
Honesty-Humility	3.24 (.60)	.82	3.30 (.74)	.89
Emotionality	3.42 (.61)	.84	3.12 (.63)	.84
eXtraversion	3.47 (.58)	.85	3.22 (.64)	.86
Agreeableness	2.97 (.59)	.84	2.78 (.63)	.86
Conscientiousness	3.45 (.58)	.84	3.52 (.55)	.82
Openness	3.32 (.61)	.81	3.69 (.57)	.82
Facet-level Scales				
Honesty-Humility				
Sincerity	3.20 (.77)	.66	3.24 (.91)	.78
Fairness	3.44 (.95)	.76	3.53 (1.06)	.83
Greed Avoidance	3.74 (.93)	.81	3.00 (1.01)	.83
Modesty	3.59 (.79)	.68	3.42 (.87)	.79
Emotionality				
Fearfulness	3.11 (.86)	.70	2.81 (.84)	.70
Anxiety	3.70 (.78)	.64	3.54 (.86)	.73
Dependence	3.32 (.91)	.80	2.84 (.88)	.76
Sentimentality	3.57 (.79)	.70	3.28 (.85)	.73
eXtraversion				
Social Self-Esteem	3.81 (.68)	.67	3.56 (.77)	.70
Social Boldness	2.99 (.88)	.76	3.05 (.87)	.72
Sociability	3.58 (.78)	.71	3.02 (.88)	.77
Liveliness	3.52 (.76)	.76	3.26 (.83)	.78
Agreeableness				
Forgiveness	2.75 (.82)	.74	2.42 (.83)	.78
Gentleness	3.22 (.72)	.66	2.95 (.81)	.72
Flexibility	2.79 (.74)	.61	2.71 (.75)	.64
Patience	3.15 (.88)	.79	3.04 (.90)	.80

	Student Sample: Self-Report Total (*N* = 2,868)		Online Sample: Self Report Total (*N* = 100,318)	
	M (SD)	*α*	*M (SD)*	*α*
Conscientiousness				
Organisation	3.28 (.93)	.74	3.36 (.88)	.73
Diligence	3.79 (.69)	.70	3.79 (.73)	.71
Perfectionism	3.53 (.77)	.69	3.55 (.76)	.69
Prudence	3.20 (.74)	.69	3.40 (.75)	.70
Openness to Experience				
Aesthetic Appreciation	3.27 (.89)	.66	3.52 (.82)	.65
Inquisitiveness	3.09 (.91)	.66	3.84 (.80)	.70
Creativity	3.53 (.90)	.75	3.72 (.84)	.73
Unconventionality	3.40 (.65)	.52	3.69 (.67)	.59
Interstitial Scale				
Altruism	3.89 (.66)	.59	3.76 (.74)	.66

Finally, as seen in Table 7, the correlations between the HEXACO–100 personality factors were typically low (Lee & Ashton, 2018). These correlations can be compared with numerous Big Five measures of personality, where approximately half of the 10 scale intercorrelations are between .20 and .40 or higher (Lee & Ashton, 2018). These stronger correlations can be seen in Big Five items such as the NEO Five-Factor Inventory (John & Srivastava, 1999) and the Big Five Aspect Scales (DeYoung, Quilty, & Peterson, 2007).

Overall, these findings of robust reliability and validity, alongside weak correlations between the personality factors themselves, support and justify the selection of the HEXACO-PI-R as the measure of personality in the current study.

Table 7.

Correlations between the HEXACO–100 factor scales for the student sample (self-report) and online sample (self-report)

	Honesty-Humility	Emotionality	eXtraversion	Agreeableness	Conscientiousness	Openness
Student Sample: Self-Report						
Honesty-Humility	1.00					
Emotionality	.13	1.00				
eXtraversion	–.08	–.10	1.00			
Agreeableness	.30	–.14	.13	1.00		
Conscientiousness	.15	.13	.17	.06	1.00	
Openness	.14	–.07	.05	.10	.04	1.00
Online Sample: Self Report						
Honesty-Humility	1.00					
Emotionality	.17	1.00				
eXtraversion	–.03	–.16	1.00			
Agreeableness	.42	–.05	.17	1.00		
Conscientiousness	.14	–.06	.17	.03	1.00	
Openness	.12	–.05	.13	.12	.07	1.00

3.4 Procedure

Ethical, Organisational, and Governmental Approvals

Multiple ethical, organisational, and governmental approvals were required. For both samples, the University of Western Australia Human Research Ethics Committee required the following of strict protocols and procedures to ensure that participant safety and confidentiality were maintained. These protocols included the development of a Participant Information Form (Appendix B) and Participant Consent Form (Appendix C). For the Czech Republic sample, these documents were translated and approved by the Prison Service of the Czech Republic (Appendices D & E). Additionally, due to the sensitive nature of the information (for example, offence histories), data security and participant confidentiality were required to be maintained. Data were stored on a password protected computer terminal with two separate back-up files on password-protected external hard drives. Further, the data were de-identified to ensure participant confidentiality. Each participant received an identification number that linked their personal information (for example, Age, Prison Location, Country, Primary Offence Category) and their HEXACO-PI-R personality profile results.

In the Czech Republic, approval to access the prisons and offender sample was provided by both the Director-General of the Czech Republic Prison Service and the Head Psychologist of the Prison Service of the Czech Republic. In Australia, approval to access offenders and ex-offenders, alongside Outcare case officers, was provided by the former WA Department of Corrective Services, now the WA Department of Justice. At an organisational level, approval to access ex-offenders who were linked with the support service Outcare was provided by the Chief Executive Officer of Outcare in Western Australia.

Czech Republic Offender Sample

The six prisons in the Czech Republic offender sample were located in Vinařice, Ostrov, Jiřice, Všehrdy, Kuřim and Liberec. A liaison officer was provided at each prison to assist with the data-collection session and to translate between English and Czech. The liaison officer was either the head psychologist or a psychologist working within the prison. Each

data collection session had approximately 10 to 20 participants and was approximately 30 minutes in duration. Aside from the participants, three individuals were present in the room: 1) the lead researcher, 2) the liaison officer, and 3) a prison officer. While no adverse reactions to the HEXACO-PI-R were anticipated, a member of the prison staff was required to be present to ensure that the session was completed safely.

When the participants entered the room they were seated and were provided with three documents that had been translated into the Czech Language: 1) the 100-item HEXACO-PI-R, 2) the Participant Information Form, and 3) the Participant Consent Form. The documents and study were explained to the participants. Emphasis was placed upon what was required of them to participate, that participation was strictly voluntary and that they could cease participation at any time. Given the vulnerable nature of the participants, this focus on voluntary participation was deemed essential. Next, they were instructed on how to complete the HEXACO-PI-R and an example was given.

Participants were informed that they could ask the researcher if they were unsure what a question or word meant and that the liaison officer would translate the information. This provision was made to increase the likelihood of the participants responding accurately. Next, the participants were informed that there was no time limit to complete the questionnaire and then asked if they had any questions before they began. Once any questions had been addressed, the participants were invited to sign the Participant Consent Form if they still wished to participate and then to begin. Once all participants had completed the questionnaire, they were thanked for their time and left the session room.

Western Australia Ex-Offender Sample:

The ex-offender sample was obtained through clients who engaged with Outcare services in Perth, WA. Each participant was approached individually in the presence of their case officer. Additionally, each data collection session was conducted individually with a single participant at a time.

In both forms of data collection, the participants were provided with the 100-item HEXACO-PI-R, the Participant Information Form and the Participant Consent Form. The documents

and study were explained to the participant. Emphasis was placed on the fact that participation was completely voluntary and that they could stop at any time with no repercussions. If the participant wanted to continue, they were instructed on how to complete the HEXACO-PI-R and an example was provided. The participant was also told that they could take as long as they needed to complete the questionnaire or stop participating at any time. The participant was also informed that if they were unsure about a term or question, then they could leave it and ask for clarification to respond to it later. The researcher and Outcare case officers then left the participant to complete the questionnaire on their own. The participant completed the questionnaire alone in order to help avoid potential response bias in case the participant felt they were being watched or monitored by their Outcare case officer.

When the participant had completed the questionnaire, any questions or clarification they required were addressed, and they submitted the completed questionnaire and signed the Participant Consent Form. As compensation for their time, participants were thanked and provided with a $20 JB Hi-Fi gift card. The WA Department of Justice did not support the use of gift cards to reimburse ex-offender participants for their time.

3.5 Analysis

Data Coding, Screening, & Descriptive Analysis

The data set was coded in SPSS and had 140 variables coded within it (Appendix F). This data set included approximately 19,500 points of data. After the data set was coded, a syntax script was applied to the SPSS file. The syntax script recoded the negatively-valenced HEXACO items, computed the main HEXACO factors (i.e., Honesty-Humility, Emotionality, eXtraversion, Agreeableness, Conscientiousness and Openness) and facet scores. When data were missing for a specific factor score, the factor score for that individual was not calculated and was not used in that analysis.

SPSS was used to check responses for outliers by factor score and Primary Offence Category. In three of the factor scores (i.e., Honesty-Humility, Emotionality and Conscientiousness), two outliers were present. In the eXtraversion factor scores, three outliers were present and in the Agreeableness factor scores, five outliers were present. These surveys were

individually assessed and had been completed accurately and with no missing responses. As such, none of the responses with outliers was removed as there were no grounds to believe that the responses were not representative of the population.

For each of the samples, the mean, standard deviation, 95% confidence interval, skewness and kurtosis were calculated using SPSS.

Inferential Statistical Tests

Four types of inferential tests were utilised in the thesis: 1) the one-sample *t*-test, 2) the independent measures *t*-test, and 3) the single-factor, independent measures analysis of variance (ANOVA) with Tukey's HSD post-hoc.

The one-sample *t*-test is used to identify whether significant mean score differences exist between a sample and an already existing population mean (Gravetter & Wallnau, 2009). In this study, the population mean and standard deviation scores were obtained from Lee and Ashton (2018). The independent-measures *t*-test utilises data from two individual samples to test a hypothesis regarding a significant difference between the mean scores of two groups (Gravetter & Wallnau, 2009). The variability between these two samples is pooled to obtain a single estimate of population variance (Gravetter & Wallnau, 2009). The effect size for both the single-sample *t*-test and the independent-measures *t*-test has been described using Cohen's *d*. This score measures the percentage of variability that is accounted for by the treatment effect (Gravetter & Wallnau, 2009). Traditionally, these scores indicated a 'small' (0.20), 'medium' (0.50), or 'large' (.80) effect (Cohen, 1988). More contemporary research, however, has also expanded upon this scale to include effect sizes of 'very small' (0.01), 'very large' (1.20) and 'huge' (2.0) (Sawilowsky, 2009).

The ANOVA was used in the study to identify whether significant mean score differences existed between three or more samples (Gravetter & Wallnau, 2009). The test statistic is represented by an *F*-ratio that comprises the division of two values. The numerator is the variability between treatment conditions (i.e., the mean difference of the samples) and the denominator by the variability within the treatment conditions (i.e., the error variability) (Gravetter & Wallnau, 2009). The effect size for the single-factor independent-measure ANOVA is represented by the symbol $\eta_p 2$. This score measures the percentage of variability

that is accounted for by the treatment effect (Gravetter & Wallnau, 2009). These scores indicated a 'small' (0.01), 'medium' (0.06), or 'large' (.14) effect (Miles & Shevlin, 2001).

As the ANOVA is an omnibus test, post-hoc tests are required to discern where the significant differences between the groups themselves are. In this study, the most suitable post-hoc test was determined to be Tukey's HSD. Tukey's HSD was selected as the post-hoc analysis test for multiple reasons. Firstly, Fisher's least significant difference (LSD) does not attempt to control for Type 1 errors (Field, 2009). Secondly, while the Bonferroni correction and Tukey's HSD both control the Type I error rate effectively, Tukey's HSD does not require equal sample sizes as long as tests of equal variance and homogeneity are satisfied. Additionally, it has higher statistical power when testing a large number of means (Field, 2009).

These statistical tests were selected as they best reflect the exploratory and omnibus approach to the research. Furthermore, these tests would highlight where significant differences existed and which personality traits may be important at both a factor and facet level. These findings would provide a road map for future research to utilise and focus upon. In a similar vein, this is the reason General Linear Modelling (GLM) was not included in the current research.

Aside from the already expansive results sections, which span Chapters 4 and 5, GLM represents a study design approach that did not align with the current research values. The thesis sought to provide new and original findings that would provide future researchers with personality profiles and matrices to inform about salient personality traits based on offence type to better benefit rehabilitation practices. The use of GLM without the proper context (for example, the dangers of using personality traits to predict criminality) would have been detrimental. This detriment would arise as the findings could then be easily misinterpreted (i.e., certain personality traits can predict criminality). While the personality profiles and matrices show that certain personality traits are significantly more prevalent in certain offending types, future research could include the use of GLM and provide the required context to ensure better that the findings are interpreted with appropriate caution.

Descriptive and inferential testing was performed on both the primary offence categories and the specific offender groups. The results from the POC analysis are presented in Chapter 4. The results for the SOG are presented in Chapter 5.

Chapter 4: Results (Primary Offence Categories)

4.1 Descriptive Data & *t*-Test Comparisons

Table 8 provides the means, standard deviations, confidence intervals, and skewness and kurtosis values for both the Czech Republic offender sample and the ex-offender Australian sample by personality factor score and Primary Offence Category (POC). For all six HEXACO personality factors, a series of independent *t*-tests were conducted for Violent Crimes offenders, Substance Abuse & Drug-Related Crimes offenders, Property & Financial Crimes offenders and Sexual Crimes (Paedophilia) offenders between the Czech Republic and Australian samples.

This analysis was completed to determine whether the samples needed to remain distinct for subsequent inferential tests or could be merged into a combined sample. No independent *t*-test was conducted for the Sexual Crimes offenders sample in any of the personality factors, as valid participant responses in that group were only obtained from the Czech Republic sample. For all of the following independent samples *t*-tests, Levene's equality of variances was not violated, aside from the Openness Factor for the Sexual Crimes (Paedophilia) sample. The results reported in this *t*-test were with equal variances not assumed. All *p* values represent two-tailed tests.

Table 8.

POC descriptive statistics & t-test comparison between the Czech Republic offender and Australian ex-offender samples

Personality Factor	Offender Group	Czech Republic Sample						Australian Sample								
		n	*M (SD)*	*95% CI for Mean*		*S*	*K*	*n*	*M (SD)*	*95% CI for Mean*		*S*	*K*	*t*	*p*	*d*
				L	*U*					*L*	*U*					
Honesty-Humility	Violent Crimes	34	3.46 (.50)	3.31	3.66	–.73	.42	21	3.36 (.36)	3.20	3.53	.12	–.44	0.79	.43	0.23
	Sexual Crimes	9	3.31 (.54)	2.88	3.83	.52	.38	0	-	-	-	-	-	-	-	-
	Substance Abuse Crimes[a]	27	3.37 (.42)	3.21	3.55	.07	–.43	7	3.25 (.72)	2.58	3.92	–1.00	.72	0.59	.56	0.20
	Property Crimes[b]	45	3.05 (.47)	2.91	3.20	–.14	–.21	5	3.41 (.27)	2.94	3.93	.01	.71	–1.68	.10	–0.94
	Sexual Crimes (Paedophilia)	17	3.36 (.41)	3.13	3.59	.11	–.05	4	3.91 (.87)	2.52	5	.21	1.42	–1.94	.07	–0.81
Emotionality	Violent Crimes	35	2.88 (.29)	2.77	2.99	–.64	.33	22	2.76 (.42)	2.58	2.97	–.65	–.05	1.20	.24	0.33
	Sexual Crimes	8	2.93 (.20)	2.76	3.10	.02	–1.17	0	-	-	-	-	-	-	-	-
	Substance Abuse Crimes	26	2.92 (.36)	2.78	3.07	–.21	–.34	7	2.87 (.38)	2.52	3.23	–.84	.72	0.29	.77	0.14

Personality Factor	Offender Group	Czech Republic Sample						Australian Sample								
		n	*M (SD)*	*95% CI for Mean*		*S*	*K*	*n*	*M (SD)*	*95% CI for Mean*		*S*	*K*	*t*	*p*	*d*
				L	*U*					*L*	*U*					
Emotionality	Property Crimes	45	3.02 (.44)	2.91	3.18	.48	1.29	5	2.90 (.36)	2.25	3.56	.30	–3.87	0.57	.60	0.30
	Sexual Crimes (Paedophilia)	16	3.13 (.54)	2.84	3.41	–.29	.41	4	3.25 (.63)	2.25	4.25	.01	–.16	–0.39	.70	–0.20
eXtraversion	Violent Crimes	35	3.22 (.45)	3.05	3.37	–.79	1.63	22	3.26 (.47)	3.04	3.48	–.06	–.20	–0.36	.72	–0.09
	Sexual Crimes	9	3.18 (.44)	2.77	3.54	.82	1.73	0	-	-	-	-	-	-	-	-
	Substance Abuse Crimes	27	3.51 (.52)	3.29	3.70	.16	–.56	7	3.56 (.62)	2.99	4.14	.34	–1.75	–0.24	.81	–0.09
	Property Crimes	45	3.27 (.41)	3.14	3.40	–.49	.46	5	3.20 (.51)	2.29	4.15	–.28	–.36	0.36	.72	0.15
	Sexual Crimes (Paedophilia)	17	3.04 (.42)	2.81	3.27	–.14	–.20	4	2.80 (.27)	2.37	3.22	–1.04	–.32	1.11	.28	0.68
Agreeableness	Violent Crimes	34	3.10 (.47)	2.94	3.28	–.42	.74	22	3.11 (.38)	2.94	3.30	–1.06	3.11	–0.04	.97	–0.02
	Sexual Crimes	8	3.14 (.63)	2.62	3.66	–.68	–.89	0	-	-	-	-	-	-	-	-

Personality Factor	Offender Group	Czech Republic Sample						Australian Sample								
		n	*M (SD)*	*95% CI for Mean*		*S*	*K*	*n*	*M (SD)*	*95% CI for Mean*		*S*	*K*	*t*	*p*	*d*
				L	*U*					*L*	*U*					
Agreeableness	Substance Abuse Crimes	27	3.10 (.58)	2.91	3.37	–.07	.25	7	3.35 (.69)	2.71	3.99	.31	–.95	–0.96	.35	–0.39
	Property Crimes	44	2.96 (.42)	2.84	3.10	–.62	2.09	5	3.31 (.22)	2.93	3.73	.25	–2.51	–1.82	.08	–1.04
	Sexual Crimes (Paedophilia)	17	3.03 (.30)	2.87	3.20	–.14	.01	4	3.50 (.69)	2.40	4.60	1.58	2.29	–2.16	.04*	–0.88
Conscientiousness	Violent Crimes	35	3.55 (.56)	3.34	3.72	–.30	1.00	22	3.43 (.56)	3.19	3.71	.63	–.75	0.80	.49	0.21
	Sexual Crimes	9	3.72 (.47)	3.30	4.14	.95	.98	0	-	-	-	-	-	-	-	-
	Substance Abuse Crimes	27	3.63 (.50)	3.44	3.85	.56	.46	7	3.30 (.51)	2.83	3.78	.32	–1.18	1.51	.14	0.65
	Property Crimes	44	3.44 (.42)	3.33	3.58	–.34	–.74	4	3.23 (.57)	2.33	4.14	.54	–2.13	0.94	.35	0.42
	Sexual Crimes (Paedophilia)	17	3.50 (.30)	3.31	3.62	1.34	1.60	4	3.20 (.24)	2.82	3.59	–.17	–4.41	1.78	.09	1.10

Personality Factor	Offender Group	Czech Republic Sample						Australian Sample								
		n	*M (SD)*	*95% CI for Mean*		*S*	*K*	*n*	*M (SD)*	*95% CI for Mean*		*S*	*K*	*t*	*p*	*d*
				L	*U*					*L*	*U*					
Openness	Violent Crimes	35	3.33 (.54)	3.10	3.44	.44	1.03	22	3.34 (.44)	3.11	3.52	.78	2.37	–0.04	.97	–0.02
	Sexual Crimes	9	3.35 (.67)	2.72	3.93	.08	–1.64	0	-	-	-	-	-	-	-	-
	Substance Abuse Crimes	26	3.45 (.48)	3.25	3.64	.01	–.52	7	3.20 (.59)	2.65	3.75	–.86	.67	1.16	.25	1.49
	Property Crimes	45	3.28 (.53)	3.10	3.43	.05	.08	5	3.36 (.50)	2.70	4.26	–.04	–5.60	–0.32	.75	–0.15
	Sexual Crimes (Paedophilia)	17	3.36 (.45)	3.10	.60	–.22	–1.21	4	2.88 (.99)	1.30	4.45	.28	–1.81	0.96	.40	0.62

* Result was significant at or below a 0.05 level

[a] Substance Abuse Crimes refers to Substance Abuse and Drug-Related Crimes

[b] Property Crimes refers to Property and Financial Crimes

4.2 Key Findings: POC Descriptive Statistics & *t*-Test Comparisons between the Czech Republic Offender and Australian Ex-Offender Samples

The key findings from Table 8 support the merging of the Czech Republic and Australian POC samples.

As indicated in Table 8, a series of independent *t*-tests found that the Honesty-Humility, Emotionality, eXtraversion, Conscientious and Openness factor mean scores did not differ significantly between the four measured Czech Republic and Australian POCs. In the Agreeableness factor, three of the four *t*-tests were non-significant. Overall, these findings justified the merging of the Czech Republic and Australian samples.

In the Agreeableness factor, one significant difference between the Czech Republic and Australian sample was found. An independent-samples *t*-test indicated that the Agreeableness factor mean score for Sexual Crimes (Paedophilia) offenders was significantly lower for the Czech Republic offenders ($M = 3.03$, $SD = .30$) than for the Australian ex-offenders ($M = 3.50$, $SD = .69$), $t(19) = –2.16$, $p = .04$, $d = .88$. As such, independent-samples *t*-tests were conducted at a facet level within this offender group and the Agreeableness factor (i.e., Forgiveness, Gentleness, Flexibility and Patience) to determine where the specific differences might be occurring. None of the independent samples *t*-tests conducted at this facet level violated Levene's test for equality of variances.

The tests found no statistically significant facet mean score differences between the two samples in relation to Forgiveness or Flexibility. There were, however, significant facet mean score differences in the Gentleness and Patience facets. An independent-samples *t*-test indicated that the Gentleness facet mean score for Sexual Crimes (Paedophilia) offenders was significantly lower for Czech Republic offenders ($M = 3.28$, $SD = .51$) than for Australian ex-offenders ($M = 4.00$, $SD = .74$), $t(19) = –2.34$, $p = .03$, $d = 1.13$. An independent-samples *t*-test indicated that the Patience facet mean score for Sexual Crimes (Paedophilia) offenders was significantly lower for Czech Republic offenders ($M = 3.01$, $SD = .47$) than for Australian ex-offenders ($M = 3.88$, $SD = .63$), $t(19) = –3.10$, $p = .01$, $d = 1.57$.

4.3 Key Findings: Descriptive Statistics & One-Sample *t*-Test Comparisons between the Combined Czech Republic & Australian Sample and the Normative Sample

The subsequent analysis (Appendix G) examined the personality factor and facet mean score similarities and differences between the Czech Republic and Australian merged samples, referred to from this point onwards as the combined sample, and the normative sample (Lee & Ashton, 2018). The direction, effect size and strength are presented in Appendix H. This analysis is without any separation by POC and reports the overall offender and ex-offender personality archetype. The normative sample represents what is being utilised as the mean population scores of 'typical' male members in society. These mean and standard deviation personality factor and facets scores were obtained from the authors of the HEXACO-PI-R, Lee and Ashton (2018). Their sample of 50,397 male participants encompasses individuals who had submitted self-report responses to the English-language HEXACO-PI-R online survey from 19 October 2014, to 18 October 2015. The key findings are as follows.

Honesty-Humility:

A one-sample *t*-test of the combined and normative samples determined that there was a significant mean score difference in the factor of Honesty-Humility. Additionally, there was a significant mean score difference in all of the facet traits (i.e., Sincerity, Fairness, Greed-Avoidance and Modesty).

Emotionality:

A one-sample *t*-test of the combined and normative samples determined that there was a significant mean score difference in the factor of Emotionality. Additionally, there was a significant mean score difference in the facet traits of Anxiety, Dependence and Sentimentality. There was no significant mean score difference, however, in the facet trait of Fearfulness.

eXtraversion:

A one-sample *t*-test of the combined and normative samples determined that there was no significant mean score difference in the factor of eXtraversion. There was, however, a significant mean score difference in all of the facet traits (i.e., Social Self-Esteem, Social Boldness, Sociability and Liveliness).

Agreeableness:

A one-sample *t*-test of the combined and normative samples determined that there was a significant mean score difference in the factor of Agreeableness. Additionally, there was a significant mean score difference in the facet traits of Forgivingness, Gentleness and Flexibility. There was no significant mean score difference in the facet trait of Patience.

Conscientiousness:

A one-sample *t*-test of the combined and normative samples determined that there was no significant mean score difference in the factor of Conscientiousness. Additionally, there was no mean score difference in the facet traits of Diligence and Perfectionism. There was, however, a significant mean score difference in the facet traits of Organisation and Prudence.

Openness:

A one-sample *t*-test of the combined and normative samples determined that there was a significant mean score difference in the factor of Conscientiousness. Additionally, there was a significant mean score difference in the facet traits of Inquisitiveness, Creativity and Unconventionality. There was, however, no mean score difference in the facet trait of Aesthetic Appreciation.

Altruism (Interstitial Scale):

A one-sample *t*-test of the combined and normative samples determined that there was no significant mean score difference in the interstitial facet trait of Altruism.

As there were significant mean score differences in each personality factor, at either a factor or facet level, further analysis was conducted to determine more accurately where these differences were occurring. For all six of the HEXACO personality factors, a series of one-sample *t*-tests were conducted for Violent Crimes offenders, Sexual Crimes offenders, Substance Abuse & Drug-Related Crimes offenders, Property & Financial Crimes offenders, and Sexual Crimes (Paedophilia) offenders between the combined sample and the normative sample (Table 9). All *p* values represent two-tailed tests.

Table 9.

Descriptive statistics & one-sample t-test comparisons between the combined Czech Republic & Australian sample and normative sample, by Primary Offending Category.

POC	Personality Factor	Combined Sample		Normative Sample (Non-Offender)							
		n	*M (SD)*	*N*	*M (SD)*	*Mean Difference*	*95% CI of the Difference*		*t*	*p*	*d*
							L	*U*			
Violent Crimes Offenders	Honesty-Humility	55	3.43 (.45)	50,397	3.15 (.76)	.28	.15	.40	4.50	.001**	0.62
	Emotionality	57	2.83 (.35)	50,397	2.86 (.58)	–.03	–.12	.06	–0.62	.54	–0.09
	eXtraversion	57	3.24 (.45)	50,397	3.23 (.64)	.01	–.11	.13	0.11	.91	0.02
	Agreeableness	56	3.10 (.43)	50,397	2.78 (.64)	.32	.21	.44	5.59	.001**	0.74
	Conscientiousness	57	3.50 (.56)	50,397	3.49 (.56)	.01	–.13	.16	0.18	.86	0.02
	Openness	57	3.33 (.50)	50,397	3.73 (.55)	–.40	–.53	–.27	–6.04	.001**	–0.80
Sexual Crimes Offenders	Honesty-Humility	9	3.31 (.54)	50,397	3.15 (.76)	.16	–.26	.58	0.90	.40	0.30
	Emotionality	8	2.93 (.20)	50,397	2.86 (.58)	.07	–.10	.24	0.96	.37	0.35
	eXtraversion	9	3.18 (.44)	50,397	3.23 (.64)	–.05	–.39	.29	–0.34	.74	–0.11
	Agreeableness	8	3.14 (.63)	50,397	2.78 (.64)	.36	–.16	.88	1.63	.15	0.57
	Conscientiousness	9	3.72 (.47)	50,397	3.49 (.56)	.23	–.13	.59	1.49	.18	0.49
	Openness	9	3.35 (.67)	50,397	3.73 (.55)	–.38	–.90	.15	–1.66	.14	–0.57
Drug & Substance Abuse Crimes Offenders	Honesty-Humility	34	3.35 (.48)	50,397	3.15 (.76)	.20	.03	.37	2.38	.02*	0.42
	Emotionality	33	2.91 (.36)	50,397	2.86 (.58)	.05	–.08	.18	0.81	.42	0.14
	eXtraversion	34	3.52 (.53)	50,397	3.23 (.64)	.29	.10	.47	3.17	.001**	0.55
	Agreeableness	34	3.15 (.60)	50,397	2.78 (.64)	.37	.17	.58	3.64	.001**	0.62
	Conscientiousness	34	3.59 (.51)	50,397	3.49 (.56)	.07	–.11	.25	0.79	.44	0.20
	Openness	33	3.39 (.51)	50,397	3.73 (.55)	–.34	–.52	–.16	–3.79	.001**	–0.67

POC	Personality Factor	Combined Sample		Normative Sample (Non-Offender)			95% CI of the Difference				
		n	*M (SD)*	*N*	*M (SD)*	*Mean Difference*	*L*	*U*	*t*	*p*	*d*
Property and Financial Crimes Offenders	Honesty-Humility	50	3.09 (.47)	50,397	3.15 (.76)	–.07	–.20	.07	–0.98	.33	–0.13
	Emotionality	50	3.01 (.43)	50,397	2.86 (.58)	.15	.02	.27	2.38	.02*	0.35
	eXtraversion	50	3.26 (.42)	50,397	3.23 (.64)	.03	–.08	.15	0.57	.57	0.07
	Agreeableness	49	3.00 (.42)	50,397	2.78 (.64)	.22	.10	.34	3.68	.001**	0.52
	Conscientiousness	48	3.43 (.43)	50,397	3.49 (.56)	–.06	–.19	.06	–1.04	.30	–0.14
	Openness	50	3.29 (.53)	50,397	3.73 (.55)	–.44	–.59	–.29	–5.90	.001**	–0.83
Sexual Crimes (Paedophilia) Offenders	Honesty-Humility	21	3.46 (.55)	50,397	3.15 (.76)	.31	.06	.56	2.62	.02*	0.56
	Emotionality	20	3.15 (.54)	50,397	2.86 (.58)	.29	.04	.55	2.43	.03*	0.54
	eXtraversion	21	2.99 (.40)	50,397	3.23 (.64)	–.24	–.42	–.05	–2.71	.01*	–0.60
	Agreeableness	21	3.12 (.42)	50,397	2.78 (.64)	.34	.15	.53	3.70	.001**	0.81
	Conscientiousness	21	3.44 (.31)	50,397	3.49 (.56)	–.05	–.19	.09	–0.73	.47	–0.16
	Openness	21	3.27 (.59)	50,397	3.73 (.55)	–.46	–.73	–.19	–3.58	.001**	–0.78

* Result was significant at or below a 0.05 level

**Result was significant at or below a 0.001 level

4.4 Key Findings: Descriptive Statistics & One-Sample *t*-Test Comparisons between the Combined Sample and Normative Sample by Primary Offending Category

Combined Violent Offender Sample & Normative Sample Comparisons

A series of one-sample *t*-tests between the combined and normative samples found that, for violent offenders, there were no significant mean score differences in the personality factors of Emotionality, eXtraversion or Conscientiousness. There were, however, significant mean score differences in the personality factors of Honesty-Humility, Agreeableness and Openness.

The Honesty-Humility factor mean score for the combined offender sample ($M = 3.43$, $SD = .45$) was significantly higher than the normative Honesty-Humility factor mean score ($M = 3.15$, $SD = .76$), with a statistically significant difference of .28, 95% CI [.15 to .40], $t(54) = 4.50$, $p < .001$, $d = .62$.

The Agreeableness factor mean score for the combined offender sample ($M = 3.10$, $SD = .43$) was significantly higher than the normative Agreeableness factor mean score ($M = 2.78$, $SD = .64$), with a statistically significant difference of .32, 95% CI [.21 to .44], $t(56) = 5.59$, $p < .001$, $d = .74$.

The Openness factor mean score for the combined offender sample ($M = 3.33$, $SD = .50$) was significantly lower than the normative Openness factor mean score ($M = 3.73$, $SD = .55$), with a statistically significant difference of –.40, 95% CI [–.53 to –.27], $t(56) = –6.04$, $p < .001$, $d = .80$.

As a significant mean score difference was found between the combined Violent Crimes offender sample and the normative sample in the Honesty-Humility, Agreeableness and Openness factors, further analysis was conducted. One-sample *t*-tests were conducted at a facet level within these factors to determine where the specific differences might occur.

In the Honesty-Humility factor, there was no statistically significant facet mean score difference between the two groups in relation to the facet trait of Fairness. There were significant facet mean score differences, however, in the Sincerity, Greed-Avoidance and Modesty facets.

A one-sample *t*-test indicated that the Honesty-Humility (Sincerity) facet mean score for Violent Crime offenders was significantly higher for the combined sample ($M = 3.49$, $SD = .59$) than the normative sample ($M = 3.17$, $SD = .92$), with a statistically significant difference of .32, 95% CI [.16 to .47], $t(56) = 4.04$, $p < .001$, $d = .54$.

A one-sample *t*-test indicated that the Honesty-Humility (Greed-Avoidance) facet mean score for Violent Crime offenders was significantly higher for the combined sample ($M = 3.13$, $SD = .86$) than the normative sample ($M = 2.88$, $SD = 1.01$), with a statistically significant difference of .31, 95% CI [.08 to .54], $t(56) = 2.75$, $p = .01$, $d = .29$.

A one-sample *t*-test indicated that the Honesty-Humility (Modesty) facet mean score for Violent Crime offenders was significantly higher for the combined sample ($M = 3.74$, $SD = .55$) than the normative sample ($M = 3.22$, $SD = .90$), with a statistically significant difference of .52, 95% CI [.37 to .67], $t(56) = 7,12$, $p < .001$, $d = .95$.

In the Agreeableness factor, there was no statistically significant facet mean score difference between the two groups in relation to the facet trait of Patience. There was significant facet mean score differences, however, in the Forgivingness, Gentleness and Flexibility facets.

A one-sample *t*-test indicated that the Agreeableness (Forgivingness) facet mean score for Violent Crime offenders was significantly higher for the combined sample ($M = 3.10$, $SD = .59$) than the normative sample ($M = 2.41$, $SD = .84$), with a statistically significant difference of .60, 95% CI [.44 to .76], $t(56) = 7.64$, $p < .001$, $d = 1.17$.

A one-sample *t*-test indicated that the Agreeableness (Gentleness) facet mean score for Violent Crime offenders was significantly higher for the combined sample ($M = 3.35$, $SD = .57$) than the normative sample ($M = 2.92$, $SD = .82$), with a statistically significant difference of .43, 95% CI [.27 to .58], $t(56) = 5.61$, $p < .001$, $d = .75$.

A one-sample *t*-test indicated that the Agreeableness (Flexibility) facet mean score for Violent Crime offenders was significantly higher for the combined sample ($M = 3.05$, $SD = .63$) than the normative sample ($M = 2.68$, $SD = .75$), with a statistically significant difference of .37, 95% CI [.21 to .54], $t(56) = 4.45$, $p < .001$, $d = .59$.

In the Openness factor, there was no statistically significant facet mean score difference between the two groups in relation to the facet trait of Aesthetic Appreciation. There were significant facet mean score differences, however, in the Inquisitiveness, Creativity, and Unconventionality facets.

A one-sample *t*-test indicated that the Openness (Inquisitiveness) facet mean score for Violent Crime offenders was significantly lower for the combined sample ($M = 3.54$, $SD = .74$) than the normative sample ($M = 4.04$, $SD = .71$), with a statistically significant difference of –.50, 95% CI [–.70 to –.30], $t(56) = –5.12$, $p < .001$, $d = .68$.

A one-sample *t*-test indicated that the Openness (Creativity) facet mean score for Violent Crime offenders was significantly lower for the combined sample ($M = 3.36$, $SD = .66$) than the normative sample ($M = 3.72$, $SD = .82$), with a statistically significant difference of –.36, 95% CI [–.54 to –.18], $t(56) = –4.10$, $p < .001$, $d = .55$.

A one-sample *t*-test indicated that the Openness (Unconventionality) facet mean score for Violent Crime offenders was significantly lower for the combined sample ($M = 3.54$, $SD = .74$) than the normative sample ($M = 3.16$, $SD = .59$), with a statistically significant difference of –.45, 95% CI [–.60 to –.29], $t(56) = –5.72$, $p < .001$, $d = .51$.

For easier applicability, the findings are presented in Personality Profile 1. Personality Profile 1 presents the comparative direction, effect size and strength of the personality factor and facet differences between the combined Violent Crime offender sample and normative population.

Personality Profile 1: Violent Crimes Offenders

Direction, effect size and strength between Violent Crimes and normative samples

Personality Factor/Facet	Cohen's *d*	Violent Offender Sample	Normative Sample	Effect Size Strength
Honesty-Humility	.62	Higher	Lower	Medium
Sincerity	.54	Higher	Lower	Medium
Fairness	-	-	-	-
Greed Avoidance	.29	Higher	Lower	Small
Modesty	.95	Higher	Lower	Large
Emotionality	-	-	-	-
Fearfulness	-	-	-	-
Anxiety	-	-	-	-
Dependence	-	-	-	-
Sentimentality	-	-	-	-
eXtraversion	-	-	-	-
Social Self-Esteem	-	-	-	-
Social Boldness	-	-	-	-
Sociability	-	-	-	-
Liveliness	-	-	-	-
Agreeableness	.74	Higher	Lower	Medium to Large
Forgivingness	1.17	Higher	Lower	Large to Very Large
Gentleness	.75	Higher	Lower	Medium to Large
Flexibility	.59	Higher	Lower	Medium
Patience	-	-	-	-
Conscientiousness	-	-	-	-
Organisation	-	-	-	-
Diligence	-	-	-	-
Perfectionism	-	-	-	-
Prudence	-	-	-	-
Openness to Experience	.80	Lower	Higher	Large
Aesthetic Appreciation	-	-	-	-
Inquisitiveness	.68	Lower	Higher	Medium to Large
Creativity	.55	Lower	Higher	Medium
Unconventionality	.51	Lower	Higher	Medium

Combined Sexual Crimes Offender Sample & Normative Sample Comparisons

A series of one-sample *t*-tests between the combined and normative samples determined that, for Sexual Crimes offenders, there were no significant mean score differences in the personality factors of Honest-Humility, Emotionality, eXtraversion, Agreeableness, Conscientiousness or Openness. The limited reliability and validity of these findings and their implications are discussed in greater detail in Section 6.10. Given the unreliability of these findings, no personality profile was developed.

Combined Substance Abuse and Drug-Related Offender Sample & Normative Sample Comparisons

A series of one-sample *t*-tests between the combined and normative samples determined that, for Substance Abuse and Drug-Related Crimes offenders there were no significant mean score differences in the personality factors of Emotionality or Conscientiousness. There were, however, significant mean score differences in the personality factors of Honesty-Humility, Agreeableness and Openness.

The Honesty-Humility factor mean score for the combined offender sample ($M = 3.35$, $SD = .48$) was significantly higher than the normative Honesty-Humility factor mean score ($M = 3.15$, $SD = .76$), with a statistically significant difference of .20, 95% CI [.03 to .37], $t(33) = 2.38$, $p = .02$, $d = .42$.

The eXtraversion factor mean score for the combined offender sample ($M = 3.52$, $SD = .53$) was significantly higher than the normative eXtraversion factor mean score ($M = 3.23$, $SD = .64$), with a statistically significant difference of .29, 95% CI [.10 to .47], $t(33) = 3.17$, $p < .01$, $d = .55$.

The Agreeableness factor mean score for the combined offender sample ($M = 3.15$ $SD = .60$) was significantly higher than the normative Agreeableness factor mean score ($M = 2.78$, $SD = .64$), with a statistically significant difference of .37, 95% CI [.17 to .58], $t(33) = 3.64$, $p < .001$, $d = .62$.

The Openness factor mean score for the combined offender sample ($M = 3.39$, $SD = .51$) was significantly lower than the normative Openness factor mean score ($M = 3.73$, $SD = .55$), with a statistically significant difference of –.37, 95% CI [–.52 to –.16], $t(32) = –3.79$, $p = .001$, $d = .67$.

As a significant mean score difference was found between the combined Substance Abuse & Drg-Related Crimes offender sample and the normative sample in the Honesty-Humility, eXtraversion, Agreeableness, and Openness factor mean scores, further analysis was conducted. One-sample *t*-tests were conducted at a facet level within these factors to determine where the specific differences possibly were.

In the Honesty-Humility factor, there was no statistically significant facet mean score difference between the two groups concerning the facet traits of Fairness or Modesty. There were significant facet mean score differences, however, in the Sincerity and Greed-Avoidance facets.

A one-sample *t*-test indicated that the Honesty-Humility (Sincerity) facet mean score for Substance Abuse & Drug-Related Crimes offenders was significantly higher for the combined sample ($M = 3.59$, $SD = .75$) than for the normative sample ($M = 3.17$, $SD = .92$), with a statistically significant difference of .42, 95% CI [.16 to .68], $t(33) = 3.26$, $p = .001$, $d = .56$.

A one-sample *t*-test indicated that the Honesty-Humility (Greed-Avoidance) facet mean score for Substance Abuse & Drug-Related Crimes offenders was significantly higher for the combined sample ($M = 3.18$, $SD = .79$) than for the normative sample ($M = 2.88$, $SD = 1.01$), with a statistically significant difference of .30, 95% CI [.02 to .57], $t(33) = 2.18$, $p = .04$, $d = .38$.

In the eXtraversion factor, there was no statistically significant facet mean score difference between the two groups concerning the facet traits of Social Self-Esteem or Social Boldness. There were significant facet mean score differences, however, in the Sociability and Liveliness facets.

A one-sample *t*-test indicated that the Extraversion (Sociability) facet mean score for Substance Abuse & Drug-Related Crimes offenders was significantly higher for the combined sample ($M = 3.50$, $SD = .73$) than for the normative sample ($M = 2.97$, $SD = .87$),

with a statistically significant difference of .53, 95% CI [.28 to .79], $t(33) = 4.23$, $p < .001$, $d = .73$.

A one-sample *t*-test indicated that the Extraversion (Liveliness) facet mean score for Substance Abuse & Drug-Related Crimes offenders was significantly higher for the combined sample ($M = 3.67$, $SD = .68$) than for the normative sample ($M = 3.24$, $SD = .84$), with a statistically significant difference of .43, 95% CI [.19 to .67], $t(33) = 3.69$, $p < .001$, $d = .63$.

In the Agreeableness factor, there was no statistically significant facet mean score difference between the two groups in relation to the facet trait of Patience. There were significant facet mean score differences, however, in the Forgivingness, Gentleness and Flexibility facets.

A one-sample *t*-test indicated that the Agreeableness (Forgivingness) facet mean score for Substance Abuse & Drug-Related Crimes offenders was significantly higher for the combined sample ($M = 3.07$, $SD = .86$) than for the normative sample ($M = 2.42$, $SD = .84$), with a statistically significant difference of .66, 95% CI [.36 to .96], $t(33) = 4.51$, $p < .001$, $d = .76$.

A one-sample *t*-test indicated that the Agreeableness (Gentleness) facet mean score for Substance Abuse & Drug-Related Crimes offenders was significantly higher for the combined sample ($M = 3.23$, $SD = .68$) than for the normative sample ($M = 2.92$, $SD = .82$), with a statistically significant difference of .31, 95% CI [.07 to .55], $t(33) = 2.63$, $p = .01$, $d = .46$.

A one-sample *t*-test indicated that the Agreeableness (Flexibility) facet mean score for Substance Abuse & Drug-Related Crimes offenders was significantly higher for the combined sample ($M = 3.15$, $SD = .71$) than for the normative sample ($M = 2.68$, $SD = .75$), with a statistically significant difference of .47, 95% CI [.22 to .72], $t(33) = 3.82$, $p = .001$, $d = .66$.

In the Openness factor, there was no statistically significant facet mean score difference between the two groups in relation to the facet trait of Aesthetic Appreciation. There were significant facet mean score differences, however, in the Inquisitiveness, Creativity and Unconventionality facets.

A one-sample *t*-test indicated that the Openness (Inquisitiveness) facet mean score for Substance Abuse & Drug-Related Crimes offenders was significantly lower for the combined sample ($M = 3.40$, $SD = .95$) than for the normative sample ($M = 4.04$, $SD = .71$), with a statistically significant difference of –.64, 95% CI [–.97 to –.30], $t(33) = –3.90$, $p < .001$, $d = .67$.

A one-sample *t*-test indicated that the Openness (Creativity) facet mean score for Substance Abuse & Drug-Related Crimes offenders was significantly lower for the combined sample ($M = 3.46$, $SD = .54$) than for the normative sample ($M = 3.72$, $SD = .82$), with a statistically significant difference of –.26, 95% CI [–.47 to –.07], $t(33) = –2.76$, $p = .01$, $d = .48$.

A one-sample *t*-test indicated that the Openness (Unconventionality) facet mean score for Substance Abuse & Drug-Related Crimes offenders was significantly lower for the combined sample ($M = 3.23$, $SD = .61$) than for the normative sample ($M = 3.76$, $SD = .66$), with a statistically significant difference of –.53, 95% CI [–.74 to –.31], $t(33) = –5.01$, $p < .001$, $d = .87$.

For easier applicability, the findings are presented in Personality Profile 2. Personality Profile 2 presents the comparative direction, effect size and strength of the personality factor and facet differences between the Substance Abuse & Drug-Related Crimes sample and normative population.

Personality Profile 2: Substance Abuse & Drug-Related Crimes Offenders

Direction, effect size and strength between the Substance Abuse and Drug-Related Crimes and normative samples

Personality Factor/Facet	Cohen's *d*	Drug and Substance Abuse Offender Sample	Normative Sample	Effect Size Strength
Honesty-Humility	.42	Higher	Lower	Small to Medium
Sincerity	.56	Higher	Lower	Medium
Fairness	-	-	-	-
Greed Avoidance	.38	Higher	Lower	Small to Medium
Modesty	-	-	-	-
Emotionality	-	-	-	-
Fearfulness	-	-	-	-
Anxiety	-	-	-	-
Dependence	-	-	-	-
Sentimentality	-	-	-	-
eXtraversion	.55	Higher	Lower	Medium
Social Self-Esteem	-	-	-	-
Social Boldness	-	-	-	-
Sociability	.73	Higher	Lower	Medium to Large
Liveliness	.63	Higher	Lower	Medium
Agreeableness	.62	Higher	Lower	Medium
Forgivingness	.76	Higher	Lower	Medium to Large
Gentleness	.46	Higher	Lower	Small to Medium
Flexibility	.66	Higher	Lower	Medium to Large
Patience	-	-	-	-
Conscientiousness	-	-	-	-
Organisation	-	-	-	-
Diligence	-	-	-	-
Perfectionism	-	-	-	-
Prudence	-	-	-	-
Openness to Experience	.67	Lower	Higher	Medium to Large
Aesthetic Appreciation	-	-	-	-
Inquisitiveness	.67	Lower	Higher	Medium to Large
Creativity	.48	Lower	Higher	Small to Medium
Unconventionality	.87	Lower	Higher	Large

Combined Property and Financial Offender Sample & Normative Sample Comparisons

A series of one-sample *t*-tests between the combined and normative samples determined that, for Property and Financial Crimes offenders (i.e., property offenders), there were no significant mean score differences in the personality factors of Honesty-Humility, eXtraversion or Conscientiousness. There were, however, significant mean score differences in the factors of Emotionality, Agreeableness and Openness.

The Emotionality factor mean score for the combined offender sample ($M = 3.01$, $SD = .43$) was significantly higher than the normative Emotionality factor mean score ($M = 2.86$, $SD = .58$), with a statistically significant difference of .15, 95% CI [.02 to .27], $t(49) = 2.38$, $p = .02$, $d = .35$.

The Agreeableness factor mean score for the combined offender sample ($M = 3.00$, $SD = .42$) was significantly higher than the normative Agreeableness factor mean score ($M = 2.78$, $SD = .64$), with a statistically significant difference of .22, 95% CI [.10 to .34], $t(48) = 3.68$, $p < .001$, $d = .52$.

The Openness factor mean score for the combined offender sample ($M = 3.29$, $SD = .53$) was significantly lower than the normative Openness factor mean score ($M = 3.73$, $SD = .55$), with a statistically significant difference of –.44, 95% CI [–.59 to –.29], $t(49) = –5.90$, $p < .001$, $d = .83$.

As a significant mean score difference was found between the combined Property and Financial Crimes offender sample and the normative sample in the Emotionality, Agreeableness and Openness factors, further analysis was conducted. One-sample *t*-tests were conducted at a facet level within these factors to determine where the specific differences possibly were.

In the Emotionality factor, there was no statistically significant facet mean score difference between the two groups in relation to the facet traits of Fearfulness or Anxiety. There were significant facet mean score differences, however, in the Dependence and Sentimentality facets.

A one-sample *t*-test indicated that the Emotionality (Dependence) facet mean score for Property & Financial Crimes offenders was significantly higher for the combined sample

($M = 2.87$, $SD = .67$) than for the normative sample ($M = 2.61$, $SD = .83$), with a statistically significant difference of .26, 95% CI [.06 to .47], $t(49) = 2.67$, $p = .01$, $d = .39$.

A one-sample *t*-test indicated that the Emotionality (Sentimentality) facet mean score for Property & Financial Crimes offenders was significantly higher for the combined sample ($M = 3.40$, $SD = .62$) than for the normative sample ($M = 2.99$, $SD = .81$), with a statistically significant difference of .41, 95% CI [.23 to .59], $t(49) = 4{,}70$, $p < .001$, $d = .66$.

In the Agreeableness factor, there was no statistically significant facet mean score difference between the two groups in relation to the facet trait of Patience. There were significant facet mean score differences, however, in the Forgivingness, Gentleness and Flexibility facets.

A one-sample *t*-test indicated that the Agreeableness (Forgivingness) facet mean score for Property & Financial Crimes offenders was significantly higher for the combined sample ($M = 2.83$, $SD = .68$) than for the normative sample ($M = 2.41$, $SD = .84$), with a statistically significant difference of .42, 95% CI [.23 to .61], $t(49) = 4.35$, $p < .001$, $d = .62$.

A one-sample *t*-test indicated that the Agreeableness (Gentleness) facet mean score for Property & Financial Crimes offenders was significantly higher for the combined sample ($M = 3.22$, $SD = .61$) than the for normative sample ($M = 2.92$, $SD = .82$), with a statistically significant difference of .30, 95% CI [.12 to .47], $t(49) = 3.43$, $p = .001$, $d = .49$.

A one-sample *t*-test indicated that the Agreeableness (Flexibility) facet mean score for Property & Financial Crimes offenders was significantly higher for the combined sample ($M = 2.97$, $SD = .46$) than for the normative sample ($M = 2.68$, $SD = .75$), with a statistically significant difference of .29, 95% CI [.16 to .42], $t(49) = 4.55$, $p < .001$, $d = .63$.

In the Openness factor, there was no statistically significant facet mean score difference between the two groups in relation to the facet trait of Aesthetic Appreciation. There were significant facet mean score differences, however, in the Inquisitiveness, Creativity and Unconventionality facets.

A one-sample *t*-test indicated that the Openness (Inquisitiveness) facet mean score for Property & Financial Crimes offenders was significantly lower for the combined sample

(M = 3.50, SD = .77) than for the normative sample (M = 4.04, SD = .71), with a statistically significant difference of –.55, 95% CI [–.76 to –.33], $t(49) = –5.00$, $p < .001$, $d = .70$.

A one-sample *t*-test indicated that the Openness (Creativity) facet mean score for Property & Financial Crimes offenders was significantly lower for the combined sample (M = 3.19, SD = .71) than for the normative sample (M = 3.72, SD = .82), with a statistically significant difference of –.54, 95% CI [–.74 to –.33], $t(49) = –5.35$, $p < .001$, $d = .75$.

A one-sample *t*-test indicated that the Openness (Unconventionality) facet mean score for Property & Financial Crimes offenders was significantly lower for the combined sample (M = 3.17, SD = .59) than for the normative sample (M = 3.76, SD = .66), with a statistically significant difference of –.60, 95% CI [–.76 to –.43], $t(49) = –7.18$, $p < .001$, $d = 1.00$.

For easier applicability, the findings are presented in Personality Profile 3. Personality Profile 3 presents the comparative direction, effect size and strength of the personality factor and facet differences between the Property and Financial Crimes sample and normative population.

Personality Profile 3: Property and Financial Crimes Offenders

Direction, effect size and strength between the Financial and Property Crimes and normative samples

Personality Factor/Facet	Cohen's *d*	Property Offender Sample	Normative Sample	Effect Size Strength
Honesty-Humility	-	-	-	-
Sincerity	-	-	-	-
Fairness	-	-	-	-
Greed Avoidance	-	-	-	-
Modesty	-	-	-	-
Emotionality	.35	Higher	Lower	Small to Medium
Fearfulness	-	-	-	-
Anxiety	-	-	-	-
Dependence	.39	Higher	Lower	Small to Medium
Sentimentality	.66	Higher	Lower	Medium to Large
eXtraversion	-	-	-	-
Social Self-Esteem	-	-	-	-
Social Boldness	-	-	-	-
Sociability	-	-	-	-
Liveliness	-	-	-	-
Agreeableness	.52	Higher	Lower	Medium
Forgivingness	.62	Higher	Lower	Medium
Gentleness	.49	Higher	Lower	Small to Medium
Flexibility	.63	Higher	Lower	Medium
Patience	-	-	-	-
Conscientiousness	-	-	-	-
Organisation	-	-	-	-
Diligence	-	-	-	-
Perfectionism	-	-	-	-
Prudence	-	-	-	-
Openness to Experience	.83	Lower	Higher	Large
Aesthetic Appreciation	-	-	-	-
Inquisitiveness	.70	Lower	Higher	Medium to Large
Creativity	.75	Lower	Higher	Medium to Large
Unconventionality	1.00	Lower	Higher	Large to Very Large

Combined Sexual Offender (Paedophilia) Sample & Normative Sample Comparisons

A series of one-sample *t*-tests between the combined and normative samples determined that for Sexual Crimes (Paedophilia) offenders there was no significant mean score difference in the personality factor of Conscientiousness. There were, however, significant mean score differences in the personality factors of Honesty-Humility, Emotionality, eXtraversion, Agreeableness and Openness.

The Honesty-Humility factor mean score for the combined offender sample ($M = 3.46$, $SD = .55$) was significantly higher than the normative Honesty-Humility factor mean score ($M = 3.15$, $SD = .76$), with a statistically significant difference of .31, 95% CI [.06 to .56], $t(20) = 2.62$, $p = .02$, $d = .56$.

The Emotionality factor mean score for the combined offender sample ($M = 3.15$, $SD = .54$) was significantly higher than the normative Emotionality factor mean score ($M = 2.86$, $SD = .58$), with a statistically significant difference of .29, 95% CI [.04 to .44], $t(19) = 2.43$, $p = .03$, $d = .54$.

The eXtraversion factor mean score for the combined offender sample ($M = 3.00$, $SD = .40$) was significantly lower than the normative eXtraversion factor mean score ($M = 3.23$, $SD = .64$), with a statistically significant difference of –.24, 95% CI [–.42 to –.05], $t(20) = –2.71$, $p < .01$, $d = .58$.

The Agreeableness factor mean score for the combined offender sample ($M = 3.12$, $SD = .42$) was significantly higher than the normative Agreeableness factor mean score ($M = 2.78$, $SD = .64$), with a statistically significant difference of .34, 95% CI [.15 to .53], $t(20) = 3.70$, $p < .001$, $d = .81$.

The Openness factor mean score for the combined offender sample ($M = 3.27$, $SD = .59$) was significantly lower than the normative Openness factor mean score ($M = 3.73$, $SD = .55$), with a statistically significant difference of –.46, 95% CI [–.73 to –.19], $t(20) = –3.58$, $p = .001$, $d = .78$.

As significant mean score differences were found between the combined Sexual Crimes (Paedophilia) sample and the normative sample in the Honesty-Humility, Emotionality, eXtraversion, Agreeableness and Openness factors, further analysis was conducted. One-

sample *t*-tests were conducted at a facet level within these factors to determine where the specific differences possibly were.

In the Honesty-Humility factor, there was no statistically significant facet mean score differences between the two groups concerning the facet traits of Sincerity or Fairness. There were significant facet mean score differences, however, in the Greed-Avoidance and Modesty facets.

A one-sample *t*-test indicated that the Honesty-Humility (Greed-Avoidance) facet mean score for Sexual Crimes (Paedophilia) offenders was significantly higher for the combined sample ($M = 3.30$, $SD = .71$) than for the normative sample ($M = 2.88$, $SD = 1.01$), with a statistically significant difference of .42, 95% CI [.10 to .74], $t(20) = 2.71$, $p = .01$, $d = .59$.

A one-sample *t*-test indicated that the Honesty-Humility (Modesty) facet mean score for Sexual Crimes (Paedophilia) offenders was significantly higher for the combined sample ($M = 3.87$, $SD = .70$) than for the normative sample ($M = 3.22$, $SD = .90$), with a statistically significant difference of .65, 95% CI [.33 to .97], $t(20) = 4.24$, $p < .001$, $d = .93$.

In the Emotionality factor, concerning the facet traits of Fearfulness, Anxiety and Sentimentality, there were no statistically significant facet mean score differences between the two groups. There was a significant facet mean score difference, however, in the Dependence facet. A one-sample *t*-test indicated that the Emotionality (Dependence) facet mean score for Sexual Crimes (Paedophilia) offenders was significantly higher for the combined sample ($M = 3.10$, $SD = .90$) than for the normative sample ($M = 2.61$, $SD = .83$), with a statistically significant difference of .49, 95% CI [.08 to .90], $t(20) = 2.51$, $p = .02$, $d = .54$.

In the eXtraversion factor, concerning the facet traits of Sociability and Liveliness, there were no statistically significant facet mean score differences between the two groups. There were significant facet mean score differences, however, in the Social Self-Esteem and Social Boldness facets.

A one-sample *t*-test indicated that the eXtraversion (Social Self-Esteem) facet mean score for Sexual Crimes (Paedophilia) offenders was significantly lower for the combined sample

(M = 3.21, SD = .73) than for the normative sample (M = 3.61, SD = .76), with a statistically significant difference of –.40, 95% CI [–.73 to –.06], $t(20) = –2.48$, p = .02, d = .55.

A one-sample t-test indicated that the eXtraversion (Social Boldness) facet mean score for Sexual Crimes (Paedophilia) offenders was significantly lower for the combined sample (M = 2.61, SD = .72) than for the normative sample (M = 3.10, SD = .86), with a statistically significant difference of –.49, 95% CI [–.82 to –.16], $t(20) = –3.13$, p = .01, d = .68.

As there was a significant difference between the Czech Republic offender sample and the Australian ex-offender sample in the factor of Agreeableness, the two groups were compared with the normative sample separately. In the Agreeableness factor, there was no statistically significant facet mean score difference between the Australian ex-offender group and the normative sample concerning the facet traits of Forgivingness, Gentleness, Flexibility or Patience. Due to the very small sample of Australian participants being measured, however, this result was excluded from further analysis.

In the Agreeableness factor, there were no statistically significant facet mean score differences between the Czech Republic offender group and the normative sample in relation to the facet traits of Forgivingness or Patience. There were significant mean score differences, however, in the Gentleness and Flexibility facets.

A one-sample t-test indicated that the Agreeableness (Gentleness) facet mean score for Czech Republic Sexual Crimes (Paedophilia) offenders was significantly higher (M = 3.28, SD = .51) than for the normative sample (M = 2.92, SD = .82), with a statistically significant difference of .36, 95% CI [.09 to .62], $t(16) = 2.89$, p = .01, d = .71.

A one-sample t-test indicated that the Agreeableness (Flexibility) facet mean score for Czech Republic Sexual Crimes (Paedophilia) offenders was significantly higher (M = 3.18, SD = .62) than for the normative sample (M = 2.68, SD = .75), with a statistically significant difference of .50, 95% CI [.18 to .81], $t(16) = 3.32$, p = .004, d = .73.

In the Openness factor, there was no statistically significant facet mean score difference between the two groups in relation to the facet trait of Aesthetic Appreciation. There were

significant facet mean score differences, however, in the Inquisitiveness, Creativity and Unconventionality facets.

A one-sample *t*-test indicated that the Openness (Inquisitiveness) facet mean score for Sexual Crimes (Paedophilia) offenders was significantly lower for the combined sample ($M = 3.57$, $SD = .68$) than for the normative sample ($M = 4.04$, $SD = .71$), with a statistically significant difference of –.47, 95% CI [–.78 to –.16], $t(20) = –3.18$, $p = .01$, $d = .69$.

A one-sample *t*-test indicated that the Openness (Creativity) facet mean score for Sexual Crimes (Paedophilia) offenders was significantly lower for the combined sample ($M = 3.12$, $SD = .88$) than for the normative sample ($M = 3.72$, $SD = .82$), with a statistically significant difference of –.60, 95% CI [–.1.00 to –.20], $t(20) = –3.12$, $p = .01$, $d = .68$.

A one-sample *t*-test indicated that the Openness (Unconventionality) facet mean score for Sexual Crimes (Paedophilia) offenders was significantly lower for the combined sample ($M = 3.10$, $SD = .53$) than for the normative sample ($M = 3.76$, $SD = .66$), with a statistically significant difference of –.66, 95% CI [–.90 to –.42], $t(20) = –5.78$, $p < .001$, $d = 1.25$.

For easier applicability, the findings are presented in Personality Profile 4. Personality Profile 4 presents the comparative direction, effect size and strength of the personality factor and facet differences between the Sexual Crimes (Paedophilia) sample and normative population.

Personality Profile 4: Sexual Offenders (Paedophilia)

Direction, effect size and strength between the Sexual Crimes (Paedophilia) and normative samples

Personality Factor/Facet	Cohen's *d*	Sexual Offender (Paedophilia) Sample	Normative Sample	Effect Size Strength
Honesty-Humility	.56	Higher	Lower	Medium
Sincerity	-	-	-	-
Fairness	-	-	-	-
Greed Avoidance	.59	Higher	Lower	Medium
Modesty	.93	Higher	Lower	Large
Emotionality	.54	Higher	Lower	Medium
Fearfulness	-	-	-	-
Anxiety	-	-	-	-
Dependence	.54	Higher	Lower	Medium
Sentimentality	-	-	-	-
eXtraversion	.58	Lower	Higher	Medium
Social Self-Esteem	.55	Lower	Higher	Medium
Social Boldness	.68	Lower	Higher	Medium to Large
Sociability	-	-	-	-
Liveliness	-	-	-	-
Agreeableness (Czech Republic sample only)	.81	Higher	Lower	Large
Forgivingness	-	-	-	-
Gentleness	.71	Higher	Lower	Medium to Large
Flexibility	.73	Higher	Lower	Medium to Large
Patience	-	-	-	-
Conscientiousness	-	-	-	-
Organisation	-	-	-	-
Diligence	-	-	-	-
Perfectionism	-	-	-	-
Prudence	-	-	-	-
Openness to Experience	.78	Lower	Higher	Medium to Large
Aesthetic Appreciation	-	-	-	-
Inquisitiveness	.69	Lower	Higher	Medium to Large
Creativity	.68	Lower	Higher	Medium to Large
Unconventionality	1.25	Lower	Higher	Very Large

4.5 Key Findings: One-Way Analysis of Variance (ANOVA) and Post-Hoc Tukey's HSD between HEXACO Personality Factors and Primary Offence Category.

Table 10 displays the significant differences between the six HEXACO personality factors and the Primary Offence Categories (i.e., Violent, Substance Abuse, Property and Sexual (Paedophilia)). The Sexual Crimes offender sample was removed for this and remaining inferential and post-hoc analyses. This decision was made as the sample comprised solely Czech Republic offenders. Levene's test for homogeneity of variances was not violated for the personality factors of Honesty-Humility (.95), Emotionality (.22), eXtraversion (.16) or Openness (.66). It was violated for the personality factors of Agreeableness (.02) and Conscientiousness (.01). The ANOVA test is robust to violations of Levene's test when sample sizes are equal (Field, 2009). As the sample sizes were approximately equal, the decision was made to use the ANOVA test, rather than a non-parametric test, for these two analyses.

Table 11 displays the post-hoc Tukey's HSD results between the significantly different personality factors of Honesty-Humility, Emotionality and eXtraversion.

Table 10.

One–way ANOVAs between HEXACO personality factors and Primary Offence Categories

Factor		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*	$\eta_p 2$
Honesty-Humility	Between Groups	3.77	3	1.26	5.54	.001**	.10
	Within Groups	35.54	156	.23			
	Total	39.32	159				
Emotionality	Between Groups	1.83	3	.61	3.70	.01*	.07
	Within Groups	25.75	156	.17			
	Total	27.58	159				
eXtraversion	Between Groups	3.76	3	1.25	6.08	.001**	.10
	Within Groups	32.55	158	.21			
	Total	36.31	161				
Agreeableness	Between Groups	.58	3	.19	.88	.62	
	Within Groups	34.15	156	.22			
	Total	34.73	159				
Conscientiousness	Between Groups	.41	3	.14	0.59	.43	
	Within Groups	36.39	156	.23			
	Total	36.80	159				
Openness	Between Groups	.29	3	.01	0.34	.90	
	Within Groups	42.78	157	.22			
	Total	43.07	160				

* Result was significant at or below a 0.05 level

**Result was significant at or below a 0.001 level.

Table 11.

Post-hoc Tukey's HSD on POC and the HEXACO personality factors of Honesty-Humility, Emotionality, and eXtraversion

Factor	Primary Offence Category (I)	Primary Offence Category (J)	*Mean Difference (I-J)*	*Std. Error*	*Sig.*	*95% CI*	
						L	*U*
Honesty-Humility	Violent Crimes	Substance Abuse and Drug-Related Crimes	.08	.10	.88	–.19	.35
		Property and Financial Crimes	.34	.09	.002*	.10	.58
		Sexual Crimes (Paedophilia)	–.04	.12	.99	–.35	.28
	Substance Abuse and Drug-Related Crimes	Violent Crimes	–.08	.10	.88	–.35	.19
		Property and Financial Crimes	.26	.11	.07	–.01	.54
		Sexual Crimes (Paedophilia)	–.11	.13	.83	–.46	.23
	Property and Financial Crimes	Violent Crimes	–.34	.09	.002*	–.58	–.10
		Substance Abuse and Drug-Related Crimes	–.26	.11	.07	–.54	.01
		Sexual Crimes (Paedophilia)	–.38	.13	.02*	–.70	–.05
	Sexual Crimes (Paedophilia)	Violent Crimes	.04	.12	.99	–.28	.35
		Substance Abuse and Drug-Related Crimes	.11	.13	.83	–.23	.46
		Property and Financial Crimes	.38	.13	.02*	.05	.70
Emotionality	Violent Crimes	Substance Abuse and Drug-Related Crimes	–.08	.09	.81	–.31	.15
		Property and Financial Crimes	–.18	.08	.12	–.38	.03

Factor	Primary Offence Category (I)	Primary Offence Category (J)	*Mean Difference (I-J)*	*Std. Error*	*Sig.*	*95% CI*	
						L	*U*
Emotionality	Violent Crimes	Sexual Crimes (Paedophilia)	–.32	.10	.01*	–.60	–.05
	Substance Abuse and Drug-Related Crimes	Violent Crimes	.08	.09	.81	–.15	.31
		Property and Financial Crimes	–.10	.09	.12	–.33	.14
		Sexual Crimes (Paedophilia)	–.24	.11	.16	–.54	.06
	Property and Financial Crimes	Violent Crimes	.18	.08	.12	–.03	.38
		Substance Abuse and Drug-Related Crimes	.10	.09	.72	–.14	.33
		Sexual Crimes (Paedophilia)	–.15	.11	.52	–.43	.13
	Sexual Crimes (Paedophilia)	Violent Crimes	.32	.10	.01*	.05	.60
		Substance Abuse and Drug-Related Crimes	.24	.11	.16	–.06	.54
		Property and Financial Crimes	.15	.11	.52	–.13	.43
eXtraversion	Violent Crimes	Substance Abuse and Drug-Related Crimes	–.28	.10	.02*	–.54	–.03
		Property and Financial Crimes	–.03	.09	.99	–.26	.20
		Sexual Crimes (Paedophilia)	.24	.12	.16	–.06	.54
	Substance Abuse and Drug-Related Crimes	Violent Crimes	.28	.10	.02*	.03	.54
		Property and Financial Crimes	.25	.10	.06	–.01	.52
		Sexual Crimes (Paedophilia)	.52	.13	.001**	.20	.85

Factor	Primary Offence Category (I)	Primary Offence Category (J)	*Mean Difference (I-J)*	*Std. Error*	*Sig.*	*95% CI*	
						L	*U*
eXtraversion	Property & Financial Crimes	Substance Abuse and Drug-related Crimes	–.25	.10	.06	–.52	.01
		Sexual Crimes (Paedophilia)	.27	.12	.11	–.04	.58
		Violent Crimes	–.24	.12	.16	–.54	.06
	Sexual Crimes (Paedophilia)	Substance Abuse and Drug-related Crimes	–.52	.13	.001**	–.85	–.20
		Property and Financial Crimes	–.27	.12	.11	–.58	.04

* Result was significant at or below a 0.05 level

**Result was significant at or below a 0.001 level

Honesty-Humility:

A one-way ANOVA indicated that a significant mean score difference existed in Honesty-Humility between the four POC groups, $F(3, 156) = 5.54$, $p < 0.001$, $\eta_P 2 = .10$.

A post-hoc Tukey's HSD analysis indicated that the Honesty-Humility factor mean score for Violent Crimes offenders ($M = 3.43$, $SD = .45$) was significantly higher than for Property Crimes offenders ($M = 3.09$, $SD = .47$), with a statistically significant difference of .34 (.09), 95% CI [.10 to .58], $p = .002$, $d = .74$.

A post-hoc Tukey's HSD analysis indicated that the Honesty-Humility factor mean score for Sexual Crimes (Paedophilia) offenders ($M = 3.46$, $SD = .55$) was significantly higher than for Property Crimes offenders ($M = 3.09$, $SD = .47$), with a statistically significant difference of .38 (.13), 95% CI [.13 to .62], $p = .003$, $d = .72$.

Emotionality

A one-way ANOVA indicated that a significant mean score difference existed in Emotionality between the four POC groups, $F(3, 156) = 3.70$, $p = 0.01$, $\eta_P 2 = .07$.

A post-hoc Tukey's HSD analysis indicated that the Emotionality factor mean score for Violent Crimes offenders ($M = 2.83$, $SD = .35$) was significantly lower than for Sexual Crimes (Paedophilia) offenders ($M = 3.15$, $SD = .54$), with a statistically significant difference of –.32 (.10), 95% CI [–.60 to –.05], $p = .02$, $d = .70$.

eXtraversion

A one-way ANOVA indicated that a significant mean score difference existed in eXtraversion between the four POC groups, $F(3, 158) = 6.08$, $p < 0.001$, $\eta_P 2 = .10$.

A post-hoc Tukey's HSD analysis indicated that the eXtraversion factor mean score for Substance Abuse Crimes offenders ($M = 3.52$, $SD = .53$) was significantly higher than for Violent Crimes offenders ($M = 3.24$, $SD = .45$), with a statistically significant difference of .28 (.10), 95% CI [.02 to .54], $p = .03$, $d = .57$.

A post-hoc Tukey's HSD analysis indicated that the eXtraversion factor mean score for Sexual Crimes (Paedophilia) offenders ($M = 2.99$, $SD = .40$) was significantly lower than for

Substance Abuse Crimes offenders (*M* = 3.52, *SD* = .53), with a statistically significant difference of –.52 (.13), 95% CI [–.85 to –.20], *p* = .001, *d* = 1.13.

While not reaching the required *p* < .05 alpha criteria, a post-hoc Tukey's HSD analysis indicated that the mean eXtraversion factor score for Substance Abuse Crimes offenders (*M* = 3.52, *SD* = .53) was approaching a significantly higher mean score compared to Property & Financial Crimes offenders (*M* = 3.26, *SD* = .42), with a mean score difference of .25 (.10), 95% CI [–.52 to .01], *p* = .06, *d* = .54.

Agreeableness, Conscientiousness and Openness

A one-way ANOVA indicated there were no significant mean score differences for Agreeableness (*F*(3, 156) = .88, *p* = 0.62), Conscientiousness (*F*(3, 156) = 0.59, *p* = 0.43) or Openness (*F*(3, 157) = .34, *p* = 0.90) at the *p* < .05 level between the four POC groups.

4.6 Key Findings: One-Way ANOVAs and Post-Hoc Tukey's HSD between HEXACO Honesty-Humility, Emotionality, and eXtraversion Personality Facet Traits and Primary Offence Category

Significant differences were found concerning the Honesty-Humility, Emotionality and eXtraversion factor mean scores between specific POC groups. As such, a one-way ANOVA was conducted at the HEXACO personality facet level within these factors and POCs to determine where the specific differences might be occurring. The findings are presented in Table 12. Concerning homogeneity of variance, Levene's test was not violated for any of the following ANOVA comparisons, except for the Social Boldness facet within the Extraversion factor. In this comparison, the Welch and Brown-Forsythe tests were used as a measure of equality of means and found not to be significant, and the Games-Howell test was used for the post-hoc analysis.

Table 13 displays the post-hoc Tukey's HSD results between the significantly different personality facets of Fairness, Fearfulness, Social Self-Esteem, Social Boldness, Sociability and Liveliness.

Table 12.

One–way ANOVAs between HEXACO Honesty-Humility, Emotionality, and eXtraversion facet traits and Primary Offence Category

Facet & Factor		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*	$\eta_p 2$
Sincerity	Between Groups	1.89	3	.63	1.36	.23	.03
(Honesty-Humility)	Within Groups	73.31	158	.46			
	Total	75.19	161				
Fairness	Between Groups	19.48	3	6.49	8.19	.001**	.14
(Honesty-Humility)	Within Groups	123.73	156	.73			
	Total	143.21	159				
Greed-Avoidance	Between Groups	2.51	3	.84	1.22	.30	.02
(Honesty-Humility)	Within Groups	108.02	158	.68			
	Total	110.53	161				
Modesty	Between Groups	3.16	3	1.05	2.46	.07	.04
(Honesty-Humility)	Within Groups	67.58	158	.43			
	Total	70.74	161				
Fearfulness	Between Groups	4.11	3	1.37	2.98	.03*	.05
(Emotionality)	Within Groups	72.20	157	.46			
	Total	76.30	160				
Anxiety	Between Groups	2.26	3	.75	1.86	.14	.03
(Emotionality)	Within Groups	64.02	158	.41			
	Total	66.28	161				
	Between Groups	1.81	3	.60	1.27	.29	.02
Dependence	Within Groups	75.03	158	.48			
(Emotionality)	Total	76.84	161				
Sentimentality	Between Groups	2.88	3	.96	2.24	.09	.04
(Emotionality)	Within Groups	67.70	158	.43			
	Total	70.57	161				

Facet & Factor		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*	$\eta_p 2$
Social Self-Esteem	Between Groups	3.73	3	1.24	2.69	.05*	.05
(eXtraversion)	Within Groups	72.94	158	.46			
	Total	76.67	161				
Social Boldness	Between Groups	4.55	3	1.52	2.97	.03*	.05
(eXtraversion)	Within Groups	80.70	158	.51			
	Total	85.25	161				
Sociability	Between Groups	6.60	3	2.20	4.78	.01*	.08
(eXtraversion)	Within Groups	72.67	158	.46			
	Total	79.27	161				
Liveliness	Between Groups	3.46	3	1.15	2.81	.04*	.05
(eXtraversion)	Within Groups	64.79	158	.41			
	Total	68.25	161				
Altruism	Between Groups	2.78	3	.93	2.39	.07	.04
(Interstitial Scale)	Within Groups	61.25	158	.39			
	Total	64.03	161				

* Result was significant at or below a 0.05 level

**Result was significant at or below a 0.001 level

Table 13.

Post-hoc Tukey's HSD on the significant POC HEXACO personality facets within Honesty-Humility, Emotionality, and eXtraversion

Facet & Factor	Primary Offence Category (I)	Primary Offence Category (J)	*Mean Difference (I-J)*	*Std. Error*	*Sig.*	*95% CI*	
						L	*U*
Fairness (Honesty-Humility)	Violent Crimes	Substance Abuse and Drug-Related Crimes	.08	.19	.98	−.42	.59
		Property and Financial Crimes	.75	.17	.001**	.29	1.20
		Sexual Crimes (Paedophilia)	−.12	.23	.95	−.71	.47
	Substance Abuse and Drug-Related Crimes	Violent Crimes	−.08	.19	.98	−.59	.42
		Property and Financial Crimes	.66	.20	.01*	.15	1.18
		Sexual Crimes (Paedophilia)	−.20	.25	.85	−.84	.44
	Property and Financial Crimes	Violent Crimes	−.75	.17	.001**	−1.20	−.29
		Substance Abuse and Drug-Related Crimes	−.66	.20	.01*	−1.18	−.15
		Sexual Crimes (Paedophilia)	−.86	.23	.002*	−1.47	−.26
	Sexual Crimes (Paedophilia)	Violent Crimes	.12	.23	.95	−.47	.71
		Substance Abuse and Drug-Related Crimes	.20	.25	.85	−.44	.84
		Property and Financial Crimes	.86	.23	.002*	.26	1.47
Fearfulness (Emotionality)	Violent Crimes	Substance Abuse and Drug-Related Crimes	.01	.15	1.00	−.38	.39
		Property and Financial Crimes	−.08	.13	.93	−.42	.26
		Sexual Crimes (Paedophilia)	−.49	.17	.03*	−.94	−.04
	Substance Abuse and Drug-Related Crimes	Violent Crimes	−.01	.15	1.00	−.39	.38
		Property and Financial Crimes	−.02	.15	.94	−.48	.31
		Sexual Crimes (Paedophilia)	−.50	.19	.05*	−.99	.00
	Property and Financial Crimes	Violent Crimes	.08	.13	.93	−.26	.42
		Substance Abuse and Drug-Related Crimes	.09	.15	.94	−.31	.48
		Sexual Crimes (Paedophilia)	−.41	.18	.10	−.86	.05

Facet & Factor	Primary Offence Category (I)	Primary Offence Category (J)	*Mean Difference (I-J)*	*Std. Error*	*Sig.*	*95% CI*	
						L	*U*
Fearfulness (Emotionality)	Sexual Crimes (Paedophilia)	Violent Crimes	.49	.17	.03*	.04	.94
		Substance Abuse and Drug-Related Crimes	.50	.20	.05*	.00	.99
		Property and Financial Crimes	.41	.18	.10	−.05	.86
Social Self-Esteem (eXtraversion)	Violent Crimes	Substance Abuse and Drug-Related Crimes	−.17	.15	.67	−.55	.22
		Property and Financial Crimes	.14	.13	.72	−.20	.48
		Sexual Crimes (Paedophilia)	.33	.17	.24	−.13	.78
	Substance Abuse and Drug-Related Crimes	Violent Crimes	.17	.15	.67	−.22	.55
		Property and Financial Crimes	.31	.15	.18	−.09	.70
		Sexual Crimes (Paedophilia)	.49	.19	.05*	.00	.98
	Property and Financial Crimes	Violent Crimes	−.14	.13	.72	−.48	.20
		Substance Abuse and Drug-Related Crimes	−.31	.15	.18	−.70	.09
		Sexual Crimes (Paedophilia)	.19	.18	.72	−.27	.64
	Sexual Crimes (Paedophilia)	Violent Crimes	−.33	.17	.24	−.78	.13
		Substance Abuse and Drug-Related Crimes	−.49	.19	.05*	−.98	.00
		Property and Financial Crimes	−.19	.18	.72	−.64	.27
Social Boldness[1] (eXtraversion)	Violent Crimes	Substance Abuse and Drug-Related Crimes	−.22	.18	.62	−.70	.26
		Property and Financial Crimes	−.01	.12	1.00	−.33	.31
		Sexual Crimes (Paedophilia)	.37	.18	.20	−.13	.87
	Substance Abuse and Drug-Related Crimes	Violent Crimes	.22	.18	.62	−.26	.70
		Property and Financial Crimes	.21	.17	.63	−.25	.67
		Sexual Crimes (Paedophilia)	.59	.22	.05*	.00	1.18

[1] Games-Howell Post-Hoc analysis.

Facet & Factor	Primary Offence Category (I)	Primary Offence Category (J)	*Mean Difference (I-J)*	*Std. Error*	*Sig.*	*95% CI*	
						L	*U*
Social Boldness (eXtraversion)	Property and Financial Crimes	Violent Crimes	.01	.12	1.00	−.31	.33
		Substance Abuse and Drug-Related Crimes	−.21	.17	.63	−.67	.25
		Sexual Crimes (Paedophilia)	.38	.18	.15	−.09	.86
	Sexual Crimes (Paedophilia)	Violent Crimes	−.37	.18	.20	−.87	.13
		Substance Abuse and Drug-Related Crimes	−.59	.22	.05*	−1.18	.00
		Property and Financial Crimes	−.38	.18	.15	−.86	.09
Sociability (eXtraversion)	Violent Crimes	Substance Abuse and Drug-Related Crimes	−.40	.15	.03*	−.79	−.02
		Property and Financial Crimes	−.25	.13	.22	−.59	.09
		Sexual Crimes (Paedophilia)	.20	.17	.64	−.25	.65
	Substance Abuse and Drug-Related Crimes	Violent Crimes	.40	.15	.03*	.02	.79
		Property and Financial Crimes	.15	.15	.75	−.24	.54
		Sexual Crimes (Paedophilia)	.61	.19	.01*	.12	1.10
	Property and Financial Crimes	Violent Crimes	.25	.13	.22	−.09	.59
		Substance Abuse and Drug-Related Crimes	−.15	.15	.75	−.54	.24
		Sexual Crimes (Paedophilia)	.46	.18	.05*	.00	.92
	Sexual Crimes (Paedophilia)	Violent Crimes	−.20	.17	.64	−.65	.25
		Substance Abuse and Drug-Related Crimes	−.61	.19	.01*	−1.10	−.12
		Property and Financial Crimes	−.46	.18	.05*	−.92	.00
Liveliness (eXtraversion)	Violent Crimes	Substance Abuse and Drug-Related Crimes	−.34	.14	.07	−.70	.02
		Property and Financial Crimes	.02	.12	1.00	−.30	.34
		Sexual Crimes (Paedophilia)	.07	.16	.97	−.35	.50

Facet & Factor	Primary Offence Category (I)	Primary Offence Category (J)	*Mean Difference (I-J)*	*Std. Error*	*Sig.*	*95% CI*	
						L	*U*
Liveliness (eXtraversion)	Substance Abuse and Drug-Related Crimes	Violent Crimes	.36	.14	.07	−.02	.70
		Property and Financial Crimes	.35	.14	.06	−.02	.72
		Sexual Crimes (Paedophilia)	.41	.18	.10	−.05	.87
	Property and Financial Crimes	Violent Crimes	−.02	.12	1.00	−.34	.30
		Substance Abuse and Drug-Related Crimes	−.35	.14	.07	−.72	.02
		Sexual Crimes (Paedophilia)	.05	.17	.99	−.38	.49
	Sexual Crimes (Paedophilia)	Violent Crimes	−.07	.16	.97	−.50	.35
		Substance Abuse and Drug-Related Crimes	−.41	.18	.10	−.87	.05
		Property and Financial Crimes	−.05	.17	.99	−.49	.38

* Result was significant at or below a 0.05 level

**Result was significant at or below a 0.001 level

Honesty-Humility:

A one-way ANOVA indicated that a significant mean score difference existed in the personality facet trait of Fairness (Honesty-Humility) at the $p < .05$ level between the four POC groups, $F(3, 158) = 8.19$, $p < 0.001$, $\eta_P 2 = .14$.

A post-hoc Tukey's HSD analysis indicated that the Fairness facet mean score for Property Crimes offenders ($M = 2.51$, $SD = .82$) was significantly lower than for Violent Crimes offenders ($M = 3.19$, $SD = .94$), with a statistically significant difference of –.75 (.17), 95% CI [–1.20 to –.29], $p < .001$, $d = .77$.

A post-hoc Tukey's HSD analysis indicated that the Fairness facet mean score for Property Crimes offenders ($M = 2.51$, $SD = .82$) was significantly lower than for Substance Abuse Crimes offenders ($M = 3.17$, $SD = .93$), with a statistically significant difference of –.66 (.20), 95% CI [–1.18 to –.15], $p = .01$, $d = .75$.

A post-hoc Tukey's HSD analysis indicated that the Fairness facet mean score for Property Crimes offenders ($M = 2.51$, $SD = .82$) was significantly lower than for Sexual Crimes (Paedophilia) offenders ($M = 3.37$, $SD = .86$), with a statistically significant difference of –.86 (.23), 95% CI [–1.47 to –.26], $p = .002$, $d = 1.02$.

Emotionality:

A one-way ANOVA indicated that a significant mean score difference existed in the personality facet trait of Fearfulness (Emotionality) at the $p < .05$ level between the four POC groups, $F(3, 157) = 2.98$, $p = 0.03$, $\eta_P 2 = .05$.

A post-hoc Tukey's HSD analysis indicated that the Fearfulness facet mean score for Sexual Offenders (Paedophilia) ($M = 2.82$, $SD = .73$) was significantly higher than for Violent Crimes offenders ($M = 2.33$, $SD = .60$), with a statistically significant difference of .49 (.17), 95% CI [.04 to .94], $p = .03$, $d = .73$.

A post-hoc Tukey's HSD analysis indicated that the Fearfulness facet mean score for Sexual Offenders (Paedophilia) ($M = 2.82$, $SD = .73$) was significantly higher than for Substance Abuse Crimes offenders ($M = 2.33$, $SD = .77$), with a statistically significant difference of .50 (.20), 95% CI [.00 to .99], $p = .05$, $d = .65$.

eXtraversion:

A one-way ANOVA indicated that a significant mean score difference existed in the personality facet trait of Social Self-Esteem (eXtraversion) at the $p < .05$ level between the four POC groups, $F(3, 158) = 2.69$, $p = 0.05$, $\eta_P 2 = .05$.

A post-hoc Tukey's HSD analysis indicated that the Social Self-Esteem facet mean score for Substance Abuse Crimes offenders ($M = 3.71$, $SD = .68$) was significantly higher than for Sexual Crimes (Paedophilia) offenders ($M = 3.21$, $SD = .73$), with a statistically significant difference of .49 (.19), 95% CI [.00 to .98], $p = .05$, $d = .71$.

A one-way ANOVA indicated that a significant mean score difference existed in the personality facet trait of Social Boldness (eXtraversion) at the $p < .05$ level between the four POC groups, $F(3, 158) = 2.97$, $p = 0.03$, $\eta_P 2 = .05$.

A post-hoc Games-Howell analysis indicated that the Social Boldness facet mean score for Substance Abuse Crimes offenders ($M = 3.20$, $SD = .90$) was significantly higher than for Sexual Crimes (Paedophilia) offenders ($M = 2.61$, $SD = .72$), with a statistically significant difference of .59 (.22), 95% CI [.00 to 1.18], $p = .05$, $d = .72$.

A one-way ANOVA indicated that a significant mean score difference existed in the personality facet trait of Sociability (eXtraversion) at the $p < .05$ level between the four POC groups, $F(3, 158) = 4.78$, $p = 0.003$, $\eta_P 2 = .08$.

A post-hoc Tukey's HSD analysis indicated that the Sociability facet mean score for Substance Abuse Crimes offenders ($M = 3.50$, $SD = .64$) was significantly higher than for Violent Crimes offenders ($M = 3.10$, $SD = .67$), with a statistically significant difference of .40 (.15), 95% CI [.02 to .79], $p = .03$, $d = .61$.

A post-hoc Tukey's HSD analysis indicated that the Sociability facet mean score for Sexual Crimes (Paedophilia) offenders ($M = 2.89$, $SD = .66$) was significantly lower than for Substance Abuse Crimes offenders ($M = 3.50$, $SD = .73$), with a statistically significant difference of –.61 (.19), 95% CI [–1.10 to –.12], $p = .01$, $d = .88$.

A post-hoc Tukey's HSD analysis indicated that the Sociability facet mean score for Sexual Crimes (Paedophilia) offenders (M = 2.89, SD = .66) was significantly lower than for Property & Financial Crimes offenders (M = 3.35, SD = .66), with a statistically significant difference of –.46 (.18), 95% CI [–.92 to .00], p = .05, d = .70.

A one-way ANOVA indicated that a significant mean score difference existed in the personality facet trait of Liveliness (eXtraversion) at the $p < .05$ level between the four POC groups, $F(3, 158) = 2.81$, $p = 0.04$, $\eta_p 2 = .05$. A post-hoc Tukey's HSD analysis indicated, however, that there were no significant differences between the four POC groups.

For easier applicability, the findings are presented in Offender Personality Matrices A–D. The Offender Personality Matrices present the comparative direction, effect size and strength of the personality factor and facet differences between the combined POC samples. As no significant differences existed between the offending groups in the Agreeableness, Openness to Experience and Conscientiousness personality factors, these were not included in the offender comparison matrixes.

Offender Personality Matrix A: Violent Crimes Offenders Compared to the Primary Offence Categories (POC)

Violent Crimes Offenders	**Substance Abuse & Drug-Related Crimes Offenders**			**Property & Financial Crimes Offenders**			**Sexual Crimes (Paedophilia) Offenders**		
	Cohen's d	*Direction*	*Effect Size Strength*	*Cohen's d*	*Direction*	*Effect Size Strength*	*Cohen's d*	*Direction*	*Effect Size Strength*
Honesty-Humility	-	-	-	.74	Higher	Medium to Large	-	-	-
Sincerity	-	-	-	-	-	-	-	-	-
Fairness	-	-	-	.75	Higher	Medium to Large	-	-	-
Greed-Avoidance	-	-	-	-	-	-	-	-	-
Modesty	-	-	-	-	-	-	-	-	-
Emotionality	-	-	-	-	-	-	.70	Lower	Medium to Large
Fearfulness	-	-	-	-	-	-	.73	Lower	Medium to Large
Anxiety	-	-	-	-	-	-	-	-	-
Dependence	-	-	-	-	-	-	-	-	-
Sentimentality	-	-	-	-	-	-	-	-	-
eXtraversion	.57	Lower	Medium	-	-	-	-	-	-
Social Self-Esteem	-	-	-	-	-	-	-	-	-
Social Boldness	-	-	-	-	-	-	-	-	-
Sociability	.61	Lower	Medium	-	-	-	-	-	-
Liveliness	-	-	-	-	-	-	-	-	-

Offender Personality Matrix B: Substance Abuse & Drug-Related Crimes Offenders Compared to the Primary Offence Categories (POC)

Substance Abuse & Drug-Related Crimes Offenders	**Violent Crimes Offenders**			**Property & Financial Crimes Offenders**			**Sexual Crimes (Paedophilia) Offenders**		
	Cohen's d	*Direction*	*Effect Size Strength*	*Cohen's d*	*Direction*	*Effect Size Strength*	*Cohen's d*	*Direction*	*Effect Size Strength*
Honesty-Humility	-	-	-	-	-	-	-	-	-
Sincerity	-	-	-	-	-	-	-	-	-
Fairness	-	-	-	-	-	-	-	-	-
Greed-Avoidance	-	-	-	-	-	-	-	-	-
Modesty	-	-	-	-	-	-	-	-	-
Emotionality	-	-	-	-	-	-	-	-	-
Fearfulness	-	-	-	-	-	-	.65	Lower	Medium to Large
Anxiety	-	-	-	-	-	-	-	-	-
Dependence	-	-	-	-	-	-	-	-	-
Sentimentality	-	-	-	-	-	-	-	-	-
eXtraversion	.57	Higher	Medium	-	-	-	1.13	Higher	Large to Very Large
Social Self-Esteem	-	-	-	-	-	-	.71	Higher	Medium to Large
Social Boldness	-	-	-	-	-	-	.72	Higher	Medium to Large
Sociability	.61	Higher	Medium	-	-	-	.88	Higher	Large
Liveliness	-	-	-	-	-	-	-	-	-

Offender Personality Matrix C: Financial & Property Crimes Offenders Compared to the Primary Offence Categories (POC)

Property & Financial Crimes Offenders	**Violent Crimes Offenders**			**Substance Abuse & Drug-Related Crimes Offenders**			**Sexual Crimes (Paedophilia) Offenders**		
	Cohen's d	*Direction*	*Effect Size Strength*	*Cohen's d*	*Direction*	*Effect Size Strength*	*Cohen's d*	*Direction*	*Effect Size Strength*
Honesty-Humility	.74	Lower	Medium to Large	-	-	-	.72	Lower	Medium to Large
Sincerity	-	-	-	-	-	-	-	-	-
Fairness	.75	Lower	Medium to Large	-	-	-	1.02	Lower	Large to Very Large
Greed-Avoidance	-	-	-	-	-	-	-	-	-
Modesty	-	-	-	-	-	-	-	-	-
Emotionality	-	-	-	-	-	-	-	-	-
Fearfulness	-	-	-	-	-	-	-	-	-
Anxiety	-	-	-	-	-	-	-	-	-
Dependence	-	-	-	-	-	-	-	-	-
Sentimentality	-	-	-	-	-	-	-	-	-
eXtraversion	-	-	-	-	-	-	-	-	-
Social Self-Esteem	-	-	-	-	-	-	-	-	-
Social Boldness	-	-	-	-	-	-	-	-	-
Sociability	-	-	-	-	-	-	.70	Higher	Medium to Large
Liveliness	-	-	-	-	-	-	-	-	-

Offender Personality Matrix D: Sexual Crimes (Paedophilia) Offenders Compared to the Primary Offence Categories (POC)

Sexual Crimes (Paedophilia) Offenders	**Violent Crimes Offenders**			**Substance Abuse & Drug-Related Crimes Offenders**			**Property & Financial Crimes Offenders**		
	Cohen's d	*Direction*	*Effect Size Strength*	*Cohen's d*	*Direction*	*Effect Size Strength*	*Cohen's d*	*Direction*	*Effect Size Strength*
Honesty-Humility	-	-	-	-	-	-	.72	Higher	Medium to Large
Sincerity	-	-	-	-	-	-	-	-	-
Fairness	-	-	-	-	-	-	1.02	Higher	Large to Very Large
Greed-Avoidance	-	-	-	-	-	-	-	-	-
Modesty	-	-	-	-	-	-	-	-	-
Emotionality	.70	Higher	Medium to Large	-	-	-	-	-	-
Fearfulness	.73	Higher	Medium to Large	.65	Higher	Medium to Large	-	-	-
Anxiety	-	-	-	-	-	-	-	-	-
Dependence	-	-	-	-	-	-	-	-	-
Sentimentality	-	-	-	-	-	-	-	-	-
eXtraversion	-	-	-	1.13	Lower	Large to Very Large	-	-	-
Social Self-Esteem	-	-	-	.71	Lower	Medium to Large	-	-	-
Social Boldness	-	-	-	.72	Lower	Medium to Large	-	-	-
Sociability	-	-	-	.88	Lower	Medium to Large	.70	Lower	Medium to Large
Liveliness	-	-	-	-	-	-	-	-	-

Chapter 5: Results (Specific Offender Group)

5.1 Descriptive Data & *t*-Test Comparisons

Table 14 provides the means, standard deviations, confidence intervals, and skewness and kurtosis values for both the Czech Republic offender sample and the ex-offender Australian sample by personality factor score and Specific Offender Group (SOG). It also provides a *t*-test comparison to justify the merging of the two data sets into one collapsed data set.

The results from Table 14 partially support the merging of the Czech Republic and Australian Specific Offender Group samples. For all six HEXACO factors, a series of independent *t*-tests were conducted between the Czech Republic and Australian samples for offenders in the Violent & Substance Abuse and Drug-Related Crimes sample, Violent & Property and Financial Crimes samples, and Sexual (Paedophilia) & Violent Crimes sample. Levene's test for equality of variances was not violated for any of the independent samples *t*-tests conducted with the exception of 1) the Honesty-Humility Factor for the Violent & Substance Abuse and Drug-Related Crimes samples, 2) the Honesty-Humility Factor for the Violent & Property and Financial Crimes Samples, and 3) the Agreeableness and Openness Factor for the Sexual (Paedophilia) & Violent Crimes samples. The results reported in these instances were with equal variances not assumed. All *p* values represent two-tailed tests.

Table 14.

SOG descriptive statistics & t-test comparison between the Czech Republic offender and Australian ex-offender samples

Personality Factor	Offender Group	Czech Republic Sample						Australian Sample							
		n	*M (SD)*	*95% CI for Mean*		*S*	*K*	*n*	*M (SD)*	*95% CI for Mean*		*S*	*K*	*t*	*p*	*d*
				L	*U*					*L*	*U*					
Honesty-Humility	Violent & Substance Abuse and Drug-Related Crimes	5	3.63 (.20)	3.37	3.88	–.59	–2.90	4	3.38 (.27)	2.50	4.25	.09	–5.36	.87	.44	1.05
	Violent & Property and Financial Crimes	10	3.40 (.48)	3.06	3.75	–.71	.68	12	3.32 (.37)	3.09	3.55	.44	.67	.49	.63	.17
	Sexual (Paedophilia) & Violent Crimes	12	3.35 (.47)	3.02	3.68	.16	–.40	2	4.40 (.84)	–3.14	11.95	N/A	N/A	–2.72	.02*	1.54
Emotionality	Violent & Substance Abuse and Drug-Related Crimes	5	2.73 (.21)	2.15	3.30	–.41	–1.76	4	2.69 (.35)	1.59	3.79	–.07	–5.60	.10	.93	.14
	Violent & Property and Financial Crimes	10	2.77 (.50)	2.41	3.12	.09	–.73	12	2.75 (.45)	2.47	3.03	–.57	.59	.09	.93	.04
	Sexual (Paedophilia) & Violent Crimes	11	3.23 (.51)	2.89	3.57	–.28	1.28	2	3.53 (.66)	–2.42	9.49	N/A	N/A	–.74	.47	.51
eXtraversion	Violent & Substance Abuse and Drug-Related Crimes	5	3.70 (.22)	3.10	4.30	.19	–1.81	4	3.77 (.34)	2.68	4.84	–.05	–4.98	–.17	.87	.24
	Violent & Property and Financial Crimes	10	3.23 (.59)	2.80	3.65	–1.55	3.66	12	3.22 (.37)	2.98	3.46	–.61	.04	.03	.98	.02

	Sexual (Paedophilia) & Violent Crimes	12	3.03 (.42)	2.73	3.32	–.26	.46	2	2.72 (.40)	–.85	6.29	N/A	N/A	.96	.35	.76
Agreeable-ness	Violent & Substance Abuse and Drug-Related Crimes	5	3.28 (.22)	2.66	3.89	–1.19	.37	4	3.16 (.24)	2.39	3.92	–.17	–4.41	.36	.73	.52
	Violent & Property and Financial Crimes	10	3.12 (.51)	2.75	3.48	.61	.03	12	3.03 (.41)	2.76	3.29	–1.68	4.18	.47	.64	.19
	Sexual (Paedophilia) & Violent Crimes	12	3.06 (.27)	2.86	3.25	.65	–.94	2	3.75 (1.06)	–5.78	13.28	N/A	N/A	–.92	.52	.89
Conscientious-ness	Violent & Substance Abuse and Drug-Related Crimes	5	3.99 (.25)	3.28	4.70	1.49	2.82	4	3.45 (.40)	2.19	4.71	1.22	2.33	1.18	.28	1.62
	Violent & Property and Financial Crimes	10	3.63 (.54)	3.25	4.02	1.56	4.28	12	3.33 (.45)	3.04	3.61	.20	–1.27	1.44	.17	.60
	Sexual (Paedophilia) & Violent Crimes	12	3.51 (.35)	3.24	3.70	1.33	1.10	2	3.25 (.27)	.87	5.63	N/A	N/A	.97	.34	.83
Openness	Violent & Substance Abuse and Drug-Related Crimes	5	3.46 (.26)	2.75	4.18	1.68	3.36	4	3.42 (.52)	1.78	5.06	–.40	–.10	.08	.94	.10
	Violent & Property and Financial Crimes	10	3.24 (.64)	2.78	3.70	1.19	2.22	12	3.12 (.28)	2.95	3.31	–1.29	1.01	.55	.59	.24
	Sexual (Paedophilia) & Violent Crimes	12	3.27 (.49)	2.90	3.58	.26	–1.47	2	2.94 (1.59)	–11.36	17.23	N/A	N/A	.29	.82	.28

*Result was significant at a 0.05 or below level.

5.2 Key Findings: SOG Descriptive Statistics & *t*-Test Comparison between the Czech Republic Offender and Australian Ex-Offender Samples

For the Violent & Substance Abuse and Drug-Related Crimes samples, and the Violent & Property and Financial Crimes groups, no significant mean score differences existed between the Czech Republic and Australian samples in any of the six HEXACO personality factors. In the Australian Sexual (Paedophilia) & Violent Crimes sample, only two participants met the criteria for the sample, meaning the sample size did not allow for a proper analysis against the 12 participants who met the criteria in the Czech Republic sample. This was evidenced by the Australian sample not being sufficient to produce skewness or kurtosis values as well as producing nonsensical '95% CI for the Mean' values. For example, it is impossible for a mean score value for any HEXACO item to be below 1 or above 5. In the Openness factor for the Australian Sexual (Paedophilia) & Violent Crimes sample, however, the 95% CI for the mean lower value was reported at –11.36 and the higher value at 17.23. These non-possible values were found in all six factors. As such, it was decided to remove the two Australian Sexual (Paedophilia) & Violent Crimes offenders from further SOG analysis, confining this sample to offenders from the Czech Republic.

With this removal, the key findings from Table 14 support the merging of the SOG Czech Republic and Australian samples, minus the Australian Sexual (Paedophilia) & Violent Crimes offender sample. These SOG combined samples and Czech Republic sample (referred to from now as the combined sample) are compared against the HEXACO normative population scores (Lee & Ashton, 2018) in Table 15 below. For all six of the HEXACO factors, a series of one-sample *t*-tests were conducted for Violent & Substance Abuse and Drug-Related Crimes, Violent & Property and Financial Crimes, and Sexual (Paedophilia) & Violent Crimes (Czech Republic sample) between the combined sample and the normative sample. All *p* values represent two-tailed tests.

Table 15.

Descriptive statistics & one-sample t-test comparison between combined SOG Czech Republic & Australian sample and normative sample

SOG	Personality Factor	Combined Sample		Normative Sample (Non-Offender)							
		n	*M (SD)*	*n*	*M (SD)*	*Mean Difference*	*95% CI of the Difference*		*t*	*p*	*d*
							L	*U*			
Violent & Substance Abuse and Drug-Related Crimes	Honesty-Humility	9	3.51 (.39)	50,397	3.15 (.76)	.36	.07	.66	2.82	.02*	.92
	Emotionality	9	2.71 (.53)	50,397	2.86 (.58)	–.15	–.56	.26	–.85	.42	.28
	eXtraversion	9	3.73 (.54)	50,397	3.23 (.64)	.50	.08	.92	2.77	.02*	.12
	Agreeableness	9	3.22 (.46)	50,397	2.78 (.64)	.44	.09	.80	2.86	.02*	.96
	Conscientiousness	9	3.75 (.69)	50,397	3.49 (.56)	.26	–.27	.79	1.13	.29	.31
	Openness	9	3.44 (.75)	50,397	3.73 (.55)	–.29	–.86	.29	–1.14	.29	.39
Violent & Property and Financial Crimes	Honesty-Humility	22	3.36 (.41)	50,397	3.15 (.76)	.21	.02	.39	2.36	.03*	.51
	Emotionality	22	2.76 (.46)	50,397	2.86 (.58)	–.10	–.31	.10	–1.04	.31	.22
	eXtraversion	22	3.22 (.47)	50,397	3.23 (.64)	–.01	–.22	.20	–.08	.93	.02
	Agreeableness	22	3.07 (.45)	50,397	2.78 (.64)	.29	.09	.49	3.00	.01*	.64
	Conscientiousness	22	3.47 (.50)	50,397	3.49 (.56)	–.02	–.25	.20	–.22	.83	.04
	Openness	22	3.18 (.47)	50,397	3.73 (.55)	–.55	–.76	–.34	–5.51	.001**	1.17
Sexual (Paedophilia) & Violent Crimes (Czech Republic sample)	Honesty-Humility	12	3.35 (.47)	50,397	3.15 (.76)	.20	–.10	.50	1.48	.17	.43
	Emotionality	12	3.23 (.51)	50,397	2.86 (.58)	.37	.03	.71	2.44	.04*	.73
	eXtraversion	12	3.03 (.42)	50,397	3.23 (.64)	–.20	–.47	.06	–1.69	.12	.48
	Agreeableness	12	3.06 (.27)	50,397	2.78 (.64)	.28	.10	.45	3.49	.01*	1.04
	Conscientiousness	12	3.51 (.35)	50,397	3.49 (.56)	.02	–.20	.24	.20	.84	.06
	Openness	12	3.27 (.49)	50,397	3.73 (.55)	–.46	–.78	–.15	–3.26	.01*	.94

*Result was significant at a 0.05 or below level.

** Result was significant at a 0.001 or below level.

5.3 Key Findings: Descriptive Statistics & One-sample *t*-test Comparison between the Combined SOG Czech Republic & Australian Sample and Normative Sample.

The key findings from Table 15 are reported below and reveal the similarities and differences between the SOG combined sample and the normative sample (Lee & Ashton, 2018).

Combined Violent & Substance Abuse and Drug-Related Crimes Sample & Normative Sample Comparison

A series of one-sample *t*-tests between the combined and normative samples determined that, for Violent & Substance Abuse and Drug-Related Crimes offenders, there were no significant mean score differences in the factors of Emotionality, Conscientiousness or Openness. There were, however, significant mean score differences in the factors of Honesty-Humility, eXtraversion and Agreeableness.

The Honesty-Humility factor mean score for the combined Violent & Substance Abuse and Drug-Related Crimes sample ($M = 3.51$, $SD = .39$) was significantly higher than the normative Honesty-Humility factor mean score ($M = 3.15$, $SD = .76$), with a statistically significant difference of .36, 95% CI [.07 to .66], $t(8) = 2.82$, $p = .02$, $d = .92$.

The eXtraversion factor mean score for the combined Violent & Substance Abuse and Drug-Related Crimes sample ($M = 3.73$, $SD = .54$) was significantly higher than the normative eXtraversion factor mean score ($M = 3.23$, $SD = .64$), with a statistically significant difference of .50, 95% CI [.08 to .92], $t(8) = 2.77$, $p = .02$, $d = .12$.

The Agreeableness factor mean score for the combined Violent & Substance Abuse and Drug-Related Crimes sample ($M = 3.22$, $SD = .46$) was significantly higher than the normative Agreeableness factor mean score ($M = 2.78$, $SD = .64$), with a statistically significant difference of .44, 95% CI [.09 to .80], $t(8) = 2.86$, $p = .02$, $d = .96$.

As a significant difference was found concerning the Honesty-Humility, eXtraversion and Agreeableness factor mean scores between the combined Violent & Substance Abuse and Drug-Related Crimes offender sample and the normative sample, one-sample *t*-tests were conducted at a facet level within these factors to determine where the specific differences might be occurring.

For the Honesty-Humility factor, there was no statistically significant facet mean score difference between the two groups in relation to any of the facet traits (i.e., Sincerity, Fairness, Greed Avoidance and Modesty). However, two facet traits that were approaching significance: Sincerity ($p = .07$) and Modesty ($p = .09$). Similarly, in the eXtraversion factor there was no statistically significant facet mean score difference between the two groups in relation to any of the facet traits (i.e., Social-Self Esteem, Social Boldness, Sociability and Liveliness). One facet trait approached significance, namely Social Self-Esteem ($p = .07$).

For the Agreeableness factor, there was no statistically significant facet mean score difference between the two groups in relation to the facet trait of Patience. There was, however, a significant facet mean score difference in the Forgiveness, Gentleness and Flexibility facets.

A one-sample *t*-test indicated that the Agreeableness (Forgiveness) facet mean score for Violent & Substance Abuse and Drug-Related Crimes offenders was significantly higher for the combined sample ($M = 3.28$, $SD = .84$) than for the normative sample ($M = 2.41$, $SD = .84$), with a statistically significant difference of .87, 95% CI [.22 to 1.52], $t(8) = 3.09$, $p = .02$, $d = 1.04$.

A one-sample *t*-test indicated that the Agreeableness (Gentleness) facet mean score for Violent & Substance Abuse and Drug-Related Crimes offenders was significantly higher for the combined sample ($M = 3.58$, $SD = .41$) than for the normative sample ($M = 2.92$, $SD = .82$), with a statistically significant difference of .59, 95% CI [.27 to .91], $t(8) = 4.29$, $p = .003$, $d = 1.61$.

A one-sample *t*-test indicated that the Agreeableness (Flexibility) facet mean score for Violent & Substance Abuse and Drug-Related Crimes offenders was significantly higher for the combined sample ($M = 3.17$, $SD = .51$) than for the normative sample ($M = 2.68$, $SD = .75$), with a statistically significant difference of .42, 95% CI [.02 to .81], $t(8) = 2.43$, $p = .04$, $d = .96$.

For easier applicability, the findings are presented in Personality Profile 5. Personality Profile 5 presents the comparative direction, effect size and strength of the personality factor and facet differences between the combined Violent and Substance-Abuse and Drug-Related Crimes offender sample and normative population.

Personality Profile 5: Violent and Substance & Drug-Related Abuse Crimes Offenders

Direction, effect size and strength between the Violent and Substance Abuse & Drug-Related Crimes and normative samples

Personality Factor/Facet	**Cohen's *d***	**Violent & Drug & Substance Abuse Offender Sample**	**Normative Sample**	**Effect Size Strength**
Honesty-Humility	.92	Higher	Lower	Large to Very Large
Sincerity	-	-	-	-
Fairness	-	-	-	-
Greed Avoidance	-	-	-	-
Modesty	-	-	-	-
Emotionality	-	-	-	-
Fearfulness	-	-	-	-
Anxiety	-	-	-	-
Dependence	-	-	-	-
Sentimentality	-	-	-	-
eXtraversion	.12	Higher	Lower	Small
Social Self-Esteem	-	-	-	-
Social Boldness	-	-	-	-
Sociability	-	-	-	-
Liveliness	-	-	-	-
Agreeableness	.96	Higher	Lower	Large
Forgivingness	1.04	Higher	Lower	Large to Very Large
Gentleness	1.61	Higher	Lower	Very Large to Huge
Flexibility	.96	Higher	Lower	Large
Patience	-	-	-	-
Conscientiousness	-	-	-	-
Organisation	-	-	-	-
Diligence	-	-	-	-
Perfectionism	-	-	-	-
Prudence	-	-	-	-
Openness to Experience	-	-	-	-
Aesthetic Appreciation	-	-	-	-
Inquisitiveness	-	-	-	-
Creativity	-	-	-	-
Unconventionality	-	-	-	-

Combined Violent & Property and Financial Crimes Sample & Normative Sample Comparison

A series of one-sample *t*-tests between the combined and normative samples determined that for Violent & Property and Financial Crimes offenders there were no significant mean score differences in the factors of Emotionality, eXtraversion or Conscientiousness. There were, however, significant mean score differences in the factors of Honesty-Humility, Agreeableness and Openness.

The Honesty-Humility factor mean score for the combined Violent & Property and Financial Crimes sample ($M = 3.36$, $SD = .41$) was significantly higher than the normative Honesty-Humility factor mean score ($M = 3.15$, $SD = .76$), with a statistically significant difference of .21, 95% CI [.02 to .39], $t(21) = 2.36$, $p = .03$, $d = .51$.

The Agreeableness factor mean score for the combined Violent & Property and Financial Crimes sample ($M = 3.07$, $SD = .45$) was significantly higher than the normative Agreeableness factor mean score ($M = 2.78$, $SD = .64$), with a statistically significant difference of .29, 95% CI [.09 to .49], $t(21) = 3.00$, $p = .01$, $d = .64$.

The Openness factor mean score for the combined Violent & Property and Financial Crimes sample ($M = 3.18$, $SD = .47$) was significantly lower than the normative Openness factor mean score ($M = 3.73$, $SD = .55$), with a statistically significant difference of –.55, 95% CI [–.76 to –.34], $t(21) = –5.51$, $p < .001$, $d = 1.17$.

As a significant difference was found concerning the Honesty-Humility, Agreeableness and Openness factor mean scores between the combined Violent & Property and Financial Crimes offender sample and the normative sample, one-sample *t*-tests were conducted at a facet level within these factors to determine where the specific differences might be occurring.

In the Honesty-Humility factor, there was no statistically significant facet mean score difference between the two groups in relation to the facet traits of Sincerity, Fairness or Greed-Avoidance. There was a significant facet mean score difference, however, in the Modesty facet.

A one-sample *t*-test indicated that the Honesty-Humility (Modesty) facet mean score for Violent & Property and Financial Crimes offenders was significantly higher for the combined sample ($M = 3.68$, $SD = .66$) than for the normative sample ($M = 3.22$, $SD = .90$), with a statistically significant difference of .46, 95% CI [.17 to .75], $t(21) = 3.31$, $p = .003$, $d = .70$.

In the Agreeableness factor, there was no statistically significant facet mean score difference between the two groups in relation to the facet traits of Patience. There were significant facet mean score differences, however, in the Forgiveness, Gentleness and Flexibility facets.

A one-sample *t*-test indicated that the Agreeableness (Forgiveness) facet mean scores for Violent & Property and Financial Crimes offenders was significantly higher for the combined sample ($M = 2.99$, $SD = .60$) than for the normative sample ($M = 2.41$, $SD = .84$), with a statistically significant difference of .58, 95% CI [.31 to .84], $t(21) = 4.52$, $p < .001$, $d = .97$.

A one-sample *t*-test indicated that the Agreeableness (Gentleness) facet mean score for Violent & Property and Financial Crimes offenders was significantly higher for the combined sample ($M = 3.34$, $SD = .64$) than for the normative sample ($M = 2.92$, $SD = .82$), with a statistically significant difference of .42, 95% CI [.14 to .71], $t(21) = 3.07$, $p = .006$, $d = .66$.

A one-sample *t*-test indicated that the Agreeableness (Flexibility) facet mean score for Violent & Property and Financial Crimes offenders was significantly higher for the combined sample ($M = 3.06$, $SD = .68$) than for the normative sample ($M = 2.68$, $SD = .75$), with a statistically significant difference of .38, 95% CI [.08 to .68], $t(21) = 2.61$, $p = .02$, $d = .56$.

In the Openness factor, there were significant mean score differences in all of the facet traits (i.e., Aesthetic Appreciation, Inquisitiveness, Creativity and Unconventionality). A one-sample *t*-test indicated that the Openness (Aesthetic Appreciation) facet mean score for Violent & Property and Financial Crimes offenders was significantly lower for the combined sample ($M = 3.09$, $SD = .68$) than for the normative sample ($M = 3.41$, $SD = .83$), with a statistically significant difference of –.32, 95% CI [–.62 to –.02], $t(21) = –2.20$, $p = .04$, $d = .47$.

A one-sample *t*-test indicated that the Openness (Inquisitiveness) facet mean score for Violent & Property and Financial Crimes offenders was significantly lower for the combined sample ($M = 3.21$, $SD = .75$) than for the normative sample ($M = 4.04$, $SD = .71$), with a statistically significant difference of –.72, 95% CI [–1.05 to –.39], $t(21) = –4.45$, $p < .001$, $d = 1.11$.

A one-sample *t*-test indicated that the Openness (Creativity) facet mean score for Violent & Property and Financial Crimes offenders was significantly lower for the combined sample ($M = 3.26$, $SD = .60$) than for the normative sample ($M = 3.72$, $SD = .82$), with a statistically significant difference of –.46, 95% CI [–.72 to –.19], $t(21) = –3.59$, $p = .002$, $d = .77$.

A one-sample *t*-test indicated that the Openness (Unconventionality) facet mean score for Violent & Property and Financial Crimes offenders was significantly lower for the combined sample ($M = 3.03$, $SD = .57$) than for the normative sample ($M = 3.76$, $SD = .66$), with a statistically significant difference of –.73, 95% CI [–.98 to –.47], $t(21) = –5.99$, $p < .001$, $d = 1.28$.

For easier applicability, the findings are presented in Personality Profile 6. Personality Profile 6 presents the comparative direction, effect size and strength of the personality factor and facet differences between the combined Violent & Property and Financial Crimes sample and normative population.

Personality Profile 6: Violent and Property Crimes Offenders

Direction, effect size and strength between the Violent & Property Crimes Offenders and normative samples

Personality Factor/Facet	Cohen's *d*	Violent & Drug & Substance Abuse Offender Sample	Normative Sample	Effect Size Strength
Honesty-Humility	.51	Higher	Lower	Medium
Sincerity	-	-	-	-
Fairness	-	-	-	-
Greed Avoidance	-	-	-	-
Modesty	.70	Higher	Lower	Medium to Large
Emotionality	-	-	-	-
Fearfulness	-	-	-	-
Anxiety	-	-	-	-
Dependence	-	-	-	-
Sentimentality	-	-	-	-
eXtraversion				
Social Self-Esteem	-	-	-	-
Social Boldness	-	-	-	-
Sociability	-	-	-	-
Liveliness	-	-	-	-
Agreeableness	.64	Higher	Lower	Medium
Forgivingness	.97	Higher	Lower	Large
Gentleness	.66	Higher	Lower	Medium
Flexibility	.56	Higher	Lower	Medium
Patience	-	-	-	-
Conscientiousness	-	-	-	-
Organisation	-	-	-	-
Diligence	-	-	-	-
Perfectionism	-	-	-	-
Prudence	-	-	-	-
Openness to Experience	1.17	Lower	Higher	Large to Very Large
Aesthetic Appreciation	.47	Lower	Higher	Medium
Inquisitiveness	1.11	Lower	Higher	Large to Very Large
Creativity	.77	Lower	Higher	Large
Unconventionality	1.28	Lower	Higher	Very Large

Sexual (Paedophilia) & Violent Crimes (Czech Republic) sample & Normative Sample Comparison

A series of one-sample *t*-tests between the Czech Republic and normative samples determined that for Sexual (Paedophilia) & Violent Crimes offenders there were no significant mean score differences in the factors of Honesty-Humility, eXtraversion or Conscientiousness. There were, however, significant mean score differences in the factors of Emotionality, Agreeableness and Openness.

The Emotionality factor mean score for the Czech Republic Sexual (Paedophilia) & Violent Crimes sample ($M = 3.23$, $SD = .51$) was significantly higher than the normative Emotionality factor mean score ($M = 2.86$, $SD = .58$), with a statistically significant difference of .37, 95% CI [.03 to .71], $t(11) = 2.44$, $p = .04$, $d = .73$.

The Agreeableness factor mean score for the Czech Republic Sexual (Paedophilia) & Violent Crimes sample ($M = 3.06$, $SD = .27$) was significantly higher than the normative Agreeableness factor mean score ($M = 2.78$, $SD = .64$), with a statistically significant difference of .28, 95% CI [.10 to .45], $t(11) = 3.49$, $p = .01$, $d = 1.04$.

The Openness factor mean score for the Czech Republic Sexual (Paedophilia) & Violent Crimes sample ($M = 3.27$, $SD = .49$) was significantly lower than the normative Agreeableness factor mean score ($M = 3.73$, $SD = .55$), with a statistically significant difference of –.46, 95% CI [–.78 to –.15], $t(11) = –3.26$, $p = .01$, $d = .94$.

As a significant difference was found concerning the Emotionality, Agreeableness, and Openness factor mean scores between the Czech Republic Sexual (Paedophilia) & Violent Crimes offender sample and the normative sample, one-sample *t*-tests were conducted at a facet level within these factors to determine where the specific differences might be occurring.

In the Emotionality factor, there were no statistically significant facet mean score differences between the two groups in relation to the facet traits of Anxiety and Sentimentality. There were significant mean score differences, however, in the Fearfulness and Dependence facets.

A one-sample *t*-test indicated that the Emotionality (Fearfulness) facet mean score for Sexual (Paedophilia) & Violent Crimes offenders was significantly higher for the Czech Republic sample ($M = 3.04$, $SD = .49$) than for the normative sample ($M = 2.52$, $SD = .77$), with a statistically significant difference of .52, 95% CI [.21 to .83], $t(11) = 3.71$, $p = .003$, $d = 1.06$.

A one-sample *t*-test indicated that the Emotionality (Dependence) facet mean score for Sexual (Paedophilia) & Violent Crimes offenders was significantly higher for the Czech Republic sample ($M = 3.22$, $SD = .86$) than for the normative sample ($M = 2.61$, $SD = .83$), with a statistically significant difference of .61, 95% CI [–.07 to .1.16], $t(11) = 2.47$, $p = .03$, $d = .71$.

In the Agreeableness factor, there were no statistically significant facet mean score differences between the two groups in relation to the facet traits of Forgiveness or Patience. There were significant mean score differences, however, in the Gentleness and Flexibility facets.

A one-sample *t*-test indicated that the Agreeableness (Gentleness) facet mean score for Sexual (Paedophilia) & Violent Crimes offenders was significantly higher for the Czech Republic sample ($M = 3.35$, $SD = .57$) than for the normative sample ($M = 2.92$, $SD = .82$), with a statistically significant difference of .43, 95% CI [.07 to .80], $t(11) = 2.65$, p = .02, $d = .75$.

A one-sample *t*-test indicated that the Agreeableness (Flexibility) facet mean score for Sexual (Paedophilia) & Violent Crimes offenders was significantly higher for the Czech Republic sample ($M = 3.33$, $SD = .49$) than for the normative sample ($M = 2.68$, $SD = .75$), with a statistically significant difference of .65, 95% CI [.34 to .97], $t(11) = 4.60$, $p < .001$, $d = 1.33$.

In the Openness factor, there was no statistically significant facet mean score difference between the two groups in relation to the facet trait of Aesthetic Appreciation. There were significant mean score differences, however, in the Inquisitiveness, Creativity and Unconventionality facets.

A one-sample *t*-test indicated that the Openness (Inquisitiveness) facet mean score for Sexual (Paedophilia) & Violent Crimes offenders was significantly lower for the Czech Republic sample ($M = 3.67$, $SD = .58$) than for the normative sample ($M = 4.04$, $SD = .71$), with a statistically significant difference of –.37, 95% CI [–.74 to –.01], $t(11) = –2.24$, p = .05, $d = .64$.

A one-sample *t*-test indicated that the Openness (Creativity) facet mean score for Sexual (Paedophilia) & Violent Crimes offenders was significantly lower for the Czech Republic sample ($M = 2.98$, $SD = .64$) than for the normative sample ($M = 3.72$, $SD = .82$), with a statistically significant difference of –.74, 95% CI [–.74 to –.01], $t(11) = –3.99$, $p = .002$, $d = 1.16$.

A one-sample *t*-test indicated that the Openness (Unconventionality) facet mean score for Sexual (Paedophilia) & Violent Crimes offenders was significantly lower for the Czech Republic sample ($M = 3.13$, $SD = .25$) than for the normative sample ($M = 3.76$, $SD = .66$), with a statistically significant difference of –.64, 95% CI [–.79 to –.48], $t(11) = –8.80$, $p < .001$, $d = 2.52$.

For easier applicability, the findings are presented in Personality Profile 7. Personality Profile 7 presents the comparative direction, effect size and strength of the personality factor and facet differences between the combined Violent and Sexual Offender (Paedophilia) sample and normative population.

Personality Profile 7: Sexual Crimes (Paedophilia} and Violent Crimes Offenders (Czech Republic sample)

Direction, effect size and strength between the Sexual (Paedophilia) & Violent Crimes offenders and normative samples

Personality Factor/Facet	**Cohen's *d***	**Sexual Offender (Paedophilia) & Violent Offender Sample**	**Normative Sample**	**Effect Size Strength**
Honesty-Humility	-	-	-	-
Sincerity	-	-	-	-
Fairness	-	-	-	-
Greed Avoidance	-	-	-	-
Modesty	-	-	-	-
Emotionality	.73	Higher	Lower	Medium to Large
Fearfulness	1.06	Higher	Lower	Large to Very Large
Anxiety	-	-	-	-
Dependence	.71	Higher	Lower	Medium to Large
Sentimentality	-	-	-	-
eXtraversion	-	-	-	-
Social Self-Esteem	-	-	-	-
Social Boldness	-	-	-	-
Sociability	-	-	-	-
Liveliness	-	-	-	-
Agreeableness	1.04	Higher	Lower	Large to Very Large
Forgivingness	-	-	-	-
Gentleness	.75	Higher	Lower	
Flexibility	1.33	Higher	Lower	Very Large
Patience	-	-	-	-
Conscientiousness	-	-	-	-
Organisation	-	-	-	-
Diligence	-	-	-	-
Perfectionism	-	-	-	-
Prudence	-	-	-	-
Openness to Experience	.94	Lower	Higher	Large
Aesthetic Appreciation	-	-	-	-
Inquisitiveness	.64	Lower	Higher	Medium
Creativity	1.16	Lower	Higher	Large to Very Large
Unconventionality	2.25	Lower	Higher	Huge

5.4 Key Findings: One-Way Analysis of Variance (ANOVA) and Post-Hoc Tukey's HSD between HEXACO Personality Factors and Specific Offence Groups (SOG)

Tables 16 and 17 below display the findings of significant differences between the six HEXACO personality factors and the Specific Offender Groups (i.e., Violent & Substance Abuse and Drug-Related Crimes, Violent & Property and Financial Crimes, and Sexual (Paedophilia) & Violent Crimes (Czech Republic sample). Levene's test for homogeneity of variances was not violated for any of the personality factors.

Table 16.

One–way ANOVAs between HEXACO personality factors and Specific Offender Group

Factor		Sum of Squares	df	Mean Square	F	Sig.	η_p^2
Honesty-Humility	Between Groups	.18	2	.09	.50	.61	N/A
	Within Groups	7.20	40	.18			
	Total	7.38	42				
Emotionality	Between Groups	1.96	2	.98	4.11	.02*	.17
	Within Groups	9.28	39	.24			
	Total	11.24	41				
eXtraversion	Between Groups	2.66	2	1.33	5.96	.01*	.23
	Within Groups	8.94	40	.22			
	Total	11.60	42				
Agreeableness	Between Groups	.18	2	.09	.52	.60	N/A
	Within Groups	6.82	40	.17			
	Total	7.00	42				
Conscientiousness	Between Groups	.53	2	.26	1.01	.37	.05
	Within Groups	10.47	40	.26			
	Total	11.00	42				
Openness	Between Groups	.46	2	.23	.78	.47	N/A
	Within Groups	11.85	40	.30			
	Total	12.31	42				

*Result was significant at a 0.05 or below level

Table 17.

Post-hoc Tukey's HSD on SOG and the HEXACO personality factors of Emotionality and eXtraversion

Factor	Specific Offender Group (I)	Specific Offender Group (J)	Mean Difference (I-J)	Std. Error	Sig.	95% CI		*d*
						L	U	
Emotionality	Violent & Substance Abuse and Drug-Related Crimes	Violent & Property and Financial Crimes	–.05	.19	.96	–.52	–.05	.10
		Sexual (Paedophilia) & Violent Crimes	–.52	.22	.05*	–1.06	–.52	1.00
	Violent & Property and Financial Crimes	Violent & Substance Abuse and Drug-Related Crimes	.05	.19	.96	–.42	.05	.10
		Sexual (Paedophilia) & Violent Crimes	–.47	.18	.03*	–.91	–.47	.97
	Sexual (Paedophilia) & Violent Crimes	Violent & Substance Abuse and Drug-Related Crimes	.52	.22	.05*	–.01	.52	1.00
		Violent & Property and Financial Crimes	.47	.18	.03*	.04	.47	.97
eXtraversion	Violent & Substance Abuse and Drug-Related Crimes	Violent & Property and Financial Crimes	.51	.19	.03*	.05	.51	1.01
		Sexual (Paedophilia) & Violent Crimes	.70	.21	.01*	.20	.70	1.45

Factor	Specific Offender Group (I)	Specific Offender Group (J)	Mean Difference (I-J)	Std. Error	Sig.	95% CI		*d*
						L	U	
	Violent & Property and Financial Crimes	Violent & Substance Abuse and Drug-Related Crimes	–.51	.19	.03*	–.96	–.51	1.01
		Sexual (Paedophilia) & Violent Crimes	.20	.17	.49	–.22	.20	.43
	Sexual (Paedophilia) & Violent Crimes	Violent & Substance Abuse and Drug-Related Crimes	–.70	.21	.01*	–1.21	–.70	1.45
		Violent & Property and Financial Crimes	–.19	.17	.49	–.61	–.19	.43

*Result was significant at a 0.05 or below level.

A one-way ANOVA indicated that there was a significant effect of the personality factor of Emotionality on SOG at the $p < .05$ level between the three SOG groups, $F(2, 39) = 4.11$, $p = 0.02$, $\eta_P^2 = .17$.

A post-hoc Tukey's HSD analysis indicated that the Emotionality factor mean score for Sexual (Paedophilia) & Violent Crimes offenders ($M = 3.23$, $SD = .51$) was significantly higher than for Violent & Substance Abuse and Drug-Related Crimes offenders ($M = 2.71$, $SD = .53$), with a statistically significant difference of .52 (.22), 95% CI [–.01 to 1.06], $p = .05$, $d = 1.00$, and then for Violent & Property and Financial Crimes offenders ($M = 2.76$, $SD = .46$), with a statistically significant difference of .47 (.18), 95% CI [.04 to .91], $p = .03$, $d = .97$.

A one-way ANOVA indicated that there was a significant effect of the personality factor of eXtraversion on SOG at the $p < .05$ level between the three SOG groups, $F(2, 40) = 5.96$, $p = 0.01$, $\eta_P^2 = .23$.

A post-hoc Tukey's HSD analysis indicated that the eXtraversion factor mean score for Violent & Substance Abuse and Drug-Related Crimes offenders ($M = 3.73$, $SD = .54$) was significantly higher than for Violent & Property and Financial Crimes offenders ($M = 3.22$, $SD = .47$), with a statistically significant difference of .51 (.19), 95% CI [.05 to .96], $p = .03$, $d = 1.01$, and then for Sexual (Paedophilia) & Violent Crimes offenders ($M = 3.03$, $SD = .42$), with a statistically significant difference of .70 (.21), 95% CI [.20 to 1.21], $p = .01$, $d = 1.45$.

A one-way ANOVA indicated that there was no significant effect of the personality factor of Honesty-Humility ($F(2, 40) = .50$, $p = 0.61$), Agreeableness ($F(2, 40) = .52$, $p = 0.60$), Conscientiousness ($F(2, 40) = 1.01$, $p = 0.37$, $\eta_P^2 = .05$) or Openness ($F(2, 40) = .79$, $p = 0.47$) on SOG at the $p < .05$ level between the three SOG groups

As significant differences were found concerning the Emotionality and eXtraversion factor mean scores between specific SOG samples, a one-way ANOVA was conducted at the HEXACO personality facet level within these factors and SOGs to determine where the specific differences might lie. The findings are shown in Tables 29 and 30. In relation to homogeneity of variance, Levene's test was not violated for any of the following ANOVA comparisons.

Table 18.

One–way ANOVAs between HEXACO Emotionality and eXtraversion facet traits and Specific Offender Group

Facet & Factor		Sum of Squares	df	Mean Square	F	Sig.	η_p^2
Fearfulness (Emotionality)	Between Groups	7.70	2	3.85	10.55	.001**	.35
	Within Groups	14.59	40	.37			
	Total	22.29	42				
Anxiety (Emotionality)	Between Groups	.48	2	.24	.55	.58	N/A
	Within Groups	17.70	40	.44			
	Total	18.19	42				
Dependence (Emotionality)	Between Groups	4.26	2	2.13	4.08	.02*	.17
	Within Groups	20.89	40	.52			
	Total	25.15	42				
Sentimentality (Emotionality)	Between Groups	1.30	2	.65	1.27	.29	.06
	Within Groups	20.60	40	.52			
	Total	21.90	42				
Social Self-Esteem (eXtraversion)	Between Groups	4.04	2	2.02	4.12	.02*	.17
	Within Groups	19.60	40	.49			
	Total	23.64	42				
Social Boldness (eXtraversion)	Between Groups	2.46	2	1.23	1.65	.20	.08
	Within Groups	29.69	40	.74			
	Total	32.14	42				

Facet & Factor		Sum of Squares	df	Mean Square	F	Sig.	ηp2
Sociability (eXtraversion)	Between Groups	2.00	2	1.00	1.80	.18	.08
	Within Groups	22.22	40	.56			
	Total	24.22	42				
Liveliness (eXtraversion)	Between Groups	4.05	2	2.03	4.82	.01*	.19
	Within Groups	16.81	40	.42			
	Total	20.87	42				

*Result was significant at a 0.05 or below level.
** Result was significant at a 0.001 or below level.

Table 19.

Post-hoc Tukey's HSD on the significant SOG HEXACO personality facets within Emotionality and eXtraversion

Facet & Factor	Specific Offender Group (I)	Specific Offender Group (J)	Mean Difference (I-J)	Std. Error	Sig.	95% CI		*d*
						L	U	
Fearfulness (Emotionality)	Violent & Substance Abuse and Drug-Related Crimes	Violent & Property and Financial Crimes	–.31	.24	.40	–.89	.27	.47
		Sexual (Paedophilia) & Violent Crimes	–1.13	.27	.001**	–1.78	–.48	1.74
	Violent & Property and Financial Crimes	Violent & Substance Abuse and Drug-Related Crimes	.31	.24	.40	–.27	.89	.47
		Sexual (Paedophilia) & Violent Crimes	–.81	.22	.002*	–1.34	–.29	1.49
	Sexual (Paedophilia) & Violent Crimes	Violent & Substance Abuse and Drug-Related Crimes	1.13	.27	.001*	.48	1.77	1.74
		Violent & Property and Financial Crimes	.81	.22	.002*	.29	1.34	1.49
Dependence (Emotionality)	Violent & Substance Abuse and Drug-Related Crimes	Violent & Property and Financial Crimes	.08	.29	.95	–.61	.78	.12
		Sexual (Paedophilia) & Violent Crimes	–.64	.32	.12	–1.41	.14	.83
	Violent & Property and Financial Crimes	Violent & Substance Abuse and Drug-Related Crimes	–.08	.29	.95	–.78	.61	.12
		Sexual (Paedophilia) & Violent Crimes	–.72	.26	.02*	–1.35	–.09	.94

Facet & Factor	Specific Offender Group (I)	Specific Offender Group (J)	Mean Difference (I-J)	Std. Error	Sig.	95% CI L	95% CI U	*d*
Dependence (Emotionality)	Sexual (Paedophilia) & Violent Crimes	Violent & Substance Abuse and Drug-Related Crimes	.64	.32	.12	–.14	1.41	.83
		Violent & Property and Financial Crimes	.72	.26	.02*	.09	1.35	.94
Social Self-Esteem (eXtraversion)	Violent & Substance Abuse and Drug-Related Crimes	Violent & Property and Financial Crimes	.29	.28	.56	–.39	.96	.46
		Sexual (Paedophilia) & Violent Crimes	.84	.31	.03*	.09	1.59	1.25
	Violent & Property and Financial Crimes	Violent & Substance Abuse and Drug-Related Crimes	–.29	.28	.56	–.96	.39	.46
		Sexual (Paedophilia) & Violent Crimes	.55	.25	.08	–.06	1.17	.73
	Sexual (Paedophilia) & Violent Crimes	Violent & Substance Abuse and Drug-Related Crimes	–.84	.31	.03*	–1.59	–.09	1.25
		Violent & Property and Financial Crimes	–.55	.25	.08	–1.17	.06	.73
Liveliness (eXtraversion)	Violent & Substance Abuse and Drug-Related Crimes	Violent & Property and Financial Crimes	.64	.26	.04*	.02	1.27	.96
		Sexual (Paedophilia) & Violent Crimes	.86	.29	.01*	.17	1.56	1.22
	Violent & Property and Financial Crimes	Violent & Substance Abuse and Drug-Related Crimes	–.64	.26	.04*	–1.27	–.02	.96
		Sexual (Paedophilia) & Violent Crimes	.22	.23	.62	–.35	.79	.32

Facet & Factor	Specific Offender Group (I)	Specific Offender Group (J)	Mean Difference (I-J)	Std. Error	Sig.	95% CI		*d*
						L	U	
Liveliness (eXtraversion)	Sexual (Paedophilia) & Violent Crimes	Violent & Substance Abuse and Drug-Related Crimes	–.86	.29	.01*	–1.56	–.17	1.22
		Violent & Property and Financial Crimes	–.22	.23	.62	–.79	.35	.32

*Result was significant at a 0.05 or below level.

** Result was significant at a 0.001 or below level.

5.5 Key Findings: One-Way ANOVAs between HEXACO Emotionality and eXtraversion facet traits and Specific Offender Group

A series of one-way between-subject analyses of variance (ANOVA) was conducted on each HEXACO personality facet trait within the Emotionality and eXtraversion factors to compare the effect of these facet personality traits on the SOG sample.

A one-way ANOVA indicated that there was a significant effect of the personality facet trait of Emotionality (Fearfulness) on SOG at the $p < .05$ level between the three SOG groups, $F(2, 40) = 10.55$, $p < 0.001$, $\eta_p^2 = .35$.

A post-hoc Tukey's HSD analysis indicated that the Fearfulness facet mean score for Violent & Substance Abuse and Drug-Related Crimes offenders ($M = 1.92$, $SD = .77$) was significantly lower than for Sexual (Paedophilia) & Violent Crimes offenders ($M = 3.04$, $SD = .49$), with a statistically significant difference of 1.13 (.27), 95% CI [–1.78 to –.48], $p < .001$, $d = 1.74$. Likewise, the Fearfulness facet mean score for Violent & Property and Financial Crimes offenders ($M = 2.23$, $SD = .59$) was significantly lower than for Sexual (Paedophilia) & Violent Crimes offenders ($M = 3.04$, $SD = .49$), with a statistically significant difference of –.81 (.22), 95% CI [–1.34 to –.29], $p = .002$, $d = 1.49$.

A one-way ANOVA indicated that there was a significant effect of the personality facet trait of Emotionality (Dependence) on SOG at the $p < .05$ level between the three SOG groups, $F(2, 40) = 4.08$, $p = 0.02$, $\eta_p^2 = .17$.

A post-hoc Tukey's HSD analysis indicated that the Dependence facet mean score for Violent & Property and Financial Crimes offenders ($M = 2.50$, $SD = .66$) was significantly lower than for Sexual (Paedophilia) & Violent Crimes offenders ($M = 3.22$, $SD = .86$), with a statistically significant difference of –.72 (.26), 95% CI [–1.35 to –.09], $p = .02$, $d = .94$.

A one-way ANOVA indicated that there was a significant effect of the personality facet trait of eXtraversion (Social Self-Esteem) on SOG at the $p < .05$ level between the three SOG groups, $F(2, 40) = 4.12$, $p = 0.02$, $\eta_p^2 = .17$.

A post-hoc Tukey's HSD analysis indicated that the Social Self-Esteem facet mean score for Violent & Substance Abuse and Drug-Related Crimes offenders ($M = 3.94$, $SD = .48$) was

significantly higher than for Sexual (Paedophilia) & Violent Crimes offenders ($M = 3.10$, $SD = .82$), with a statistically significant difference of .84 (.31), 95% CI [.09 to 1.59], $p = .03$, $d = 1.25$.

A one-way ANOVA indicated that there was a significant effect of the personality facet trait of eXtraversion (Liveliness) on SOG at the $p < .05$ level between the three SOG groups, $F(2, 40) = 4.82$, $p = 0.01$, $\eta_p^2 = .19$.

A post-hoc Tukey's HSD analysis indicated that the Liveliness facet mean score for Violent & Substance Abuse and Drug-Related Crimes offenders ($M = 4.03$, $SD = .72$) was significantly higher than that of the Violent & Property and Financial Crimes offenders ($M = 3.39$, $SD = .61$), with a statistically significant difference of .64 (.26), 95% CI [.02 to 1.27], $p = .04$, $d = .96$, and of the Sexual (Paedophilia) & Violent Crimes offenders ($M = 3.17$, $SD = .69$), with a statistically significant difference of .86 (.29), 95% CI [.17 to 1.56], $p = .01$, $d = 1.22$.

For easier applicability, the findings are presented in Offender Personality Matrices E–G. The Offender Personality Matrices present the comparative direction, effect size and strength of the personality factor and facet differences between the combined SOG samples.

As no significant differences existed between the offending groups in the Honesty-Humility, Agreeableness, Openness to Experience and Conscientiousness personality factors, these were not included in the offender comparison matrices.

Offender Personality Matrix E: Violent & Substance Abuse and Drug-Related Crimes Offenders Compared to the Specific Offender Groups (SOG)

Violent & Substance Abuse and Drug-Related Crimes Offenders	**Violent & Property and Financial Crimes Offenders**			**Sexual Crimes (Paedophilia) & Violent Crimes Offenders**		
	Cohen's d	*Direction*	*Effect Size Strength*	*Cohen's d*	*Direction*	*Effect Size Strength*
Emotionality	-	-	-	1.00	Lower	Large to Very Large
Fearfulness	-	-	-	1.74	Lower	Very Large to Huge
Anxiety	-	-	-	-	-	-
Dependence	-	-	-	-	-	-
Sentimentality	-	-	-	-	-	-
eXtraversion	1.01	Higher	Large to Very Large	1.45	Higher	Very Large
Social Self-Esteem	-	-	-	1.25	Higher	Very Large
Social Boldness	-	-	-	-	-	-
Sociability	-	-	-	-	-	-
Liveliness	.96	Higher	Large	1.22	Higher	Very Large

Offender Personality Matrix F: Violent & Property and Financial Crimes Offenders Compared to the Specific Offender Groups (SOG)

Violent & Property and Financial Crimes Offenders	**Violent & Substance Abuse and Drug-Related Crimes Offenders**			**Sexual Crimes (Paedophilia) & Violent Crimes Offenders**		
	Cohen's d	*Direction*	*Effect Size Strength*	*Cohen's d*	*Direction*	*Effect Size Strength*
Emotionality	-	-	-	.97	Lower	Large
Fearfulness	-	-	-	1.49	Lower	Very Large
Anxiety	-	-	-	-	-	-
Dependence	-	-	-	.94	Lower	Large
Sentimentality	-	-	-	-	-	-
eXtraversion	1.01	Lower	Large to Very Large	-	-	-
Social Self-Esteem	-	-	-	-	-	-
Social Boldness	-	-	-	-	-	-
Sociability	-	-	-	-	-	-
Liveliness	.96	Lower	Large	-	-	-

Offender Personality Matrix G: Sexual Crimes (Paedophilia) & Violent Crimes Offenders Compared to the Specific Offender Groups (SOG)

Sexual Crimes (Paedophilia) & Violent Crimes Offenders	**Violent & Substance Abuse and Drug-Related Crimes Offenders**			**Violent & Property and Financial Crimes Offenders**		
	Cohen's d	*Direction*	*Effect Size Strength*	*Cohen's d*	*Direction*	*Effect Size Strength*
Emotionality	1.00	Higher	Large to Very Large	.97	Higher	Large
Fearfulness	1.74	Higher	Very Large to Huge	1.49	Higher	Very Large
Anxiety	-	-	-	-	-	-
Dependence	-	-	-	.94	Higher	Large
Sentimentality	-	-	-	-	-	-
eXtraversion	1.45	Lower	Very Large	-	-	-
Social Self-Esteem	1.25	Lower	Very Large	-	-	-
Social Boldness	-	-	-	-	-	-
Sociability	-	-	-	-	-	-
Liveliness	1.22	Lower	Very Large	-	-	-

Chapter Six: Discussion

The review of the literature in Chapter 2 highlighted the need for a more comprehensive and HEXACO-specific approach to criminality and personality. This need arose because the literature review found that it was not possible to recommend a consistent set of HEXACO personality traits based on offending type to help guide rehabilitation program selection (Chapter 2.6). Hypotheses of a broader nature were developed to address this gap in the literature and to answer the exploratory research question, 'How do the personality traits of criminal offenders differ from non-offenders and by offence type?'

These hypotheses were as follows.

1) Factor mean scores in the HEXACO-PI-R would be significantly different between the normative sample and the combined Czech Republic offender and Australian ex-offender sample.
2) Facet mean scores in the HEXACO-PI-R would be significantly different between the normative sample and the combined Czech Republic offender and Australian ex-offender sample.
3) Factor mean scores in the HEXACO-PI-R would be significantly different between the primary offence categories.
4) Facet mean scores in the HEXACO-PI-R would be significantly different between the primary offence categories.
5) Factor mean scores in the HEXACO-PI-R would be significantly different between the specific offender groups.
6) Facet mean scores in the HEXACO-PI-R would be significantly different between the specific offender groups

The exploratory nature of the thesis and the non-directional hypotheses meant that all of the hypotheses were partially supported. A subset of personality traits differed between criminal offenders and the 'normal population'. Additionally, personality traits differed significantly between the offending groups themselves. These findings, and the similarities

and differences between the current thesis findings and previous research utilising both the FFM and HEXACO models of personality, will be discussed in this chapter.

The first section of this chapter examines the collapsing of the Czech Republic and Australian samples and the interpretations and implications that were elicited. It then explores the personality differences in the primary offending categories (POCs) compared to the normative sample. As the specific offending groups (SOGs) were a secondary analysis, small in sample size and designed to be compared against other specific offender groups, they were not compared against the normative population.

The second section of this chapter discusses the similarities and differences between the offending groups themselves. These comparisons were separated by the POCs and the SOGs. The third section of the chapter discusses the implications, applications and limitations of the results and how future research can build upon them.

6.1 Collapsing of the Data Set & International Comparisons

The results of the study strongly supported the merging of the Czech Republic and Australian samples by POC (Section 4.2). There were no statistically significant mean score differences in the personality factors of Honesty-Humility, Emotionality, eXtraversion, Agreeableness, Conscientious or Openness to Experience between the Violent Crimes, Substance Abuse Crime or Property Crime offenders between the countries samples. There were, however, significant differences between the Czech Republic and Australian samples in the personality factor of Agreeableness and two of its subset facets.

The findings indicate that the Australian Sexual Crimes (Paedophile) offenders displayed higher scores in the Agreeableness personality factor compared to their Czech Republic counterparts. At a facet level, these were represented by significantly higher scores in Gentleness and Patience, with ‘large’ (i.e., 1.13; Gentleness) and ‘very large’ (i.e., 1.57; Patience) Cohen’s *d* effect size scores (Cohen, 1988; Sawilowsky, 2009). Thus, the Australian Sexual Crimes (Paedophilia) offenders were likely to report gentler demeanours and higher levels of patience.

The findings also supported the merging of the Czech Republic and Australian samples by SOG (Chapter 5.2). There were no statistically significant mean score differences in the personality factors of Honesty-Humility, Emotionality, eXtraversion, Agreeableness, Conscientious or Openness to Experience between the 'Violent and Substance Abuse & Drug-Related Crimes offenders' and the 'Violent and Property Crimes offenders'. Due to the limited number of Australian participants in the 'Sexual (Paedophilia) and Violent Crimes offender' category, however, the data could not support the merging of the samples. As such, the subsequent interpretations for this group only used the data from the Czech Republic. In the 'Violent and Substance Abuse & Drug-Related Crimes offenders' and the 'Violent and Property Crimes offenders' samples, there were no statistically significant mean score differences between any of the HEXACO personality factors.

Becerra-García, García-León and Egan (2013) also find that the personality traits of their convicted child-related sex offender samples differ by country. The findings of their study indicate that the Spanish sample recorded significantly higher scores in all of the FFM personality factors measured than did the United Kingdom sample. They explain this difference as possibly being due to culture, suggesting that Spain has a more collectivist culture while the United Kingdom has an individualistic society. As Australia (Hofstede Insights, 2020a) and the Czech Republic (Hofstede Insights, 2020b) are both individualistic societies, this may explain why the personality profiles were mostly similar. A limitation of this argument, however, is that Australia is considered to be a more highly individualistic society than the Czech Republic (Hofstede Insights, 2020c). The degree of impact this difference may have is unknown.

The findings of this thesis and those of Becerra-García, García-León and Egan (2013) have implications for the international applicability of offence-based personality profiles. The results suggest that personality profiles may be similar by offending type in individualistic societies. Additionally, those personality profiles might not apply to collectivist cultures. The results, however, provide a foundation to continue this line of enquiry to whether similar or different offender personality profiles by offending type appear in other countries. Australia and the Czech Republic have many different cultural elements but are similar in some (for example, being recognised as an individualistic society) (Hofstede Insights, 2020c).

Without further differentiation of the possible impact of these similarities and differences, the results indicate that personalities, rather than culture, are more closely associated with types of offending behaviour.

6.2 Combined Offender Personality Profile and Normative Sample Comparison

The results indicate that the most notable effect size differences between the general offender and normative personality profiles were in the Agreeableness and Openness to Experience personality factors (Chapter 4.3). In the Agreeableness personality factor, the general offender sample scored significantly higher than the normative sample in the Forgiveness, Gentleness and Flexibility facet scales. These scores indicate that the general offender reported being more likely to be willing to trust and forgive someone who had caused them harm, to be milder in their dealings with others, and to compromise and work with others (Lee & Ashton, 2009b).

In the Openness to Experience factor, the general offender sample scored significantly lower than the normative sample in the Inquisitiveness, Creativity, and Unconventionality facet scales. This result indicate that the 'general offender' reported little curiosity about natural or social sciences, a lower inclination for original thought, and sought to avoid eccentric people or individuals who do not conform to the norm (Lee & Ashton, 2009b). The lower Openness to Experience factor and Inquisitiveness and Unconventionality facet scores align with the findings of Rolison et al. (2013).

The higher levels of Agreeableness and lower levels of Openness personality scores may initially appear hard to reconcile, as they would suggest that the general offender is at the same time both understanding and agreeable, but also closed-minded and set in their ways. This finding could be due to several causes. One concerns response bias and the participant wanting, for their sense of self-worth or other perceived benefits, to appear more likable. The HEXACO-PI-R questions that measure Agreeableness are more obvious about what is being measured than are the Openness to Experience questions. For example, questions that measure Agreeableness include 'My attitude toward people who treat me badly is "forgive and forget"' and 'Even when people make a lot of mistakes, I rarely say anything negative'. These questions represent values that are ideal in society. The normative sample may not

conform to the same bias as they completed the survey online and not in the presence of a researcher (Lee & Ashton, 2018).

The general offender sample also scored significantly higher than the normative sample in the Honesty-Humility factor and all of the facet scales. These scores were indicative of individuals who avoid manipulating others for personal gain and do not feel the temptation to break the rules (Lee & Ashton, 2009b). Also, those who report this trait do not have an interest in lavish wealth or feel a special entitlement to higher tiers of social status (Lee & Ashton, 2009b). While the strength of the effect size differences between the two groups was mostly small (apart from the Modesty facet, which was medium), the findings warrant further consideration as they differ from those of both de Vries and van Gelder (2015) and Dunlop et al. (2012).

While Dunlop et al. (2012) highlight the salience of the Honesty-Humility personality factor in their sample, their study utilised the 60-item HEXACO personality inventory. For this reason, it was unable to report findings at a facet level. This approach may have constrained the ability to apply the results in sufficient detail. For example, while Rolison et al. (2013) find that while the personality factor of Honesty-Humility was significantly lower in offenders, only two facets out of four facets were significantly lower (i.e., Fairness & Greed Avoidance). Furthermore, Rolison et al. (2013) also find (while not reaching statistical significance as the current study does) that offenders scored higher than non-offenders in the Honesty-Humility facet trait of Modesty.

Additionally, both de Vries and van Gelder (2015) and Dunlop et al. (2012) examine samples whose participants were more likely to be in a situation for crimes or deviant behaviour that involved dishonest elements (i.e., workplace employees & university students). Even if the questionnaires had been adapted so as not to reflect offending or deviant behaviour focused on the samples' environment, as was the case in Dunlop et al. (2012), the participants were still educated individuals enrolled at university, not incarcerated individuals. This sampling difference could account for the difference between the results of the current analysis and those of de Vries and van Gelder (2015) and Dunlop et al. (2012).

The findings of the thesis concerning the general offender personality profile and normative comparisons, however, need to be treated with caution. When compared, the results indicate that the personality factors of Honesty-Humility, Agreeableness and Openness to Experience, and their respective facet traits, all had the same facet-level directional difference. On the other hand, the personality factors of Emotionality, eXtraversion and Conscientiousness, and their associated facet traits, did not.

Personality facets within a personality factor should load in the same direction (i.e., all higher or all lower). The interpretation of the Emotionality, eXtraversion and Conscientiousness findings indicates that a factor-level understanding of the general offender personality profile is unhelpful because the facets in the general offender profile were not aligned in the same direction, with some being significantly higher and some lower when compared to the normative population (Appendix A). As such, this finding supports the notion that a 'one size fits all' general offender profile is not suitable. This position is further supported by comparing the current findings with previous research by Međedović (2017) and Rolison et al. (2013). The thesis's findings were compared with these two studies as they are the only ones reviewed in the literature that examine general offender populations using the HEXACO-PI-R at both a factor and facet level.

Međedović's (2017) personality profile of general offenders indicates that the general criminal offender has low factor levels of Honesty-Humility, Emotionality, Agreeableness and Conscientiousness. Conversely, at a personality factor level, the current thesis findings indicate that, compared to non-offenders, the combined offender sample scored higher on Honesty-Humility, Emotionality and Agreeableness, and lower in Openness to Experience. Additionally, compared to Rolison et al. (2013), the results of the current thesis found that more personality differences than similarities existed between the general offender personality profile at both a personality factor and facet level.

Two possible reasons might explain the differences found between the three studies' findings. Firstly, there are differences between the studies' designs. The focus of Međedović's (2017) research is on personality factor traits as predictors of criminal behaviour, to the exclusion of including facet-level data. Additionally, unlike the current thesis, Međedović (2017) does not focus on how the offenders differed from either the

normative population or each other. Additionally, from a methodological standpoint, it is unclear whether the study utilised the English version of the 100-item HEXACO-PI-R on the Serbian prison sample. If this were the case, difficulties in comprehension might have arisen even if the participants could speak fluent English.

The second possible reason for the disparity in findings is the sampling. Međedović (2017) utilised a sample of 256 Serbian male convicts. While that is a sufficient number for the research, the study does not adequately separate the sample by offence type. As a result, approximately half of the sample consisted of Violent Crimes offenders and the other half of a mixture of theft, possession of illegal substances, and fraud offenders. Not enough detail is provided on the offences committed, which may have influenced the findings and conclusions.

Concerning sampling, Rolison et al.'s (2013) study had three issues that may explain why differences their results differ from those of the current thesis. Firstly, only 45 male offenders were used in the sample. While statistical significance was still found in the results, the generalisability of those significant findings is limited due to the small sample size. This limitation leads to the second issue. While Rolison et al. (2013) do note in greater detail than Međedović (2017) the type of offence committed by the participants, the resultant smaller samples were too small for meaningful comparisons against each other. Additionally, while providing greater detail than Međedović (2017), the classifications are still too broad. For example, 21 (46.7%) of the participants were convicted of crimes against the person (for example, violence or sexual assault), 16 (35.6%) of offences that were not against another person (for example, drugs or burglary), and 8 (17.7%) were not classified.

Collectively, the differences in results between Međedović (2017), Rolison et al. (2013) and this thesis highlights that the personality profile of the 'general offender' (i.e., a personality profile not based on offending type) can change depending on the sample of offenders being measured. This may be due to a certain prison housing more of a certain criminal offender type (for example, violent offenders) or to differences in access to certain prisons (for example, low-security prisons). As such, it is the position of this thesis that comparisons between 'general offender' personality profiles are problematic. It was for this reason that the thesis developed Personality Profiles 1–4 based on the Primary Offence Category (POC)

(Chapter 4) and Personality Profiles 5–7 based on Specific Offending Group (SOG) (Chapter 5). The first four POC personality profiles were compared against the normative population.

Two consistent themes emerge in Personality Profiles 1–7. The first theme is the comparatively higher score of the personality factor of Agreeableness and the facets of Forgivingness, Gentleness and Flexibility. The exceptions were the samples that included the Sexual Crimes (Paedophilia) offenders. Accordingly, in Personality Profiles 4 and 7, no significant differences were found in the Forgivingness personality facet trait. The second personality factor trait that was consistently lower compared to the normative sample was Openness to Experience. The Inquisitiveness, Creativity and Unconventionality facets were also consistently lower. Possible reasons for the higher reported Agreeableness scores, as discussed Section 6.2, include a possible desire to appear more likable or socially acceptable. Also, it is prudent to note that the findings and subsequent interpretations of the personality profiles are derived from the offenders' prior criminal behaviour and the results of the HEXACO-PI-R and do not consider situational or eco-systemic factors beyond that.

As the SOGs were a secondary analysis, small in sample size and designed to be compared against other specific offender groups, they were not compared against the normative population.

6.3 Personality Profile 1: Violent Crimes Offenders

Personality Profile 1 compares the Violent Crimes offender sample to the normative population sample. The descriptions of the factors and facet scales from the HEXACO are from Lee and Ashton (2009b). The personality profile indicates that, compared to the normative population, Violent Crimes offenders reported less interest in manipulating others for personal gain, less interest in lavish wealth, and viewed themselves more as relatively ordinary people. Additionally, they reported a lower level of curiosity regarding the natural and social sciences, less inclination to original and creative thought, and a tendency to avoid eccentric or non-conforming people. Finally, the personality profile indicates that, in comparison, Violent Crimes offenders were much more likely to want to trust others again and re-establish friendly relationships after being mistreated, to be reluctant to judge others harshly, and to seek to avoid arguments. Despite the Agreeableness

facet traits of Forgivingness, Gentleness and Flexibility all being significantly higher than the normative population – with 'medium' to 'very large' effect size differences – the facet trait of Patience was not significantly different.

This non-significant finding is important, as the personality facet trait of Patience is used to measure an individual's tendency to remain calm instead of becoming angry (Lee & Ashton, 2009b). Individuals who score highly in this facet have a higher threshold for expressing anger. Conversely, those who score lower tend to lose their tempers quickly. A proposed explanation for this discrepancy is that response bias resulted in the Violent Crimes offenders wanting to appear more likable and that all of the facet traits in the Agreeableness factor were 'bumped up'. For example, low scores become average scores, and average scores became higher scores in the Violent Crimes offender sample. This explanation, however, has a considerable drawback in that higher Agreeableness factors and facet scores were consistent in all seven offender personality profiles.

To address the 'response bias' argument, the sampling design of the current thesis was examined. Participants were obtained from five separate prisons throughout the Czech Republic. While offenders in the Czech Republic were drawn from prisons that were more likely to contain a specific type of offender (for example, violent or drug-using) the samples were not defined by prison location but by offence type. Additionally, the ex-offender sample in Australia was drawn from members of the general public who were engaged with the post-release support services of Outcare. On balance, it was more likely that the higher and lower scores in these personality factors and facets were an accurate representation of this combined sample than it was that 171 separate participants lied or gave biased responses in almost precisely the same manner.

Pajevic et al.'s (2017) research uses the HEXACO model of personality to examine offenders who had been convicted of a Violent Crimes offence. In this regard, it is the peer-reviewed study that most closely matches the assessment of Violent Crimes offenders and personality in the current thesis. It differs, however, in that it examines various levels of psychopathy across three groups and used the 60-item HEXACO-PI-R. The first cluster had average scores on the psychopathy factors. The 'psychopathic-like' group who scored highest on the psychopathy factor were the second cluster. The final 'non-psychopathic group' had the

lowest scores on psychopathic factors. The factor personality scores for each of these clusters, ranked from highest levels of psychopathy to lowest, are compared to the thesis' combined Violent Crimes offender sample and the normative sample scores in Table 20. This comparison was made to highlight the similarities and differences between the findings.

Table 20.

Mean and standard deviation comparison between Pajevic et al. (2017), current Violent Crimes offender findings and normative HEXACO personality factor scores

Personality Factor	High Psychopathic Group (n = 21)	Moderate Psychopathic Group (n = 51)	Low (non) Psychopathic Group (n = 50)	Combined Violent Offenders (n = 57)	Normative sample (n = 50,397)
Honesty-Humility	2.94 (.67)	3.24 (.55)	3.67 (.58)	3.43 (.45)	3.15 (.76)
Emotionality	2.55 (.60)	2.96 (.62)	3.22 (.57)	2.83 (35)	2.86 (.58)
eXtraversion	3.29 (.69)	3.38 (.63)	3.42 (.60)	3.24 (.45)	3.23 (.64)
Agreeableness	2.77 (.53)	3.33 (.58)	3.66 (.61)	3.10 (.43)	2.78 (.64)
Conscientiousness	3.94 (.77)	3.78 (.67)	3.75 (.59)	3.50 (.56)	3.49 (.56)
Openness to Experience	3.54 (.74)	3.45 (.68)	3.51 (.88)	3.33 (.50)	3.73 (.55)

While it is not appropriate to perform and present inferential testing in the Discussion section of a thesis, the descriptive interpretation and comparison of Pajevic et al.'s (2017) findings and the current thesis provide insights relevant to the thesis and its findings. This relevance is based on the fact that Pajevic et al. (2017) provide one of the few studies that focus on violent offending using the HEXACO model of personality. The inclusion of a 'high psychopathic-like' group, however, served as an outlier in the context of the current thesis as the current thesis does not focus on personality disorders, psychopathic features or the Dark Triad.

Table 20 demonstrates how the findings of Pajevic et al. (2017) align with the current thesis's findings. In all of the groups, aside from the 'psychopathic-like' group, the Violent Crimes offenders scored higher on the Honesty-Humility and Agreeableness personality factors, and lower on the Openness to Experience personality factors compared to the normative

population. This consistency in findings strengthens the current thesis's assessment of the personality traits that are salient in Violent Crimes offenders.

To summarise, when examining Violent Crimes offenders against the normative population using the HEXACO-PI-R, higher scores on the Honesty-Humility and Agreeableness factors, and lower scores on the Openness to Experience were found. Similar findings at a personality factor level were also found by Pajevic et al. (2017) when descriptively comparing the data. In the current thesis, Violent Crimes offenders reported scoring higher in the facet traits of Sincerity, Greed Avoidance, Modesty, Forgivingness, Gentleness and Flexibility. They also reported scoring lower in the Inquisitiveness, Creativity and Unconventionality facet traits.

6.4 Personality Profile 2: Substance Abuse and Drug-Related Offenders

Personality Profile 2 compares the combined Substance Abuse and Drug-Related Crimes offender sample to the normative population sample. The descriptions of the factors and facet scales from the HEXACO are from Lee and Ashton (2009b). The personality profile indicates that compared to the normative population, Substance Abuse and Drug-Related Crimes offenders scored higher in the factor score of Agreeableness and the Forgivingness, Gentleness and Flexibility facet traits. Additionally, the offender sample scored lower in the Openness to Experience personality factor and in the Inquisitiveness, Creativity and Unconventionality facet traits. This finding is consistent with the factor and facets scores found in Personality Profile 1 (Violent Crimes Offenders).

In relation to Honesty-Humility, when compared to the normative population, Substance Abuse and Drug-Related Crimes offenders also scored higher at a factor level and in the Sincerity and Greed-Avoidance facet traits. Unlike the Violent Crimes offender sample, however, they did not score higher than the normative population in the Modesty personality facets. By using the normative population as a reference point, Substance Abuse & Drug-Related Crimes offenders were more likely than Violent Crimes offenders to perceive themselves as superior or more entitled.

Previous research has highlighted the significance of personality traits such as higher Extraversion and impulsivity, and lower scores in Conscientiousness and Patience (i.e.,

quicker to anger) in Substance Abuse and Drug-Related Crimes offenders (Coskunpinar, Dir, & Cyders, 2013; Lyvers, Boileau, & Thorberg, 2019; Shin, Hong, & Jeon, 2012). The current thesis finds that, compared to the normative population, the Substance Abuse and Drug-Related Crimes offenders did not significantly differ in the personality factor of Conscientiousness. A possible reason for this finding may be the heavily restricted ability to consume drugs or alcohol in prison and the subsequent readjustment of the body both physically and mentally.

On a comparative note, Zawacki et al. (2003) examine how perpetrators of alcohol-involved sexual assaults differ in personality from non-alcohol-involved sexual assaults and non-perpetrators. Zawacki et al.'s (2003) results indicate that offenders who committed alcohol-involved sexual assaults were more likely to display higher levels of aggression. In a similar vein to the Violent Crimes offenders, the Substance Abuse and Drug-Related Crimes offenders in the current thesis scored higher in the personality factor of Agreeableness and all of the facet-level traits compared to the normative population, except for the facet trait of Patience. As lower levels of Patience are associated with quicker loss of temper, this outlying difference may warrant future investigation.

The results of the current thesis do align with previous research regarding higher scores of eXtraversion in the Substance Abuse and Drug-Related Crimes sample. Only two out of the four traits at a facet-level, however, were significantly higher: Sociability and Liveliness. This difference indicates that, compared to the normative population, Substance Abuse and Drug-Related Crimes offenders reported being more likely to enjoy social conversation, parties, talking and celebrating with others. Additionally, they reported as displaying higher levels of enthusiasm, energy and optimism.

These specific facet traits and their associated behaviours are explained by Fairbairn et al. (2015). who explore the link between extraversion-type behaviour and problematic drinking patterns. Their findings indicate that individuals who score high in extraversion gain greater mood enhancement from alcohol in group drinking than those who score low in extraversion. A possible reason for this difference could (as highlighted by Eysenck's early work in criminality and personality) be that extraverts are cortically under-aroused and require continued stimulation to maintain an optimum level of arousal (Hollin, 2013).

Collectively, the findings suggest that people who report higher levels of extraversion may be more likely to drink excessively to enhance their mood and typically have lower base levels of cortical arousal. When paired with the findings of Zawacki et al. (2003), if the same individual also reported lower patience than they may also be quicker to anger; especially after consuming alcohol.

The low scores regarding Openness to Experience, however, suggest that this enthusiasm and energy may be focused on activities or items that this group of offenders enjoys. The facet traits of Social Self-Esteem and Social Boldness were not significantly different from the normative population. This finding demonstrates that while the previous eXtraversion traits were high, the individuals did not report as having any higher or lower self-confidence or social awkwardness compared with the normative population. Additionally, these differences at a facet level highlight the importance of not examining personality solely at a factor level, in order to avoid missing the nuances within offending behaviours and personality.

In summary, a distinctive feature of Personality Profile 2 (Substance Abuse & Drug-Related Offenders) was the higher levels of eXtraversion compared to the normative population.

6.5 Personality Profile 3: Property & Financial Offenders

Personality Profile 3 compares the combined Property and Financial Crimes offender sample to the normative population sample. The descriptions of the factors and facet scales from the HEXACO are from Lee and Ashton (2009b). The personality profile indicates that, compared to the normative population, Property and Financial Crimes offenders scored higher in the factor score of Agreeableness and the Forgivingness, Gentleness and Flexibility facet traits. This offender sample also scored lower in the Openness to Experience personality factor and in the Inquisitiveness, Creativity and Unconventionality facets. Again, this finding is consistent with the factor and facet scores found in Personality Profile 1 (Violent Crimes Offenders) and Personality Profile 2 (Substance Abuse & Drug-Related Crimes Offenders). This, however, is where the similarities end.

Compared to the normative population, the Property and Financial Crimes sample scored higher in the personality factor trait of Emotionality and facet traits of Dependence and

Sentimentality. These higher scores indicate that this group of offenders reported as being more likely to seek and require support from others and more able to feel strong attachments to and empathy for others. Given the different nature of property and financial offending (for example, compared to violent or drug-related crimes), it is understandable that this type of offender may be warier and less independent and confident in a prison environment, especially if they were in constant contact with or afraid of offenders who had committed different types of offences.

The personality factor of Honesty-Humility has previously been highlighted as the most salient predicting trait of unethical business decision making (Ashton & Lee, 2008) and workplace delinquency (Lee, Ashton, & deVries, 2005; Lee, Ashton, & Shin, 2005). When compared to the normative sample, however, no significant differences were found in the Honesty-Humility personality factor or any of the associated facet scales. This finding indicates that the typical financial or property offender reported as not differing in these personality traits from a 'normal person'. It suggests that that 'everyday people' have the same capability to commit financial or property crime if given the opportunity. Personality Profile 3 (Property and Financial Offenders) is the only profile where the offenders did not score higher than the normative population in Honesty-Humility and related facet scales.

In Personality Profile 1 (Violent Crimes Offenders), it was noted that an unusual 'bump' in the Agreeableness score existed (i.e., Violent Crimes offenders scored higher than the normative population, when previous research suggested that they would score lower). It was also highlighted that it was unlikely that 171 participants drawn from two countries and five prisons, or from ex-offenders residing in the community, would all respond falsely or with response bias. A similar 'bump', however, is seen in Personality Profile 3 (Property and Financial Offenders) regarding the personality factor of Honesty-Humility. From previous literature (Ashton & Lee, 2008; Lee, Ashton, & deVries, 2005; Lee, Ashton, & Shin, 2005), it might be assumed that this group of offenders would score lower than the normative sample. However, they scored lower than the other offending types but not the normative population sample.

Two suggestions to explain this difference are proposed. The first is that the majority of the previous research either did not use the HEXACO model of personality or did not examine

personality at a facet level. The second is that Property and Financial Crimes offenders are not different personality-wise from the average person, who could just as plausibly – given the ability and opportunity – commit similar offences (for example, keeping a found wallet or downloading pirated television movies and shows).

Another consideration when examining the personality profiles of Property and Financial Crimes offenders is what the questions in the HEXACO are measuring. The nature of the questions in the Honesty-Humility HEXACO model of personality is not targeted to offenders specifically. In particular, the facet trait of Fairness is the only specific personality facet scale to directly ask participants questions regarding fraud, corruption, cheating, stealing and taking advantage of others or society at large.

This point is important to note given that the Consumer Survey on Online Copyright Infringement Report (2017) highlights that 66% of internet users aged 12+ in Australia had illegally streamed, accessed or downloaded online copyrighted content. Television programs (45%) and music (44%) had the highest prevalence of being streamed, accessed or downloaded, followed by movies (39%), and video games (18%). These statistics demonstrate that a majority of individuals would be and are willing to pirate copyrighted information in their day-to-day lives illegally and that 'ordinary people' frequently engage in various forms of dishonest behaviour.

6.6 Personality Profile 4: Sexual Offenders (paedophilia)

Personality Profile 4 compares the combined Sexual Crimes (Paedophilia) sample to the normative population sample. The descriptions of the factors and facet scales from the HEXACO are from Lee and Ashton (2009b). The personality profile indicates – in a similar manner to Personality Profiles 1, 2 and 3 – that the Sexual Crimes (Paedophilia) sample also scored lower than the normative population in the Openness to Experience personality factor and Inquisitiveness, Creativity and Unconventionality facets. The only significant difference reported between any of the offending behaviours between the Czech Republic offenders and Australian ex-offenders was in the personality factor of Agreeableness.

The Czech Republic sample scored significantly lower in the Agreeableness factor than the Australian ex-offender sample. This result was a substantial difference with a Cohen's d

effect size of 0.88. At a facet level, the two samples were not significantly different regarding the traits of Forgiveness or Flexibility. They did, however, differ in the Gentleness and Patience facet scales. In both of these facets, the Czech Republic sample scored significantly lower than the Australian ex-offender sample. This finding indicated that the Czech Republic offenders expressed a less lenient attitude and were more critical in their dealings with others. Additionally, they were quicker to lose their temper and become aggressive. Conversely, the Australian Sexual Crimes (Paedophilia) sample was comparatively less likely to judge others harshly and more likely to remain calm than express feelings of anger.

This difference in the Agreeableness factor scores, however, may have been due to the difference in sample size. The Czech Republic Sexual Offender (Paedophilia) sample had 17 participants, and the Australian ex-offender sample had 4. As the Czech Republic sample was larger than the Australian sample and the participants measured in that sample were currently incarcerated, Personality Profile 4 (Sexual Offender (Paedophilia)) utilised the Czech Republic Agreeableness factor and facet scores for comparison against the normative population sample. This decision was made because they were deemed more representative of the offending group as the sample size was larger and they were also currently in prison. Compared to the normative population, the Czech Republic offender sample scored higher on the Agreeableness personality factor and Gentleness and Flexibility facet scales.

Moreover, compared to the normative population sample the combined Sexual Crimes (Paedophilia) sample was found to score higher in the Honesty-Humility personality factor and higher in the Greed-Avoidance and Modesty facet scales. This finding indicates that the offending group reported being not overly interested in excessive wealth and did not consider themselves superior to others. Additionally, these offenders were comparatively higher in the Emotionality personality factor and the associated Dependence facet scale, which is indicative of a greater need for emotional support from others and a desire to share difficulties with those who would provide them with comfort and encouragement. Finally, the combined Sexual Crimes (Paedophilia) sample scored lower on the eXtraversion personality factor and Social Self-Esteem and Social Boldness facet scales when compared to the normative population sample. These scores indicate that this sample of offenders was

more likely to have an increased sense of self-worthlessness, to perceive themselves as unpopular and to lack confidence in social situations.

It is difficult to compare the results of Personality Profile 4 (Sexual Offender (Paedophilia) to previous research as the vast majority of the latter utilises the NEO model of personality (Becerra-García et al., 2013; Carvalho & Nobre, 2013; Dennison et al., 2001; Egan, Kavanagh, & Blair, 2005; Madsen et al., 2006). Additionally, given that the nature of these types of crimes is so inherently heinous, access to samples and the amount of research into this offence is limited.

As such, the review of the literature in Chapter 2 was required to approximate how the NEO personality results would apply, as best as possible, to the HEXACO model of personality. This approximation determined that Sexual Crimes (Paedophilia) offenders would be more likely to demonstrate higher levels of Emotionality, and lower levels of Honesty-Humility, eXtraversion, Agreeableness, Conscientiousness and Openness to Experience. The results of the current thesis partly support this summation of personality traits.

As indicated by Personality Profile 4 (Sexual Offender (Paedophilia), the offending sample scored higher on the Emotionality factor and then lower on the eXtraversion and Openness to Experience personality factors when compared to the normative population. The offending group, however, scored higher on the Honesty-Humility and Agreeableness personality factors and showed no significant difference in scores within the Conscientiousness personality factor. In this sample, it is also particularly difficult to note if these differences are due to similar reasons as the 'bump' seen in Personality Profiles 1–3 or whether they reflect a response bias. This difficulty is noted in research from Gannon and Polaschek (2005) and Gannon (2006) specifically highlighting the increased likelihood of child-related sex offenders wanting to display themselves in a more socially desirable manner. This likelihood was compounded by the comparatively lower scores of social self-esteem.

6.7 Primary Offence Category Comparisons

This section discusses how the primary offender categories scored compared with each other rather than with the normative population. This comparison was conducted to refine the

differences that existed in personality, based on the type of offending behaviour committed. The comparisons between these types of offences are original; no previous research based on the HEXACO model of personality has compared all of these offences against each other at a personality factor and facet level. The descriptions of the factors and facet scales from the HEXACO are from Lee and Ashton (2009b).

When compared with the normative population, higher scores of Agreeableness and lower scores of Openness to Experience were apparent in Personality Profiles 1–4. These significant personality factor score differences in Agreeableness and Openness to Experience, however, did not exist between the offending groups, nor were their significant differences between any of the offender groups in the personality factor of Conscientiousness.

Violent Crimes Offenders

Offender Personality Matrix A compares Violent Crimes offenders against the other three primary offence categories. The matrix demonstrates that when compared to the other primary offence categories, significant differences existed in the Honesty-Humility, Emotionality and eXtraversion factors and specific facets. When compared to the Substance Abuse and Drug-Related crime offenders, Violent Crimes offenders scored lower in the eXtraversion personality factor and the Sociability facet. This finding indicates that they are comparatively less likely to enjoy social situations and more likely to enjoy individual activities that do not require conversations with others.

When compared to the Property and Financial Crimes offenders, the Violent Crimes offenders scored higher on the personality factor of Honesty-Humility and the facet trait of Fairness. This finding indicates that violent offenders reported being relatively more likely to avoid fraud and corruption, as well as less likely to seek to take advantage of other individuals or society. Finally, Violent Crimes offenders scored lower on the personality factor of Emotionality and the related facet of Fearfulness than did Sexual Crimes (Paedophilia) offenders. This finding suggests that the group of offenders would be less likely to experience fear and that, comparatively, Violent Crimes offenders were tougher,

braver and less likely to feel fear as a result of an injury. The Cohen's *d* effect sizes for these differences were all between 'medium' and 'medium to large'.

Substance Abuse and Drug-Related Offenders

Offender Personality Matrix B compares the Substance Abuse and Drug-Related Crimes offenders against the other three primary offence categories. No significant differences existed between the Substance Abuse and Drug-Related Crimes offenders and the Property and Financial Crimes offenders. The Substance Abuse and Drug-Related Crimes offenders did differ, however, when compared to the Violent Crimes offenders sample, scoring significantly higher in the eXtraversion personality factor and Sociability facet. This finding indicates that Substance Abuse and Drug-Related Crimes offenders were more likely to enjoy talking, social interactions and engaging with groups.

The most substantive differences were found between the Substance Abuse and Drug-Related Crimes offender sample and the Sexual Crimes (Paedophilia) sample, with the Substance Abuse and Drug-Related Crimes sample scoring lower on the facet trait of Fearfulness, indicating a lower likelihood of experiencing fear due to physical injury. The most decisive differences, however, were in the personality factor of eXtraversion and its related facets. Compared to the Sexual Crimes (Paedophilia) sample, the Substance Abuse and Drug-Related Crimes offenders scored higher on the personality factor of eXtraversion and the Social Self-Esteem, Social Boldness and Sociability facets. This finding means that these individuals enjoy social company and talking more and have a higher level of positive self-regard, perceive themselves as having likable qualities and are confident talking in group settings with strangers.

The Cohen's *d* effect size differences in the eXtraversion personality factor and Sociability facet were 'medium' when compared to Violent Crimes offenders. They ranged from 'medium' to 'large to very large' when compared to the Sexual Crimes (Paedophilia) offenders. This difference indicates that the Substance Abuse and Drug-Related Crimes offender sample had notably higher scores of eXtraversion when compared to the Violent Crimes and Sexual Crimes (Paedophilia) groups.

Property and Financial Crimes Offenders

Offender Personality Matrix C compares the Property and Financial Crimes offenders against the other three primary offence categories. No significant differences were found between the Property and Financial Crimes offenders and the Substance Abuse and Drug-Related Crimes offenders. This finding was noteworthy as the Property and Financial Crimes offenders scored lower than the other two offending groups (i.e., Violent Crimes and Sexual Crimes (Paedophilia)) on the Honesty-Humility personality factor and the Fairness facet.

The finding also indicates that both the Property and Financial Crimes offenders and the Substance Abuse and Drug-Related Crimes offenders had similar attitudes towards the concept of fairness. Lower scores in this personality facet typically result in an individual being more likely to engage in fraud or corruption. Additionally, they reported being more willing to make personal gains by cheating, stealing or taking advantage of other individuals or society. Compared to the Violent Crimes offenders the Cohen's *d* effect size of the Fairness facet indicated that this difference was 'medium to large', and then 'large to very large' when compared against the Sexual Crimes (Paedophilia) sample.

Sexual Offenders (Paedophilia)

Offender Personality Matrix D compared the Sexual Offenders (Paedophilia) sample against the other three primary offence categories. This group of offenders displayed the most differences compared to the other offending profiles. All of the differences were notable with Cohen's *d* effect sizes of 'medium to large' or 'large to very large'. When compared to the Violent Crimes offenders and the Substance Abuse and Drug-Related Crimes offenders, the Sexual Crimes (Paedophilia) group scored higher in the personality factor of Emotionality and the facet of Fearfulness. This finding meant that the sample was more likely to experience fear and seek to avoid physical harm. Given the nature of their offending behaviour, a fear of physical harm from other offenders may be a contributing cause to the score.

The Sexual Crimes (Paedophilia) sample also scored higher in the Honesty-Humility personality factor and Fairness facet, indicating that they were comparatively less inclined to engage in fraud and corruption. While not significantly different in the eXtraversion personality factor when compared to Violent Crimes offenders, the Sexual Crimes (Paedophilia) sample was significantly lower compared to the Substance Abuse and Drug-Related Crimes offenders. The difference was seen in the eXtraversion factor, as well as in Social Self-Esteem, Social Boldness, and Sociability facets. This finding indicates that, comparatively, the Sexual Crimes (Paedophilia) sample perceived themselves as unpopular and had a sense of personal worthlessness, as well as not being comfortable talking or engaging in group settings and preferring solitary activities.

Summary

Collectively, Offender Matrixes A to D provided essential insights into the personality differences between the offenders themselves. When compared to the normative population, there appeared to be a 'bump' concerning the offenders and their scores. This finding was attributed to the possibility of a degree of response bias. The 'bump' disappeared when the offenders were compared across groups, and the results appeared to align more closely with the findings of previous research. In summary, when the offenders were compared to each other, Violent Crimes offenders scored lower on Emotionality. Substance Abuse and Drug-Related Crimes offenders score higher on eXtraversion, Financial and Property Crimes offenders score lower on Honesty-Humility, and Sexual Crimes (Paedophilia) offenders scored lower on the eXtraversion factor.

6.8 Specific Offending Category Comparisons

The majority of the offenders in the study had committed only one type of offending behaviour (i.e., one of the primary offence categories). The offending behaviour of some offenders, however, spanned multiple categories. These included 'Violent & Substance Abuse Crimes offenders', 'Violent & Financial and Property Crimes offenders', and 'Sexual (Paedophilia) & Violent Crimes offenders'. A separate analysis was performed in Chapter 5 to identify where the differences in personality factor and facets traits between these groups existed. The results found that between the three specific offender groups significant

differences existed in two personality factors (i.e., Emotionality and eXtraversion) and the related facet scales.

Offender Personality Matrix E found that the 'Violent & Substance Abuse Crimes offenders' scored higher in the eXtraversion personality factor and Liveliness facet than did the two other groups. Additionally, they scored lower than the 'Sexual (Paedophilia) & Violent Crimes offenders' in the personality factor of Emotionality and the Fearfulness facet. While all three of the groups in the specific offender category had an element of violence in the crime committed, the differences in eXtraversion further solidified that the inclusion of substance or drug abuse in the offending behaviour does indicate that eXtraversion levels in these offenders could be higher when compared to other offenders. This difference was further supported by the 'large' to 'very large' Cohen's *d* effect sizes.

Offender Personality Matrix F highlighted that the 'Violent & Property and Financial Crimes offenders' scored significantly lower in eXtraversion and the Liveliness facet compared to the 'Violent & Substance-Abuse crimes offenders'. Additionally, they scored lower in Emotionality and the Fearfulness and Dependency facets than did the 'Sexual (Paedophilia) & Violent Crimes offenders' group. The violent component in the 'Violent & Property and Financial Crimes' sample was most commonly indicative of an armed theft crime (robbery) having been committed. Accordingly, it is worth noting that no differences in Honesty-Humility were found, a finding previously consistent with Property and Financial Crimes. This finding could signify that the personality traits in offenders who commit more planned and considered financial offending (for example, fraud), are different from those who prefer to use violence to achieve their goal.

Finally, Offender Personality Matrix G found that the 'Sexual (Paedophilia) & Violent Crimes offenders' scored higher than both other groups in Emotionality and the Fearfulness facet, and higher in the Dependence facet compared to the 'Violent & Property and Financial Crimes offenders'. Additionally, the sample also scored lower on the eXtraversion personality factor and Social Self-Esteem and Liveliness facets when compared to the offenders who had committed 'Violent & Substance Abuse Crimes'.

The development and examination of the Specific Offender Groups was designed as a supplementary analysis. The original study sought only offenders who had committed a particular type of offence. In reality, however, sampling with offender and ex-offender populations is rarely so straightforward. Additionally, numerous studies considered in the literature review in Chapter 2 examine offences that had multiple facets of offending behaviour (for example, alcohol-related sexual assault). These studies and their findings support analysis to ascertain whether or not 'blends' of offending types will result in different personality traits from the other more specific offending groups. The sample sizes of the SOGs, however, were much smaller than the POC groups. Despite this, numerous significant differences were found. Additionally, Cohen's *d* effect sizes for all of these differences ranged from 'large' to 'very large to huge'.

6.9 Theoretical & Practical Implications

The literature review, findings, and interpretations derived from the thesis present substantive theoretical implications regarding criminality and personality. Firstly, the review of the literature in Chapter 2 indicated that overlapping systems and measures of personality create greater confusion when attempting to highlight consistency in the personality traits of offenders.

The expansion of the use of the HEXACO model of personality globally, its addition of the Honesty-Humility factor, and its more direct explanations of personality factors and facets demonstrate that it is the logical 'next step' for measuring personality in deviant and criminal behaviour. As discussed in Chapter 1, the Five-Factor Model of personality expanded upon and replaced older measures of personality; no paradigm can resist change forever, and it is the position of the thesis that the HEXACO Six-Factor Model represents that change from the previous FFM. Additionally, its application to offending populations represents a modernised and more focused manner of measuring individual traits utilising a more holistic approach to personality. This was a necessary approach to shift away from Dark Triad views of measuring offender personality, an approach that focuses primarily on the negative personality traits of offenders.

However, while this thesis argues that the HEXACO is the best tool for measuring offender personality, it is not perfect. It is important to highlight that the HEXACO was not designed as a personality tool for offenders. The HXEACO model does expand upon the FFM and happens to be particularly suitable for offenders. Some facet-level scales, however, do not align directly to offenders. This lack of alignment is most notable in three instances. Firstly, 'quickness to anger' needs to be inferred from a low Patience facet score. Secondly, impulsivity is not directly measured but, rather, is most closely aligned with lower levels on the Prudence facet scale. Finally, as highlighted in Chapter 2, Honesty-Humility has been a large focus of measuring offending behaviour. As demonstrated in the present chapter, however, only one facet scale (i.e., Fairness) explicitly states that it measures beliefs or attitudes that could be considered to lead to criminal behaviour (for example, stealing), rather than being immoral or unethical.

The focus on the importance of facet-level scales highlighted the next theoretical implication identified by this thesis; that measuring personality and criminality only at a personality factor level is not appropriate, as a single substantially higher or lower facet score within any given personality factor can mislead both the researcher and subsequent future researchers. The support for this claim was apparent in the offender personality profiles and offender comparison matrices, which made clear that sometimes significant differences in only one or two personality facets generate a significant difference in the personality factor trait overall. For example, Personality Matrix C highlighted that Property and Financial offenders scored lower on the personality factor of Honesty-Humility than either Violent Crimes offenders and Sexual Crimes (Paedophilia) offenders. When examining this finding at a facet level, however, it was apparent that significant difference between the offender groups was evident only in the Fairness scale. Accordingly, it would be more accurate to highlight that the Property and Financial offender's findings indicated that they would likely to be willing to gain what they need from cheating or stealing, rather than summarily attributing a different score across the complete Honesty-Humility personality factor.

The issue of this factor-only-based findings in the review literature is compounded by sampling that does not measure offending populations but nonetheless attempts to generalise findings to them. Such an approach can mislead researchers as inferences are

made to criminal behaviour, while the samples do not reflect a population of offenders. While non-offenders may be easier to study, they are not an appropriate sample upon which to make generalisations when considering offender personality traits, because there is a clear distinction between attitudes toward behaviour and actual deviant or criminal behaviour.

In response to these points, and to work toward maintaining a clear and consistent body of theory and findings concerning criminality and personality, this thesis makes three strong recommendation recommendations: 1) that the HEXACO model of personality should be utilised when measuring criminal offending, 2) that personality should be measured at both the factor and facet level when measuring criminal offending, and 3) that research that seeks to generalise to offenders should include offenders or people who have been previously convicted of an offence. These recommendations will aid in building a more consistent and accurate body of knowledge and theoretical understanding.

In a practical sense, the thesis findings have a large amount of applicability and expand upon the Risk-Need-Responsivity (RNR) literature. The research question asked in this thesis was, 'How do the personality traits of criminal offenders differ from non-offenders and by offence type?' The thesis has answered that question and provided practitioners and researchers with a set of HEXACO offender personality profiles and matrices. A key finding of the personality profiles was the consistency across offending types, in that criminal offenders typically reported higher levels of Agreeableness and lower Levels of Openness to Experience at a factor and facet level compared to the normative population. This type of information can be used when practitioners are considering what type of program or treatments may be suitable for their clients. This consideration is especially essential when approaching a population that reports low levels of Openness to Experience, which could impact how open or responsive they are to particular rehabilitation programs.

Furthermore, the Offender Personality Matrixes highlighted how the offender samples personalities differed from each other. These differences were in the Honesty-Humility, eXtraversion and Emotionality factors and related facets. In this regard, researchers have been provided with the information required to expand upon these personality profiles and potentially examine how personality trait responsivity could influence rehabilitation programs engagement – for example, what programs work well for individuals who have

low self-esteem (i.e., Sexual Crimes (Paedophilia) offenders) or enjoy talking in groups (for example, Substance Abuse and Drug-Related Crimes offenders).

The personality profiles and matrices collectively expand upon and contribute to the risk and need aspects of the RNR model – as highlighted by the salient personality traits discussed in Chapter 6, Sections 6.2 to 6.8 and summarised in 6.11, which demonstrate that criminogenic needs based on offence type do exist and that a general offender personality type is not sufficient. In turn, this finding expands upon the responsivity element of RNR, as the personality profiles and matrices narrow the focus of personality as a broad concept into specific personality traits based on offence type. These specific personality traits can help assess and identify the rehabilitation treatment tyes to which offending groups may or may not be more responsive. The applicability and expansion of the RNR model also has international merit. While certain personality traits may differ within countries' populations – for example, extraversion (Costello, Wood, & Tov, 2018) – the offender profiles did not significantly differ by country and offence type. Accordingly, these findings indicate that, for example, a violent offender's personality profile in Australia is similar to a violent offender's personality profile in the Czech Republic. These comparisons could be expanded to other countries to see if the consistencies observed between the Czech Republic and Australian samples persist.

In summary, the thesis contributes substantially to existing knowledge by explaining how the personality traits of criminal offenders differ from non-offenders and between different criminal behaviours at a factor and facet level. It also highlights and demonstrates the need for a stronger HEXACO-based and consistent approach when measuring criminality and personality.

6.10 Limitations & Future Research

Given the inherent difficulty of obtaining data from offender and ex-offender populations, the present research has several limitations. The first limitation was the inability to recruit enough participants in the sex offender sample. Additionally, as participants in this category were only obtained from the Czech Republic, no meaningful comparisons could be made with Australia to determine whether the sample was suitable for merging. This limitation

meant neither a personality profile nor a comparison matrix was created for the Sexual Crimes primary offence category as was initially planned. Despite this limitation, the thesis provides an essential step towards building a new framework for offenders based upon personality traits and offence type. It is, however, only a first step.

Future research could expand upon this framework by examining what types of personality traits are responsive to which types of rehabilitation treatments. Expansion of the research would broaden the applicability of the framework and remove the need for practitioners to research personality traits and rehabilitation responsivity. The thesis sought to address the question, 'How do the personality traits of criminal offenders differ from non-offenders and by offence type?'. It did so by developing personality profiles and matrices that highlighted salient personality traits that were higher and lower in offenders based on the types of offences they had committed. The next question to answer would be which rehabilitation programs best apply to these personality profiles.

Another limitation concerns certain assumptions for the selected ANOVASs and *t*-tests not being met. While minor assumptions, such as selecting participants randomly, could not be met given the nature of the research, the major assumptions were met. These include 1) independence of observations, 2) removal of significant outliers, 3) normality, and 4) homogeneity of variance (Gravetter & Wallnau, 2009). In addition, given the robustness of the ANOVA and *t*-test statistical tests, the benefit of the parametric tests over the loss of power inherent in non-parametric tests was deemed more suitable. However, where the major assumptions were deemed to have not been met and where a parametric test was not appropriate, non-parametric tests were conducted.

This use of non-parametric tests was evident when conducting the statistical analysis, and a small number of the tests found that the *p*-value for Levene's test for equality of variances was significant. Given the large number of analyses completed, this is not surprising. When the ANOVA's robustness was not deemed suitable to maintain the use of it as a parametric test (for example, if the sample sizes were approximately equal), then Welch and Brown-Forsythe, and Games-Howell tests were used as appropriate alternatives. In all cases, however, where Levene's statistic was violated, greater care should be taken in the interpretation of results, given the increased chance of falsely rejecting the null hypothesis. It

should also be noted that given the high number of repeated *t*-tests on a series of small samples, the possibility of increased Type 1 errors and intercorrelations was increased. Future research could address this issue by using the current findings to focus on specific offending types, compared to the current studies more omnibus approach, that would require fewer samples of greater size.

Future research could also expand the results by conducting General Linear Modelling and Factor Analysis given the current findings. These analytical techniques could be applied to any of the POCs or SOCs to examine in greater detail the possible predictive value of the personality traits at a factor and facet level or further confirm personality traits within more focused samples (for example, the varying levels of severity within violent offences), followed by specific dependent variable comparisons. This approach was not possible in the current thesis given the more exploratory approach, which required specific sample compositions and smaller offence group sizes across multiple sample groups.

Next, while the offending groups were more granular than in previous research in the field, they were still 'omnibus' groupings. This approach limited the research as, for example, while Violent Crimes offenders had different personality traits to the normative population and other offenders, various types of violent offending behaviour exists. Future research could examine offences within the offending types themselves to see whether differences exist. This approach would further refine and potentially highlight differences within the offending types of behaviour itself (for example, potential differences in personality between those who steal and those who commit fraud).

Additionally, while the personality profiles and matrices provide clear quantitative findings, they do not explain the personal background of the offender or the context in which their crimes were committed. Future research could include interviewing participants with a focus on two key areas. The first focus of the interview could be on the individual's background and what led to them committing the crime they did. This information would provide additional insight into both the type of person the offender was and what might help account for disparities when comparing offenders who committed the same offence. For example, an offender could express their motivation in committing a specific offence.

This qualitative interview approach would also help address the limitation highlighted in Chapter 3.2 of groups not being completely 'pure' (i.e., certain offenders may have committed other crimes falling within groups other than the one to which they were allocated). Such an approach would also help to further reduce the likelihood of 'faking' or the participant giving more socially desired responses undetected by the researcher. However, the limitation of socially desirable responses was not seen to be any more prominent with the current samples than it would be with members of the general population. As Ashton and Lee (2020) highlight, the HEXACO scales include more minor variance than the Big Five scales due to self-response styles. Also, the results for neither the ex-offenders nor the offenders had any bearing on the participants' lives. It was made very clear to all participants that only the researcher and his research team would have access to the results. The second focus of the interview could be on what offenders believe would benefit them rehabilitation-wise. By directly asking what they believe works or does not work, and then comparing their responses to the personality profiles and academic research, greater clarity and confidence in assigning rehabilitation programs to offenders would be possible.

Concerning how the data itself was collected and the study design, certain variables could not be controlled for. Firstly, the participants were from different offender populations, and differing rehabilitation treatment programs were being administered to participants. Secondly, participant recruitment came from various prisons, and the selection of suitable participants in some prisons by a staff liaison may have resulted in a bias occurring whereby the liaison selected participants who would have been more agreeable to participating. Thirdly there was a difference in the administration of the HEXACO-PI-R between the countries. The Australian ex-offender sample completed the instrument at the Outcare offices or their own home, whereas the Czech Republic offender sample completed it within the prison. This difference may have led to some participants in the Czech Republic sample being in an increased state of stress when they completed the instrument. Also, gender differences could not be explored as the sample contained only male participants. Accordingly, the personality profiles and matrices generalisability is limited to male offenders. However, these limitations concerning the data collection and study design could

be addressed in future research with the use of the findings presented in this thesis, which more easily allow for the selection of smaller and more focused groups to examine further.

Finally, the thesis compared the results of samples obtained from two countries. While the personality profiles for the criminal offences committed did not, for the most part, differ by country in this study, that may not always be the case. Future research could follow a similar methodology to that employed in this thesis to examine other countries and offenders to identify any similarities or differences between their personality profiles and the ones developed by the thesis exist. This research would aid in the generalisability of the findings on a global level and also assist in addressing the question of whether different social cultures (for example, individualistic or collectivistic cultures) influence the personality traits of offenders and the types of crimes they commit.

6.11 Conclusions

This thesis examined whether personality differences existed at a factor and facet level between offenders and non-offenders using the HEXACO model of personality. Additionally, it examined whether differences existed between offenders based upon different types of offending behaviour. These two areas were measured using a sample from the Czech Republic and a sample from Australia to help determine how personality traits can better guide rehabilitation program selection, based upon the type of offence an individual had committed. The following four conclusions were reached.

1) Independent-samples *t*-tests revealed that HEXACO offending profiles (i.e., violent, substance abuse, financial, and sexual (paedophilia) were not significantly different at a personality factor level between Czech offenders ($n = 133$) and Australian ex-offenders ($n = 38$).
2) Independent-samples *t*-tests revealed that the combined offender sample and non-offenders normative sample HEXACO personality profiles were significantly different at a personality factor and facet level.
3) That HEXACO primary offending profiles (i.e., violent, substance abuse and drug-related, property and financial, and sexual (paedophilia) were significantly different

at a personality factor and facet level. These significant differences were demonstrated via between-subject ANOVAs and independent samples *t*-tests.

4) That HEXACO specific offending profiles (i.e., violent & substance abuse and drug-related offenders, violent & property and financial offenders, and sexual crimes (paedophilia) & violent offenders) were significantly different at a personality factor and facet level. These significant differences were demonstrated via between-subject ANOVAs and independent samples *t*-tests.

The findings of the thesis and its conclusions indicate that significant differences in personality traits do exist between criminal offenders and the normative population. Significant differences in personality traits also exist between different types of criminal offending. Future research could examine the responsiveness between specific personality traits and established rehabilitation programs.

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Appendix A: HEXACO-PI-R Personality Factor and Facet Definitions

Factor/Facet	Definition
Honesty-Humility	Persons with very high scores on the Honesty-Humility scale avoid manipulating others for personal gain, feel little temptation to break rules, are uninterested in lavish wealth and luxuries, and feel no special entitlement to elevated social status. Conversely, persons with very low scores on this scale will flatter others to get what they want, are inclined to break rules for personal profit, are motivated by material gain, and feel a strong sense of self-importance.
Sincerity	The *Sincerity* scale assesses a tendency to be genuine in interpersonal relations. Low scorers will flatter others or pretend to like them in order to obtain favors, whereas high scorers are unwilling to manipulate others.
Fairness	The *Fairness* scale assesses a tendency to avoid fraud and corruption. Low scorers are willing to gain by cheating or stealing, whereas high scorers are unwilling to take advantage of other individuals or of society at large.
Greed Avoidance	The *Greed Avoidance* scale assesses a tendency to be uninterested in possessing lavish wealth, luxury goods, and signs of high social status. Low scorers want to enjoy and to display wealth and privilege, whereas high scorers are not especially motivated by monetary or social-status considerations.

Modesty	The *Modesty* scale assesses a tendency to be modest and unassuming. Low scorers consider themselves as superior and as entitled to privileges that others do not have, whereas high scorers view themselves as ordinary people without any claim to special treatment.
Emotionality	Persons with very high scores on the Emotionality scale experience fear of physical dangers, experience anxiety in response to life's stresses, feel a need for emotional support from others, and feel empathy and sentimental attachments with others. Conversely, persons with very low scores on this scale are not deterred by the prospect of physical harm, feel little worry even in stressful situations, have little need to share their concerns with others, and feel emotionally detached from others.
Fearfulness	The *Fearfulness* scale assesses a tendency to experience fear. Low scorers feel little fear of injury and are relatively tough, brave, and insensitive to physical pain, whereas high scorers are strongly inclined to avoid physical harm.
Anxiety	The *Anxiety* scale assesses a tendency to worry in a variety of contexts. Low scorers feel little stress in response to difficulties, whereas high scorers tend to become preoccupied even by relatively minor problems.
Dependence	The *Dependence* scale assesses one's need for emotional support from others. Low scorers feel self-assured and able to deal with problems without any help or advice, whereas high scorers want to share their difficulties with those who will provide encouragement and comfort.

Sentimentality	The *Sentimentality* scale assesses a tendency to feel strong emotional bonds with others. Low scorers feel little emotion when saying good-bye or in reaction to the concerns of others, whereas high scorers feel strong emotional attachments and an empathic sensitivity to the feelings of others.
eXtraversion	Persons with very high scores on the Extraversion scale feel positively about themselves, feel confident when leading or addressing groups of people, enjoy social gatherings and interactions, and experience positive feelings of enthusiasm and energy. Conversely, persons with very low scores on this scale consider themselves unpopular, feel awkward when they are the center of social attention, are indifferent to social activities, and feel less lively and optimistic than others do.
Social Self-Esteem	The *Social Self-Esteem* scale assesses a tendency to have positive self-regard, particularly in social contexts. High scorers are generally satisfied with themselves and consider themselves to have likable qualities, whereas low scorers tend to have a sense of personal worthlessness and to see themselves as unpopular.
Social Boldness	The *Social Boldness* scale assesses one's comfort or confidence within a variety of social situations. Low scorers feel shy or awkward in positions of leadership or when speaking in public, whereas high scorers are willing to approach strangers and are willing to speak up within group settings.
Sociability	The *Sociability* scale assesses a tendency to enjoy conversation, social interaction, and parties. Low scorers generally prefer solitary activities and do not seek out conversation, whereas high scorers enjoy talking, visiting, and celebrating with others.

Liveliness	The *Liveliness* scale assesses one's typical enthusiasm and energy. Low scorers tend not to feel especially cheerful or dynamic, whereas high scorers usually experience a sense of optimism and high spirits.
Agreeableness (versus Anger)	Persons with very high scores on the Agreeableness scale forgive the wrongs that they suffered, are lenient in judging others, are willing to compromise and cooperate with others, and can easily control their temper. Conversely, persons with very low scores on this scale hold grudges against those who have harmed them, are rather critical of others' shortcomings, are stubborn in defending their point of view, and feel anger readily in response to mistreatment.
Forgivingness	The *Forgivingness* scale assesses one's willingness to feel trust and liking toward those who may have caused one harm. Low scorers tend 'hold a grudge' against those who have offended them, whereas high scorers are usually ready to trust others again and to re-establish friendly relations after having been treated badly.
Gentleness	The *Gentleness* scale assesses a tendency to be mild and lenient in dealings with other people. Low scorers tend to be critical in their evaluations of others, whereas high scorers are reluctant to judge others harshly.
Flexibility	The *Flexibility* scale assesses one's willingness to compromise and cooperate with others. Low scorers are seen as stubborn and are willing to argue, whereas high scorers avoid arguments and accommodate others' suggestions, even when these may be unreasonable.

Patience	The *Patience* scale assesses a tendency to remain calm rather than to become angry. Low scorers tend to lose their tempers quickly, whereas high scorers have a high threshold for feeling or expressing anger.
Conscientiousness	Persons with very high scores on the Conscientiousness scale organise their time and their physical surroundings, work in a disciplined way toward their goals, strive for accuracy and perfection in their tasks, and deliberate carefully when making decisions. Conversely, persons with very low scores on this scale tend to be unconcerned with orderly surroundings or schedules, avoid difficult tasks or challenging goals, are satisfied with work that contains some errors, and make decisions on impulse or with little reflection.
Organisation	The *Organization* scale assesses a tendency to seek order, particularly in one's physical surroundings. Low scorers tend to be sloppy and haphazard, whereas high scorers keep things tidy and prefer a structured approach to tasks.
Diligence	The *Diligence* scale assesses a tendency to work hard. Low scorers have little self-discipline and are not strongly motivated to achieve, whereas high scorers have a strong 'work ethic' and are willing to exert themselves.
Perfectionism	The *Perfectionism* scale assesses a tendency to be thorough and concerned with details. Low scorers tolerate some errors in their work and tend to neglect details, whereas high scorers check carefully for mistakes and potential improvements.
Prudence	The *Prudence* scale assesses a tendency to deliberate carefully and to inhibit impulses. Low scorers act on impulse and tend not to consider consequences, whereas high scorers consider their options carefully and tend to be cautious and self-controlled.

Openness to Experience	Persons with very high scores on the Openness to Experience scale become absorbed in the beauty of art and nature, are inquisitive about various factors of knowledge, use their imagination freely in everyday life, and take an interest in unusual ideas or people. Conversely, persons with very low scores on this scale are rather unimpressed by most works of art, feel little intellectual curiosity, avoid creative pursuits, and feel little attraction toward ideas that may seem radical or unconventional.
Aesthetic Appreciation	The *Aesthetic Appreciation* scale assesses one's enjoyment of beauty in art and in nature. Low scorers tend not to become absorbed in works of art or in natural wonders, whereas high scorers have a strong appreciation of various art forms and of natural wonders.
Inquisitiveness	The *Inquisitiveness* scale assesses a tendency to seek information about, and experience with, the natural and human world. Low scorers have little curiosity about the natural or social sciences, whereas high scorers read widely and are interested in travel.
Creativity	The *Creativity* scale assesses one's preference for innovation and experiment. Low scorers have little inclination for original thought, whereas high scorers actively seek new solutions to problems and express themselves in art.
Unconventionality	The *Unconventionality* scale assesses a tendency to accept the unusual. Low scorers avoid eccentric or nonconforming persons, whereas high scorers are receptive to ideas that might seem strange or radical.
Interstitial Scale	A scale intended to measure traits that load moderately on two or more of the six factors (i.e., factors) (Lee & Ashton, 2009c).

Altruism (versus Antagonism)	The *Altruism (versus Antagonism)* scale assesses a tendency to be sympathetic and soft-hearted toward others. These traits tend to load on the Honesty-Humility, Agreeableness, and Emotionality factors (Ashton & Lee, 2001, 2007). High scorers avoid causing harm and react with generosity toward those who are weak or in need of help, whereas low scorers are not upset by the prospect of hurting others and may be seen as hard-hearted.

(Lee & Ashton, 2009b)

Appendix B: Participant Information Form (English)

Participant Information Form

Project title: Targeted Rehabilitation: A Criminological and Psychological Approach to Reducing Recidivism Using Personality Traits to Achieve Treatment Efficacy
Name of Researchers: Michael Montalto (PhD Student) and Dr Hilde Tubex (PhD Supervisor)

Dear Potential Participant,

You are invited to participate in the above research project, which is being conducted primarily by Michael Montalto of the School of Law at The University of Western Australia.

What the study is aiming to do:

The objective of the study is to lower reoffending by offering more targeted rehabilitation options to individuals who are in prison, based on their personality traits and the rehabilitation services available within the prison. The project is based on Criminological and Psychological literature, which supports the idea that certain rehabilitation treatment approaches work best with certain types of personality traits. This project will look at the personality traits of individuals who have previously been convicted of an offence. It will then use this information to help select the best rehabilitation programs for people who have committed an offence based on their type of offence and their personality.

What you will be asked to do:

If you choose to participate, you will be asked to complete a personality survey called the HEXACO-PI-R. The survey has 100 short statements that you will be asked to place a number from 1 to 5 next to, depending on how strongly you agree or disagree with the statement. The explanation of the study and survey should take approximately 30 minutes. You will be compensated for your time. Also, you will not be asked to provide information about your previous offences as this information, with consent, can be obtained from Outcare. Your information and results will be de-identified, and all information provided will remain confidential. Instead of using a name, you will receive a unique participation number

Voluntary Participation and Withdrawal from the Study:

Participation in this study is completely optional. If you do choose to participate, please note that you can also choose to leave the study at any time without the need to provide an

explanation. If you do choose to withdrawal at any time and for any reason, there will be absolutely no consequences or impact upon you.

Your privacy:

Your privacy is of the utmost importance in this study. As such, your participation in the study and any information you provide in the scope of the study will be treated in a confidential manner. Please be aware, however, that you should not mention or discuss any offences that you committed and were not charged with or any that you intend to commit in the future. This is because Western Australian State Law legally forces the researcher to disclose that type of information.

Benefits and Risks:

In the short-term, you will receive a $20 JB Hi-Fi gift card. Your participation, in the long-term, may help others who have committed similar offences to receive more targeted and focused treatment that they find of greater benefit.

There are no foreseeable risks associated with the study. If at any time before or after the study, however, you have questions or concerns, you will be able to contact the primary researcher, Michael Montalto.

Contact Details:

If you would like to discuss any aspect of this study, please feel free to contact Michael Montalto at The University of Western Australia (School of Law), 35 Stirling Highway, Crawley, WA 6009.

Warm regards,

Michael Montalto

Appendix C: Participant Consent Form (English)

Participant Consent Form

Project title - Targeted Rehabilitation: A Criminological and Psychological Approach to Reducing Recidivism Using Personality Traits to Achieve Treatment Efficacy

I _____have read the information provided and any questions I have asked have been answered to my satisfaction. I agree to participate in this research project, realising that I may withdraw at any time without reason and without prejudice.

I understand that all identifiable information that I provide, including personal criminal history, is treated as confidential and will not be released by the investigator or the research team in any form that may identify me. The only exception to this principle of confidentiality is if this information is required by law to be released.

_____ _____

Participant signature Date

Approval to conduct this research has been provided by the University of Western Australia, in accordance with its ethics review and approval procedures. Any person considering participation in this research project, or agreeing to participate, may raise any questions or issues with the researchers at any time.

In addition, any person not satisfied with the response of researchers may raise ethics issues or concerns and may make any complaints about this research project by contacting the Human Ethics Office at the University of Western Australia on (08) 6488 3703 or by emailing to humanethics@uwa.edu.au

All research participants are entitled to retain a copy of any Participant Information Form and/or Participant Consent Form relating to this research project.

Appendix D: Participant Information Form (Czech Republic)

Informace pro účastníky výzkumu

Název projektu: Cílená rehabilitace: Kriminologický a psychologický přístup ke snížení recidivy pomocí osobnostních rysů pro dosažení účinné léčby
Jména výzkumných pracovníků: Michael Montalto (PhD student) a Dr. Hilde Tubex (PhD Supervisor)

Vážení potenciální účastníci,

zveme Vás k účasti na výše uvedeném výzkumném projektu, pod hlavním vedením Michaela Montalta z Právnické fakulty Univerzity Západní Austrálie. Byl jste vybrán se souhlasem Vězeňské služby České republiky.

Co je cílem studie:

Cílem studie je nabídnout informace o cílenějších možnostech resocializace osob, které jsou ve vězení, na základě jejich osobnostních rysů a odborných aktivit nabízených uvnitř věznice. Projekt je založen na kriminologické a psychologické literatuře, která podporuje myšlenku, že některé přístupy k rehabilitační léčbě nejlépe fungují u určitých typů lidí. Také, že určité typy lidí, kteří spáchali trestní čin, lépe reagují na určité resocializační programy.

O co budete požádáni:

Pokud se rozhodnete zúčastnit, budete požádáni o vyplnění osobního sotazníku nazvaného HEXACO-PI-R v určené místnosti ve Vaší věznici. Dotazník obsahuje 100 krátkých výroků, u nichž budete vyzváni, abyste na ně odpověděli číslem od 1 do5, v závislosti na tom, do jaké míry souhlasíte nebo nesouhlasíte s výrokem. Vysvětlení studie a průzkumu by mělo trvat přibližně 30 minut. Budete také požádáni o poskytnutí souhlasu s vydáním souhrnu vašich trestných činů, který bude zpřístupněn výzkumnému pracovníkovi. Vaše informace a výsledky budou anonymizovány a všechny Vami poskytnuté informace zůstanou důvěrné.

Dobrovolná účast a odstoupení od studie:

Účast na této studii je zcela dobrovolná. Pokud se rozhodnete zúčastnit, buďte si prosím vědomi, že můžete také od studie odstoupit kdykoli bez nutnosti vysvětlení. Pokud se rozhodnete odstoupit kdykoli a z jakéhokoli důvodu, nebude to mít na vás vůbec žádné důsledky.

Vaše soukromí:

Vaše soukromí je v této studii nejdůležitější. Účast na studii a vše Vami poskytnuté informace v rámci studie budou považovány za důvěrné. Vezměte prosím na vědomí, že během návštěvy nebudete tázáni na žádné z vašich trestných činů, protože tyto informace můžeme získat s Vaším souhlasem od vedení věznice. Uvědomte si také, že byste se neměli zmínit o žádném Vašem přestupku, který jste

spáchali a nebyli jste z něho obviněni, nebo že máte v úmyslu spáchat nějaký přestupek v budoucnosti.

Výhody a rizika:

Vaše účast může pomoci Vám i ostatním, kteří se dopustili podobných trestných činů, získat lépe cílenou léčbu nebo zacházení, které pro Vás budou více prospěšné.

Neexistují žádná předvídatelná rizika spojená se studií. Pokud však někdy během studie nebo po ní budete mít jakékoli dotazy nebo obavy, budete se moci obrátit na hlavního řešitele, Michaela Montalta.

Kontaktní údaje:

Pokud byste chtěli projednat jakýkoli aspekt této studie po její skončení, neváhejte kontaktovat Michaela Montalta na University of Western Australia (School of Law), 35 Stirling Highway, Crawley, WA 6009, Austrálie.

S vřelým pozdravem,

Michael Montalto

Appendix E: Participant Consent Form (Czech Republic)

Informovaný souhlas účastníka výzkumu

Název projektu - Cílená rehabilitace: Kriminologický a psychologický přístup ke snížení recidivy pomocí osobnostních rysů pro dosažení účinné léčby

Já,_____, jsem četl poskytnuté informace a všechny otázky, které jsem položil, byly zodpovězeny k mé spokojenosti. Souhlasím s mou účastí na tomto výzkumném projektu a uvědomuji si, že můžu svoji účast kdykoli odvolat bez zdůvodnění a bez jakýchkoli následků pro mou osobu.

Chápu, že se všemi osobními údaji, které poskytnu, včetně osobní kriminální historie, bude zacházeno jako s důvěrnými a nebudou uvolněny výzkumníkem nebo výzkumným týmem v jakékoliv formě, která by mě mohla identifikovat. Jedinou výjimkou z této zásady důvěrnosti je situace, kdy tyto informace budou požadovány na základě zákona.

_____ _____

Podpis účastníka Datum

Schválení k provedení tohoto výzkumu poskytla University of Western Australia v souladu se svými etickými posuzovacími a schvalovacími postupy. Kterákoli osoba, která uvažuje o účasti na tomto výzkumném projektu nebo o souhlasu s účastí, může kdykoli vznést jakékoli otázky nebo problémy výzkumníkům.

Navíc každá osoba, která není spokojena s odpovědí výzkumných pracovníků, může vznést své otázky nebo obavy ohledně etiky a může podat jakoukoli stížnost na tento výzkumný projekt kontaktováním Kanceláře pro lidskou etiku na University of Western Australia na (08) 6488 3703 nebo zasláním e-mailu na humanethics@uwa.edu.au

Všichni účastníci výzkumu jsou oprávněni uchovat si kopii jakéhokoli Informačního formuláře účastníka a / nebo Formuláře souhlasu účastníka týkajícího se tohoto výzkumného projektu.

Appendix F: SPSS Data Coding Variables

Label	SPSS Code	Values	Type of Measurement
Original ID	OriginalID	None	Nominal
ID	ID	None	Nominal
Sex	Sex	1: Male, 2: Female	Nominal
Age	Age	None	Scale
Location	Location	1: Czech Republic, 2: Australia	Nominal
Prison	Prison	1: Vinařice 2: Ostrov, 3: Jiřice, 4: Všehrdy, 5: Kuřim, 6: Liberec	Nominal
Primary Offence Category	POC	1: Violent Crimes, 2: Sexual Crimes, 3: Substance Abuse and Drug-Related Crimes, 4: Property and Financial Crimes, 5: Sexual Crimes (Paedophilia)	Nominal
Secondary Offence Category	SOC	1: Violent Crimes, 2: Sexual Crimes, 3: Substance Abuse and Drug-Related Crimes, 4: Property and Financial Crimes, 5: Sexual Crimes (Paedophilia)	Nominal
Specific Offender Group	SOG	6: Violent & Substance Abuse and Drug-Related Crimes, 7: Violent & Property and Financial Crimes, 8: Sexual (Paedophilia) & Violent Crimes	Nominal
Factor: Honesty-Humility	HonestyHumility	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Scale
Factor: Emotionality	Emotionality	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Scale
Factor: eXtraversion	eXtraversion	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Scale
Factor: Agreeableness	Agreeableness	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Scale

Label	SPSS Code	Values	Type of Measurement
Factor: Conscientiousness	Conscientiousness	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Scale
Factor: Openness	Openness	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Scale
HSinc	Facet: Honesty-Humility (Sincerity)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
HFair	Facet: Honesty-Humility (Fairness)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
HGree	Facet: Honesty-Humility (Greed-Avoidance)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
HMode	Facet: Honesty-Humility (Modesty)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
EFear	Facet: Emotionality (Fearfulness)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
EAnxi	Facet: Emotionality (Anxiety)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
EDepe	Facet: Emotionality (Dependence)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
ESent	Facet: Emotionality (Sentimentality)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
XSSEs	Facet: Extraversion (Social Self-Esteem)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
XSocB	Facet: Extraversion (Social Boldness)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
XSoci	Facet: Extraversion (Sociability)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
XLive	Facet: Extraversion (Liveliness)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal

Label	SPSS Code	Values	Type of Measurement
AForg	Facet: Agreeableness (Forgivingness)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
AGent	Facet: Agreeableness (Gentleness)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
AFlex	Facet: Agreeableness (Flexibility)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
APati	Facet: Agreeableness (Patience)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
COrga	Facet: Conscientiousness (Organisation)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
CDili	Facet: Conscientiousness (Diligence)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
CPerf	Facet: Conscientiousness (Perfectionism)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
CPrud	Facet: Conscientiousness (Prudence)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
OAesa	Facet: Openness to Experience (Aesthetic Appreciation)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
OInqu	Facet: Openness to Experience (Inquisitiveness)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal

Label	SPSS Code	Values	Type of Measurement
OCrea	Facet: Openness to Experience (Creativity)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
OUnco	Facet: Openness to Experience (Unconventionality)	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Alt	Facet (interstitial scale): Altruism	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 56. Conscientiousness: Diligence (Reverse Scored)	Cdili5_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 57. Agreeableness: Gentleness	Agent6	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 58. Extraversion: Social Boldness	Xsocb4	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 59. Emotionality: Anxiety (Reverse Scored)	Eanxi6_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 60. Honesty-Humility: Fairness	Hfair6	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 61. Openness to Experience: Creativity	Ocrea7	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 62. Conscientiousness: Perfectionism	Cperf3	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 63. Agreeableness: Flexibility (Reverse Scored)	Aflex7_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 64. Extraversion: Sociability	Xsoci5	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 65. Emotionality: Dependence	Edepe7	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal

Label	SPSS Code	Values	Type of Measurement
Question 66. Honesty-Humility: Greed-Avoidance (Reverse Scored)	Hgree5_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 67. Openness to Experience: Unconventionality	Ounco6	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 68. Conscientiousness: Prudence	Cprud4	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 69. Agreeableness: Patience	Apati4	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 70. Extraversion: Liveliness (Reverse Scored)	Xlive4_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 71. Emotionality: Sentimentality	Esent3	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 72. Honesty-Humility: Modesty (Reverse Scored)	Hmode6_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 73. Openness to Experience: Aesthetic Appreciation	Oaesa7	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 74. Conscientiousness: Organization (Reverse Scored)	Corga8_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 75. Agreeableness: Forgiveness (Reverse Scored)	Aforg8_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 76. Extraversion: Social Self-Esteem (Reverse Scored)	Xsses8_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal

Label	SPSS Code	Values	Type of Measurement
Question 77. Emotionality: Fearfulness (Reverse Scored)	Efear8_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 78. Honesty-Humility: Sincerity	Hsinc6	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 79. Openness to Experience: Inquisitiveness (Reverse Scored)	Oinqu8_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 80. Conscientiousness: Diligence (Reverse Scored)	Cdili6_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 81. Agreeableness: Gentleness	Agent7	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 82. Extraversion: Social Boldness (Reverse Scored)	Xsocb8_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 83. Emotionality: Anxiety	Eanxi8	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 84. Honesty-Humility: Fairness (Reverse Scored)	Hfair8_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 85. Openness to Experience: Creativity (Reverse Scored)	Ocrea8_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 86. Conscientiousness: Perfectionism	Cperf4	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 87. Agreeableness: Flexibility (Reverse Scored)	Aflex8_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 88. Extraversion: Sociability	Xsoci6	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal

Label	SPSS Code	Values	Type of Measurement
Question 89. Emotionality: Dependence (Reverse Scored)	Edepe8_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 90. Honesty-Humility: Greed-Avoidance (Reverse Scored)	Hgree7_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 91. Openness to Experience: Unconventionality (Reverse Scored)	Ounco8_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 92. Conscientiousness: Prudence (Reverse Scored)	Cprud8_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 93. Agreeableness: Patience (Reverse Scored)	Apati6_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 94. Extraversion: Liveliness (Reverse Scored)	Xlive7_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 95. Emotionality: Sentimentality (Reverse Scored)	Esent7_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 96. Honesty-Humility: Modesty (Reverse Scored)	Hmode8_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 97. Altruism	Alt3	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 98. Altruism	Alt4	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal
Question 99. Altruism (Reverse Score)	Alt7_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal

Label	SPSS Code	Values	Type of Measurement
Question 100. Altruism (Reverse Score)	Alt8_R	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree	Ordinal

Appendix G: Descriptive Statistics & One-Sample *t*-Test Comparisons between the Combined Czech Republic & Australian Sample and Normative Sample.

Personality Factor /Facet	**Combined Sample**			**Normative Sample (Non-Offender)**							
	n	*M (SD)*	*Shapiro-Wilk*	*N*	*M (SD)*	*Mean Difference*	*95% CI of the Difference*		*t*	*p*	*d*
							L	*U*			
Honesty-Humility	169	3.31 (.50)	.87	50,397	3.15 (.76)	.16	.08	.23	4.11	.001**	.32
Sincerity	171	3.43 (.67)	.48	50,397	3.17 (.92)	.26	.16	.36	5.09	.001**	.39
Fairness	169	3.02 (.96)	.27	50,397	3.33 (1.11)	–.31	–.46	–.17	–4.21	.001**	.32
Greed Avoidance	171	3.14 (.82)	.29	50,397	2.88 (1.01)	.26	.13	.38	4.07	.001**	.32
Modesty	171	3.63 (.66)	.24	50,397	3.22 (.90)	.41	.32	.51	8.24	.001**	.61
Emotionality	168	2.94 (.41)	.41	50,397	2.86 (.58)	.08	.02	.14	2.60	.01*	.20
Fearfulness	170	2.43 (.69)	.03*	50,397	2.52 (.77)	–.09	–.20	.01	–1.74	.08	.13
Anxiety	171	3.21 (.63)	.07	50,397	3.32 (.87)	–.11	–.20	–.01	–2.20	.03*	.18
Dependence	171	2.85 (.69)	.90	50,397	2.61 (.83)	.24	.14	.35	4.56	.001*	.34
Sentimentality	171	3.28 (.66)	.48	50,397	2.99 (.81)	.29	.20	.39	5.86	.001*	.44

eXtraversion	171	3.27 (.47)	.33	50,397	3.23 (.64)	.04	−.03	.11	1.05	.30	.09
Social Self-Esteem	171	3.48 (.68)	.01*	50,397	3.61 (.76)	−.13	.23	−.03	−2.51	.01*	.19
Social Boldness	171	2.97 (.73)	.18	50,397	3.10 (.86)	−.13	−.24	−.02	−2.27	.02*	.18
Sociability	171	3.23 (.70)	.56	50,397	2.97 (.87)	.26	.16	.37	4.90	.001**	.37
Liveliness	171	3.39 (.66)	.40	50,397	3.24 (.84)	.15	.05	.25	2.87	.01*	.23
Agreeableness	168	3.09 (.47)	.62	50,397	2.78 (.64)	.31	.24	.38	8.42	.001**	.66
Forgivingness	171	2.91 (.70)	.02*	50,397	2.41 (.84)	.50	.40	.61	9.47	.001**	.71
Gentleness	171	3.30 (.62)	.41	50,397	2.92 (.82)	.38	.28	.47	7.99	.001**	.61
Flexibility	171	3.09 (.61)	.12	50,397	2.68 (.75)	.41	.31	.50	8.77	.001*	.67
Patience	171	3.05 (.79)	.29	50,397	3.10 (.92)	−.05	−.17	.07	−.82	.42	.06
Conscientiousness	169	3.50 (.48)	.03*	50,397	3.49 (.56)	.01	−.07	.08	.17	.87	.02
Organisation	171	3.68 (.68)	.04	50,397	3.27 (.86)	.41	.31	.51	7.88	.001*	.60
Diligence	171	3.73 (.64)	.50	50,397	3.77 (.74)	.04	−.14	.06	−.82	.41	.06
Perfectionism	171	3.48 (.59)	.10	50,397	3.51 (.77)	−.03	−.12	.06	−.74	.46	.06
Prudence	171	3.09 (.70)	.01*	50,397	3.44 (.75)	−.35	−.45	−.24	−6.48	.001**	.50
Openness to Experience	170	3.33 (.53)	.09	50,397	3.73 (.55)	−.41	−.48	−.33	−10.04	.001**	.75

Aesthetic Appreciation	171	3.35 (.79)	.61	50,397	3.41 (.83)	–.06	–.18	.06	–1.01	.32	.08
Inquisitiveness	171	3.49 (.79)	.45	50,397	4.04 (.71)	–.55	–.67	–.43	–9.04	.001**	.70
Creativity	171	3.30 (.71)	.10	50,397	3.72 (.82)	–.42	–.53	–.32	–7.85	.001**	.59
Unconventionality	171	3.16 (.58)	.001**	50,397	3.76 (.66)	–.60	–.68	–.51	–13.56	.001**	1.03
Altruism (Interstitial Scale)	171	3.62 (.65)	.56	50,397	3.56 (.75)	–.04	–.04	.16	1.26	.21	.09

* Result was significant at a 0.05 level

**Result was significant at a 0.001 level

NB. All p values represent two-tailed tests

Appendix H. Direction, Effect Size, and Strength between the Combined Offender and Normative Sample

Personality Factor/Facet	Cohen's *d*	Offender Sample	Normative Sample	Effect Size Strength
Honesty-Humility	.32	Higher	Lower	Small
Sincerity	.39	Higher	Lower	Small
Fairness	.32	Higher	Lower	Small
Greed Avoidance	.32	Higher	Lower	Small
Modesty	.61	Higher	Lower	Medium
Emotionality	.20	Higher	Lower	Small
Fearfulness	-	-	-	-
Anxiety	.18	Lower	Higher	Small
Dependence	.34	Higher	Lower	Small
Sentimentality	.44	Higher	Lower	Small to Medium
eXtraversion	-	-	-	-
Social Self-Esteem	.19	Lower	Higher	Small
Social Boldness	.18	Lower	Higher	Small
Sociability	.37	Higher	Lower	Small to Medium
Liveliness	.23	Higher	Lower	Small
Agreeableness	.66	Higher	Lower	Medium to Large
Forgivingness	.71	Higher	Lower	Medium to Large
Gentleness	.61	Higher	Lower	Medium
Flexibility	.67	Higher	Lower	Medium to Large
Patience	-	-	-	-
Conscientiousness	-	-	-	-
Organisation	.60	Higher	Lower	Medium
Diligence	-	-	-	-
Perfectionism	-	-	-	-
Prudence	.50	Lower	Higher	Medium
Openness to Experience	.75	Lower	Higher	Medium to Large
Aesthetic Appreciation	-	-	-	--
Inquisitiveness	.70	Lower	Higher	Medium to Large
Creativity	.59	Lower	Higher	Medium to Large
Unconventionality	1.03	Lower	Higher	Large to Very Large