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Comparison of emotional dispositions between street gang and non-gang prisoners.

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## Abstract

*Objective:* Effectively recognizing, identifying and utilizing emotional stimuli is essential for successful social interactions; with deficits in these robustly identified as risk factors for offending. Psychological understanding of street gang membership is limited, particularly surrounding emotional dispositions distinguishing street gang from non-gang offenders. This study examined how street gang members compare to non-gang offenders on: trait emotional intelligence (TEI), antisocial personality disorder (ASPD), callous-unemotional traits, anger rumination and aggression. *Method:* Recruited through volunteer sampling, participants included 73 (44 street gang and 29 non-gang) male offenders incarcerated at a UK Category C prison. Participants completed seven questionnaires assessing emotional dispositions, social desirability and, consistent with the Eurogang definition, street gang membership. To compare participants' demographics and identify the predictors of street gang membership, chi-square and discriminant function analyses were conducted. *Results:* With a significant discriminant function,  $A = .80$ ,  $\chi^2(6) = 14.96$ ,  $p = .021$ , high levels of ASPD, anger rumination and aggression, and low levels of TEI predict street gang membership. Compared to non-gang prisoners, street gang prisoners did not differ on callous-unemotional traits, age or ethnicity. *Conclusions:* Results suggest that, compared to non-gang prisoners, street gang members were more likely to possess dysfunctional emotional dispositions. Findings from this research have important implications in terms of developing interventions for street gang membership. Specifically, this research supports the need for gang-specific early intervention and prevention programs, with emotion-focused components. Ideas for future research are discussed; including the identification of further socio-cognitive, personality and emotional traits distinguishing street-gang from non-gang offenders.

*Keywords:* Street Gang, Emotion, Trait Emotional Intelligence, Eurogang, Personality Comparison of emotional dispositions between street gang and non-gang prisoners.

Caught in the cross-fire between rival Liverpool gangs, the 2007 murder of 10-year old Rhys Jones escalated the already growing concern with violent street gangs throughout the United Kingdom (Treadwell & Gooch, 2015). The Jones' case highlighted that street gangs were not restricted to London (Centre for Social Justice, 2009); within which 224 known street gangs are responsible for 20% of annually recorded violent crimes (House of Commons, 2015; London Crime Reduction Board, 2014). Instigated following the 2011 London riots, the Government's 'Ending Gang and Youth Violence' strategy aims to reduce street gang membership and associated violence, through prevention, intervention and enforcement approaches (HM Government, 2011).

Since initiation of this strategy, UK gang research has rapidly increased; particularly surrounding the trajectory and associated social and cognitive factors of street gang membership (e.g., Niebieszczanski, Harkins, Judson, Smith, & Dixon, 2015). Yet, literature surrounding emotional dispositions of street gang members remains scarce (Alleyne & Wood, 2010); despite deficits in emotional processes robustly identified as risk factors for violent offending (Ward & Nee, 2009). Consequently, to ensure prevention and intervention strategies are effective, it is essential that risk factors for street gang membership are identified and targeted. As such, the current study aims to identify key emotional dispositions relevant to street gang involvement.

According to the Diagnostic and Statistical Manual of Mental Disorders Version Five (DSM-V; American Psychological Association, 2013), personality disorders are categorized according to their emotional temperaments. For instance, antisocial personality disorder (ASPD) is characterized by erratic and dramatic displays of emotions (APA, 2013). Self-reported levels of ASPD is found to be higher amongst gang than non-gang offenders (Coid et al., 2013). This is unsurprising as the impulsiveness and callous-disregard for others' feelings, synonymous with ASPD, enables the violent behaviors associated with street gang

membership (Klein & Maxson, 2006). However, ASPD cannot be diagnosed prior to the age of 18 years (APA, 2013); despite the majority of individuals who join street gangs, tending to do so between the ages of 12 to 18 years (Rizzo, 2003). As such, ASPD may *result* from, rather than cause, involvement in street gangs; particularly because street gang members are at high risk of developing Post Traumatic Stress Disorder (PTSD), from their exposure to violence (Kerig, Chaplo, Bennett, & Modrowski, 2016) and PTSD is known to prompt the development of ASPD (Goodwin & Hamilton, 2003).

Yet, research provides a lack of consensus on personality variables. For example, Valdez, Kaplan and Codina (2000) found psychopathy (characterized by emotional shallowness, manipulation and a lack of empathy and remorse), did not differ between male gang members and a matched sample of violent non-gang individuals; despite theorists arguing psychopathy is equivalent to, or on the spectrum with, ASPD (Coid & Ullrich, 2010). However, when assessing the subscales of psychopathy, Chu, Daffern, Thomas, Ang, and Long (2013) found street gang members score higher on the impulsive-irresponsible, but not callous-unemotional (CU) and grandiose-manipulative subscales. This lack of distinction between street gang and non-gang offenders on CU and grandiose-manipulative subscales may be because street gang members need to cooperate in achieving common goals (Chu et al., 2013). In contrast, other researchers have found high CU traits to be associated with street gang membership; particularly in gang members in a leadership position (Thornton et al., 2015). Thus, CU traits warrant closer examination as they may be predictive of level of street gang involvement (Dupéré, Lacourse, Willms, Vitaro, & Tremblay, 2007).

One key feature of all the personality dispositions discussed above, is a lack of ability to adapt behavior in response to information received regarding emotions (Kahn, Ermer, Salovey, & Kiehl, 2016). Recognition, identification and utilization of emotional stimuli are the defining features of Trait Emotional Intelligence (TEI; Petrides & Furnham, 2001).

Measured using self-report methods, TEI is a collection of self-perceptions regarding an ability to process emotions (Petrides, Pita, & Kokkinaki, 2007). Low TEI has been associated with numerous cognitive (i.e., rumination and empathy; Lanciano, Curci & Zatton, 2010; Salas-Wright, Olate & Vaughn, 2012), behavioral (i.e., bullying and substance misuse; García-Sancho, Salguero, & Fernández-Berrocal, 2014; Trinidad & Johnson, 2002), and social (i.e., poor academic engagement and attainment; Petrides, Frederickson & Furnham, 2004) factors robustly identified as increasing the risk of joining a street gang. Consequently, TEI may be an important risk factor for street gang membership.

So far research has shown that low TEI relates to offending behavior (Megreya, 2015), which may mean that it will not distinguish street gang offenders from offenders more generally. However, critically, individuals with low TEI are likely to become overwhelmed when experiencing negative emotions, as they cannot effectively manage emotional responses to negative stimuli (Abdollahi & Talib, 2015). As such, individuals with low TEI are at risk of developing mental illness, including suicidality, anxiety and depression (Resurrección, Salguero, & Ruiz-Aranda, 2014) and, as recent research shows, gang members have higher levels of mental illness than do non-gang offenders (Wood, Kallis, & Coid, 2017). Despite this, the relationship between TEI and street gang membership has not yet been assessed.

Street gang membership is characterized by repeated acts of interpersonal aggressive and violent behavior, more so than any other offending typology (Vasquez, Lickel, & Hennigan, 2010) and the influence of emotions is well-established as a predictor of aggressive behaviors (Robertson, Daffern, & Bucks, 2014). In particular, aggressive individuals display deficits in facial affect processing and recognition (García-Sancho, Salguero, & Fernández-Berrocal, 2015); consistent with research finding aggression to be associated with low Emotional Intelligence (EI; García-Sancho, Salguero, & Fernández-

Berrocal, 2016a). However, demonstrative of the inextricable relationship between cognition and emotion (Ward, 2017), anger rumination (repetitive thoughts surrounding anger-inducing events), has been identified as mediating the relationship between aggression and EI (García-Sancho, Salguero, & Fernández-Berrocal, 2016b; Vasquez, Osman, & Wood, 2012).

Arguably, this may be because anger rumination temporarily reduces ability to evaluate emotional stimuli and respond adaptively (Denson, Pedersen, Friese, Hahm, & Roberts, 2011). Yet, this research focused specifically on ability EI (AEI); conceptualized as a mental ability and measured through maximum performance tasks (Mayer, Salovey, Caruso, & Sitarenios, 2003). Such tasks lack predictive validity and rely solely on subjective scoring methods (Petrides, 2011). Consequently, research is needed to assess whether TEI can predict street gang membership, when anger rumination and inclination to aggress are accounted for.

Understanding the influence of emotions on street gang membership is essential to developing effective intervention strategies. Current interventions either place little focus on emotional factors or suffer from limited evidence guiding which emotional dispositions to target (Day, 2009). If, as suggested throughout this paper, emotional deficits link to street gang membership, it is crucial these are targeted alongside cognitive and social factors to improve effectiveness of street gang intervention programs. Past research notes the success of emotion-focused treatment programs in reducing violent, antisocial and offending behavior (Hubble, Bowen, Moore, & van Goozen, 2015; Penton-Voak et al., 2013); particularly amongst adolescent offenders with high CU-traits (Dadds, Cauchi, Wimalaweera, Hawes, & Brennan, 2012). In addition, interventions aimed specifically at increasing TEI have improved psychological well-being, social relationships and future prospects (Nelis et al., 2011). Thus, by identifying emotional dispositions and the role they have in predicting involvement in street gangs, we can determine if street gang members will benefit from an

emotion-focused component within an intervention which may help them to desist from gang membership and its associated interpersonal violence.

### **The Current Study**

As noted, little is known about emotional dispositions distinguishing street gang from non-gang offenders. The aim of this study is to distinguish between street gang and non-gang prisoners' levels of TEI, CU-traits, anger rumination, aggression and ASPD, whilst controlling for social desirability. Utilizing the Eurogang definition, throughout this study a street gang member is defined as an individual involved in "*any durable, street-orientated youth group whose involvement in illegal activity is part of its group identity*" (Weerman et al., 2009, p.20). Although it is possible that some street gang members engage in prison gangs, past research has found that prison gang activity is not predicted by involvement in street gangs (Wood, Alleyne, Mozova, & James, 2014); meaning street and prison gangs can be considered as distinct groups. As street gangs are known to be responsible for a disproportionate and increasing amount of interpersonal violence compared to non-gang offenders (Melde, Esbensen, & Carson, 2016), it was decided that the focus of this study will be on street gang membership only.

Based on the above, it is hypothesized that compared with non-gang prisoners, street gang prisoners would express higher CU traits, higher anger rumination and increased inclination to aggress, lower TEI and be more likely to fulfil ASPD criteria.

## **Method**

### **Participants**

Consistent in sample size to previous research (e.g., Wood & Dennard, 2017), seventy-four male offenders imprisoned at a UK public sector training prison participated (see table 1). In terms of street gang involvement, this prison is representative of other institutions throughout the UK. An understanding of basic English was required for

participation in this research and one participant was excluded on this basis. As the focus of this study was on emotional traits distinguishing street gang members from non-gang individuals, information regarding offence history (beyond self-reported group membership), was not relevant and therefore not collected. See Table 1 for demographic characteristics.

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INSERT TABLE 1 HERE

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### **Design**

A within-participants design was employed. Predictor variables included: level of TEI, ASPD, CU traits, aggression and anger rumination. The outcome variable was street gang membership, categorized as: (1) street gang or (2) non-gang.

### **Materials**

**Street Gang Membership.** The Eurogang Youth Survey (Weerman et al., 2009) is the leading method for classification of street gang membership. Past research has found this survey to be a valid measure for identifying a subset of individuals fulfilling expectations of street gang members (Medina, Aldridge, Shute, & Ross, 2013). Selected from 89 items, six items were used to assess street gang membership. The term ‘gang’ was avoided due to its emotionally charged meaning (Esbensen & Weerman, 2005). As involvement in street and prison gangs are unrelated (Wood et al., 2014), participants were asked only about their engagement in street gangs for six months prior to imprisonment to help reduce effects of memory deficits. To be classified as a street gang member, participants’ had to belong to a group which met the following Eurogang criteria: (1) include three or more people, (2) exist for more than three months, (3) meets in public places and (4) accepts, and engages in, illegal activity (Matsuda, Esbensen, & Carson, 2012).

**Trait Emotional Intelligence.** The Trait Emotional Intelligence Questionnaire - Short Form (TEIQue-SF; Petrides, 2009) is a 30-item measure assessing global TEI.

Respondents rate agreement to items (e.g., *'expressing my emotions with words is not a problem for me.'*) on seven-point Likert scales from 'Completely Disagree' (1) to 'Completely Agree' (7). Included in TEIQue-SF are two items measuring each of the 15 facets of TEI, including adaptability, emotional expression and emotional perception; although these cannot be derived from the TEIQue-SF. High scores relate to high TEI.

Unlike other measures of TEI, TEIQue-SF has high predictive validity and quick implementation (Andrei, Siegling, Aloe, Baldaro, & Petrides, 2016). So, TEIQue-SF is useful where attention is limited; supporting applicability to offending populations (Cooper & Petrides, 2010). Cronbach's Alpha, the most commonly used statistical test of internal consistency, was conducted. With Cronbach's Alpha scores greater than .70 indicating an acceptable level of reliability (Taber, 2017), the TEIQue-SF was found to have good internal consistency ( $\alpha = .86$ ).

**Antisocial Personality Disorder.** The Millon Clinical Multiaxial Inventory Third Edition (MCMI-III; Millon, Davis, & Grossman, 2006) is the most frequently used instrument of adult psychopathology. As such, the Antisocial Personality Scale of the MCMI-III was used in this study. This scale includes 17 items (e.g., *'I often criticize people strongly if they annoy me.'*), which respondents rated as 'true' or 'false'. To establish raw scores, if items are endorsed: true prototypal items (e.g., *'punishment never stopped me from doing what I wanted'*) are weighted as two; true non-prototypal items (e.g., *'I like to flirt with members of the opposite sex'*) and false items (e.g., *'people tell me I'm a very proper and moral person'*) are weighted as one. Referring to standardized population criteria, raw scores are converted to base rate scores (Ó Ciardha et al., 2015). Higher base rate scores relate to higher levels of ASPD. Cronbach's alpha indicated that the Antisocial Personality Scale had good internal consistency ( $\alpha = .84$ ).

**Callous-Unemotional Traits.** The Inventory of Callous-Unemotional Traits is a 24-item self-report scale was designed to assess CU traits in youths (Frick, 2004). Items focus upon three hypothesized components of CU traits: callousness (e.g., *'I do not feel remorseful when I do something wrong'*), unemotional (e.g., *'I express my feelings openly'*), and uncaring (e.g., *'I seem very cold and uncaring to others'*). Items are scored on four-point Likert scales (0 = 'not at all true', 3 = 'definitely true'). Following reverse-coding of positively-worded items, scores are summed obtaining the total score; higher scores represent higher CU traits. ICU is frequently used in offending populations (e.g., Kimonis et al., 2014), and, as the current study found, has good internal consistency ( $\alpha = .82$ ).

**Inclination for Aggression.** Comprising of 29-items, the Aggression Questionnaire (Buss & Perry, 1992) measures four components of aggression: verbal (e.g., *'I often find myself disagreeing with people'*), physical (e.g., *'If I have to resort to violence to protect my rights, I will'*), anger (e.g., *'I have trouble controlling my temper'*) and hostility (e.g., *'I am suspicious of overly friendly strangers'*). Items are rated on seven-point Likert scales from 'extremely unlike me' (1) to 'extremely like me' (7). Aggression score is equivalent to total sum of item scores, with higher scores relating to higher inclination to aggress. Buss and Perry's (1992) Aggression Questionnaire is commonly used with offending populations (Palmer & Thakordas, 2005), and, as this study found, has good internal consistency ( $\alpha = .92$ ).

**Angry Thoughts.** The Anger Rumination Scale (Sukhodolsky, Golub, & Cromwell, 2001) is a 19-item measure assessing disposition towards rumination (e.g., *'I analyze events that make me angry'*). Respondents rate frequency of experiencing the given statement from 'almost never' (1) to 'almost always' (4). Item sum score equates to tendency to ruminate following anger. Past research utilized the Anger Rumination Scale with offending

populations, including street gang members (Vasquez et al., 2012). The scale has good internal consistency ( $\alpha = .94$ ).

**Social Desirability.** Social desirability bias, the tendency to present oneself positively whilst neglecting to report undesirable attitudes/behaviors to an audience, is known to be a source of inaccuracy in studies using self-reporting methodology (Paulhus, 1988). As the current study asks participants to self-report offending behavior (i.e., street gang membership and inclination for aggression), it was decided to control for social desirability. The Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1988), a frequently used measure of social desirability, contains 40 items (e.g., *'I never swear'*), rated on seven-point Likert scales from 'not true' (1) to 'very true' (7). The current study utilizes continuous scoring; following reverse-coding of negatively-keyed items, all item scores are summed together. This avoids extremity bias seen in dichotomizing scoring (Stöber, Dette, & Musch, 2002). Past research has utilized the BIDR across various samples, including offending populations (Kroner & Weekes, 1996). Good internal consistency of the BIDR was found in this study ( $\alpha = .74$ ).

### **Procedure**

Participants were approached by a researcher independent of police and prison services, to ask if they would like to participate. This led to a snow ball sampling technique used for recruitment, with participants recommending their peers take part. Participants were informed the study aim was to compare emotional traits of group members to non-group individuals. Following consent, research was undertaken in the form of one-to-one interviews, in a closed room, enabling participants to speak freely. In addition to completing all materials, participants provided demographic information, including age and ethnicity. Each interview took approximately 40 minutes. All questionnaires and information sheets were read to participants to overcome literacy issues.

### **Ethical Considerations**

Fulfilling the British Psychological Society (2009) ethical code of conduct, approval was gained from ethics committees at the University of Kent and National Offender Management Service (NOMS) prior to data collection. To enable consent, participants were fully informed of aims and procedure, and assured responses would remain anonymous and confidential. Participants signed a consent form, which was kept separate from questionnaire materials to maintain confidentiality. A unique participation code was created for questionnaire materials enabling confidentiality and anonymity. Aside from necessary caveats specified by NOMS (i.e., security breaches, disclosure of additional offences, violating prison rules during interview and threats to harm self or others), participants were told that their responses would have no bearing on their management in the prison. No incentive was given for participation.

Participants were told participation was optional, and they could withdraw at any point during, or one month following, participation. To enable withdrawal, the researcher visited each participant two days following the study. If any wished to withdraw following this visit, they were asked to give their unique participation code to a named member of prison staff who would refer the participant's wish to withdraw to the researcher. Upon completion, participants were provided with verbal and written debriefs, containing withdrawal process, method of contacting researchers and process of attaining support services. Completed questionnaires were securely stored, with only named researchers having access.

### **Results**

Data was analyzed with a  $p < .05$  significance level.

### **Demographic Variables**

To assess whether street gang and non-gang offenders differed according to demographic variables, age and ethnicity were compared. An independent t-test identified no difference in age for street gang ( $M = 26.23$ ,  $SD = 5.39$ ) compared to non-gang offenders ( $M = 28.24$ ,  $SD = 7.99$ );  $t(71) = 1.19$ ,  $p = .24$ ,  $d = 0.28$ . Consistent with Wood and Dennard's (2017) research, due to the diversity in ethnic minority groups reported, offenders were categorized as White (39.7%) or Black and Minority Ethnic (BAME; 60.3%). Chi-square test of association found no difference in ethnicity according to street gang involvement;  $\chi^2(1, N = 73) = 0.055$ ,  $p = .815$ .

### **Predicting Involvement in Street Gangs**

Discriminant function analysis was used to test the hypothesis that, compared with non-gang prisoners, street gang prisoners would express: higher CU traits, anger rumination and aggression, lower TEI and be more likely to fulfil ASPD criteria. Unlike logistic regression, discriminant function analysis is a robust measure for comparing categorical dependent variables with a smaller sample size (Tabachnik & Fidell, 2013), making this the most appropriate measure for the current study. In addition, discriminant function analysis, unlike analysis of variance measures, enables multiple predictor variables to be compared concurrently. As such, the following predictor variables were entered into the discriminant function analysis in a single block: TEI, ASPD, CU traits, aggression and anger rumination. In addition, socially desirable responding was included to control for its effect on other variables.

Results produced a significant discriminant function  $\lambda = .80$ ,  $\chi^2(6) = 14.96$ ,  $p = .021$ . The Canonical correlation of .44 shows that the model accounts for 19.71% of variance. The cross-validated classification indicates 71.2% of cases were correctly classified. Statistically and marginally significant mean differences were observed for the majority of predictors (see

Table 2); with an exception being no difference in CU-traits between street gang and non-gang offenders.

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INSERT TABLE 2 HERE

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Structure matrix loadings of .3 or above indicated variable importance (see Table 3).

With the exception of CU-traits, all predictors exceeded accepted level of .3; suggesting high levels of ASPD, anger rumination and aggression, and low levels of TEI were important predictors of street gang involvement.

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### **Discussion**

This study assessed differences in emotional dispositions between street gang and non-gang prisoners; specifically, levels of CU traits, ASPD, anger rumination, aggression and TEI. The expectations were mainly upheld: as predicted, street gang prisoners scored higher on ASPD, anger rumination and aggression, and lower on TEI, than non-gang prisoners. However, counter to expectations, CU traits did not differ between street gang and non-gang prisoners.

Consistent with past research, this study found higher levels of ASPD in street gang, than non-gang prisoners (Coid et al., 2013; Wood et al., 2017). This refutes suggestions that street gangs reject individuals with personality disorders, due to their unpredictability (Densley, 2013). As such, erratic and impulsive behaviors, exhibited by those with ASPD, may attract individuals to join street gangs (Klein & Maxson, 2006). This supports the view that ASPD may predispose an individual to joining a street gang. However, the current study cannot answer this; longitudinal assessment is needed to decipher whether ASPD makes one vulnerable to joining a street gang or emerges due to engagement in street gang members (Raby & Jones, 2016). One reason that ASPD may be more apparent in street gang members

is because they are more likely to have been involved in high levels of interpersonal violence (Melde et al., 2016). Perpetrators of interpersonal violence are at increased risk of developing PTSD (Kerig et al., 2016), which hastens the development of ASPD (Goodwin & Hamilton, 2003) and research has shown that incarcerated street gang members have higher levels of PTSD than non-gang prisoners (Wood & Dennard, 2017).

Compared to non-gang prisoners, street gang prisoners exhibited lower TEI. This finding provides a novel perspective to street gang membership. It was questionable whether TEI would distinguish street gang from non-gang prisoners; particularly as low TEI is related to general offending behavior (Megreya, 2015). Yet, the clear association between low TEI and numerous risk factors for joining street gangs (as noted earlier), supports the finding that low TEI predicts street gang membership. This association makes intuitive sense: low TEI means street gang members have difficulty managing negative emotions (Abdollahi & Talib, 2015). As such, street gang members rely on maladaptive coping mechanisms, which can be harmful to oneself (e.g., self-harm and suicide; Madan, Brodie, & Hrobonova, 2013) or others (e.g., interpersonal violence; Melde & Esbensen, 2013). With this in mind, future research should assess whether low TEI mediates the relationship between street gang membership and mental illness.

With past research finding anger rumination mediates the relationship between ability EI and aggression (García-Sancho et al., 2016b), the current study assessed whether TEI would remain a predictor of street gang membership when accounting for inclination to aggress and anger rumination. This was supported, with low levels of TEI, and high levels of anger rumination and inclination to aggress all predicting street gang membership; demonstrating each of these dispositions remains important in its own right. It is possible this may be due to differences in emotional deficits underlying each disposition: whereas low levels of TEI is characterized by difficulty in emotion processing (Petrides & Furnham,

2001), engaging in anger rumination maintains negative emotions (Vasquez et al., 2012), whilst inclination to aggress is associated with social and emotional contagion (Vasquez, Wenborne, Peers, Ellis, & Alleyne, 2015). Therefore, it can be suggested street gang membership is related to a number of emotional deficits. However, particularly surrounding the influence of emotional contagion, further research is required to test this assumption.

A key finding of this study is the lack of relationship between street gang membership and CU traits. The reason for this is not clear. Past research, although limited, produced mixed findings (Chu et al., 2013; Thornton et al., 2015). Contradictory research, finding a positive relationship between street gang membership and CU traits, may be explained by response bias in self-reporting as a street gang member (Thornton et al., 2015). As such, Thornton and colleagues (2015) street gang sample may have consisted of those not concerned about others' views of their membership; characteristic of high CU traits (Goldweber, Dmitrieva, Cauffman, Piquero, & Steinberg, 2010). Comparatively, Chu and colleagues (2013) research used official records (gang intelligence reports), to confirm self-reported gang affiliation. As findings of the current study are consistent with that of Chu and colleagues (2013), it can be suggested that this study used a less biased sample than Thornton and colleagues (2013); explaining the lack of relationship between CU traits and street gang membership. Furthermore, high CU traits are common amongst offenders, particularly those who are violent or associate with delinquent (but not necessarily gang affiliated) peers (Oberth, Zheng, & McMahon, 2017). As such, high CU traits may be associated with general offending behavior, and not specific to street gang members (Kimonis, Frick, & Barry, 2004).

### **Clinical Implications**

In relation to early intervention and treatment programs, findings from this study have vital clinical implications. This study highlights the role emotional dispositions play in differentiating street gang from non-gang prisoners. As such, this emphasizes the need to

tailor treatment programs specifically to street gang prisoners, as their needs differ from the general offending population (Wood et al., 2017). Therefore, it can be suggested that including an emotion-focused component in treatment programs could aid in improving desistance amongst street gang prisoners; reducing the associated interpersonal violence (Mallion & Wood, in prep). Despite a current lack of evidence-base, such socio-emotional programs are particularly popular amongst schools as a method of early interventions for street gang involvement (Public Health England, 2015). Thus, this study provides a much-needed evidence-base to support the applicability of such programs for the resistance of street gang involvement.

### **Limitations**

This study is not without limitations. First, findings are constrained in terms of generalizability; the sample is composed of males, aged over 18 years, from one UK institution. This may explain why no demographic differences were found between street gang and non-gang prisoners despite previous research finding ethnicity and age to predict engagement in street gangs (Wood & Dennard, 2017). With number of females involved in street gangs increasing (O'Neal, Decker, Moule, & Pyrooz, 2014), it is also necessary to assess whether findings can be replicated with female street gang members. Secondly, no conclusions surrounding causality can be reached; longitudinal research, assessing development of emotional dispositions prior to, throughout, and post-street gang membership is necessary to establish a causal model. Finally, due to the statistical test used, the number of variables examined was limited. Thus, future research is required to examine additional emotional dispositions not assessed in this research. In particular, future research should use the full TEIQue; enabling a comprehensive assessment of emotional deficits across 15 specific facets (e.g., emotion expression, trait empathy; Andrei et al., 2016).

### **Conclusion**

This study demonstrated the importance of emotional dispositions in predicting street gang membership; particularly high levels of ASPD, anger rumination and aggression, and low levels of TEI. Findings of this study support the need for emotion-focused components in prevention and intervention programs aimed at street gang members; particularly targeting difficulties in emotion recognition, processing and regulation. With limited research assessing emotional dispositions of street gang members, this study highlights the need for increased consideration in this area to develop a comprehensive account of street gang membership.

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Table 1

*Demographic characteristics of street gang, non-gang and overall sample.*

Demographic Characteristics	Total Sample	Street Gang	Non-Gang
Sample Size (%)	73 (100)	44 (60.3)	29 (39.7)
Mean Age ( <i>SD</i> )	27.03 (6.57)	26.23 (5.39)	28.24 (7.99)
Ethnicity (%)			
White UK/Irish	23 (31.5)	14 (31.8)	9 (31)
Black Caribbean	12 (16.4)	6 (13.6)	6 (20.7)
Black British	10 (13.7)	8 (18.2)	2 (6.9)
Mixed Race	8 (11)	6 (13.6)	2 (6.9)
Black African	7 (9.6)	4 (9.1)	3 (10.3)
White Other	6 (8.2)	3 (6.8)	3 (10.3)
Bangladeshi	3 (4.1)	2 (4.5)	1 (3.4)
Asian Other	2 (2.7)	0	2 (6.9)
Indian	1 (1.4)	0	1 (3.4)
Pakistani	1 (1.4)	1 (2.3)	0

Table 2

*Differences in Street Gang and Non-Gang Offenders on Emotion-Related Variables*

Variable	Street Gang	Non-Gang	<i>p</i>
	Mean ( <i>SD</i> )	Mean ( <i>SD</i> )	
ASPD	79.89 (15.24)	65.38 (26.40)	.004
Anger Rumination	49.02 (14.68)	40.28 (15.29)	.017
Aggression	116.86 (32.16)	98.66 (34.70)	.025
TEI	5.21 (.75)	5.57 (.84)	.060
CU-traits	22.91 (9.29)	21.48 (9.86)	.533

Table 3

*Importance of Variables Predicting Street Gang Involvement.*

Variable	Discriminant Loading
ASPD	.712
Anger Rumination	.586
Aggression	.549
TEI	-.457
CU-traits	.150