

## Original Papers

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### A Rapid Evidence Assessment of the correlates of Criminal Social Identity (CSI)

**Abstract:** *The Integrated Psychosocial Model of Criminal Social Identity (IPM-CSI) explains the underlying reasons, i.e. risk factors, for the development of criminal social identity (CSI). Empirical research surrounding these risk factors is inconsistent in the measures and procedures used and the risk factors were mostly considered in isolation from one another. The main purpose of the paper was to review existing empirical studies elucidating correlates of CSI incorporated in the IPM-CSI and indicate further direction for research. A search in PubMed, PsychInfo, ERIC, Google Scholar, and the journal Child Development and Adolescent Studies was performed. Eleven studies exploring the correlates of CSI were identified and discussed herein. Studies indicated that there is potential for further expansion of the IPM-CSI to consider the consequences of CSI. Based on the present study results, a set of recommendations are provided for future research.*

**Keywords:** *IPM-CSI, Integrated Psychosocial model of a Criminal Social Identity, CSI, Criminal Social Identity, anti-social, offending, identity*

#### Introduction

Identity has been studied for many years in the field of psychology. However there have been variations in the conceptual meaning of identity. The concept of identity, which is fundamental to the present paper taking a psychosocial stance, comprises of meanings that an individual assigns to the roles they play in different social contexts (Stryker & Burke, 2000).

Early theories of identity focus on the psychosocial development of individuals and how social experiences impact upon this (Erikson, 1963). Expanding on this, Turner (1982) proposed two types of identity: personal and social. Personal identity refers to the unique features of individuals which separates them from other people and is largely resistant to change. Social identity, described as dynamic, is concerned with social interactions with others, developing similarities with others' and acknowledging self-perception as a member of certain social groups (Vryan, Adler, & Adler, 2003).

#### Social Identity

Pioneering theories, e.g. Social Identity Theory of intergroup behaviour (Tajfel & Turner, 1979), indicate that people have a desire to understand their self concept and

have a sense of belonging, developed through socialising and identifying themselves as part of a group (Baumeister & Leary, 1995; Tajfel, 1978). Being part of a social group leads to individuals adapting, or completely changing, their views, attitudes and behaviours to fit with the group they now identify with, based on an awareness of their group membership and its value and emotional significance (Hogg, 2001; Tajfel, 1978). Through this transition from personal identity to social identity, individuals lose their sense of personal identity (uniqueness) and adopt a social identity, a process known as depersonalization (Hogg & Smith, 2007). Hence, individuals no longer differentiate between themselves and others as individuals but differentiate between themselves as a group and other formed groups within society, based upon the collective identity of the group.

Exploring the social cognitive processes associated with the shift from personal to social identity, Turner (1982) expanded on the SIT, developing the Self Categorisation Theory (SCT; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987; Turner, Oakes, Haslam, & McGarty, 1994). The SCT begins to explain how individuals choose who to identify themselves with, which stems from experiences in early childhood. From a young age, people are introduced to social categories, classifying themselves into groups, such

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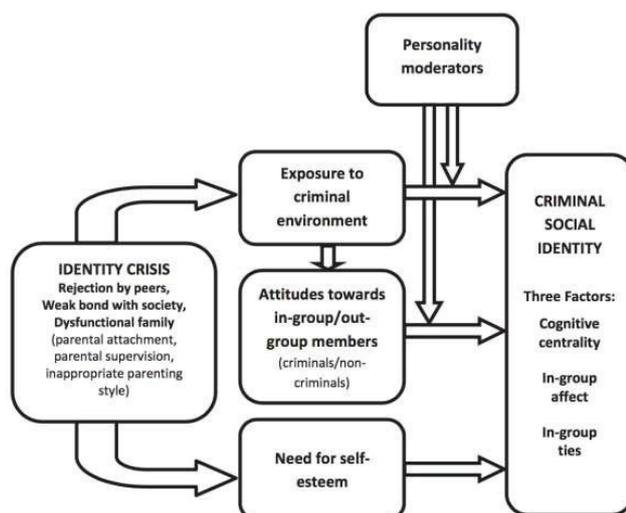
as gender, ability and nationality, whereby the distinct behaviours and attitudes of each group are portrayed by the group members.

### Criminal Social Identity

Whilst most individuals strive to achieve a pro-social identity, this is not always possible (e.g., due to the lack of pro-social peers with whom they can connect) and may result in the development of an anti-social identity (Jackson, Sullivan, Harnish, & Hodge, 1996). Boduszek and Hyland (2011) suggested that a criminal social identity (CSI) is formed through group membership with a group of offenders, enduring the same process as highlighted in the social identity theory. Focus is therefore drawn to the underlying reasons for generating an identity with a criminal group, pertinent in targeting the risk factors most likely to lead to criminal group membership and thus criminal behaviour.

Empirical research surrounding these risk factors is not scarce. However, studies have focused on different outcome variables, including criminal/anti-social behaviour or criminal identity formation, rendering comparison between studies difficult (Baumeister, Stillewell, & Heatherton, 1994; Boduszek, O'Shea, Dhingra, & Hyland, 2014a; Boduszek, Adamson, Shevlin, Hyland, & Dhingra, 2014b; Burke, 2006; Juvonen, 1991; Losel, 2003). Further, risk factors were mostly considered in isolation from one another. Thus, expanding on the theory of CSI (Boduszek & Hyland, 2011), Boduszek, Dhingra and Debowska (2016a) proposed the Integrated Psycho-Social Model of CSI (IPM-CSI [see Figure 1]), which is based upon previously empirically tested theories of the origins of CSI. The IPM-CSI explains the underlying reasons for the development of CSI, based upon four concepts; (1) an identity crisis that results in weak bonds with society, peer rejection, and is associated with poor parental attachment and supervision; (2) exposure to a criminal/anti-social environment in the form of associations with criminal friends before, during, and/or after incarceration; (3) a need for identification with a criminal group in order

Figure 1.



to protect one's self-esteem and (4) the moderating role of personality traits in the relationship between criminal/anti-social environment and the development of CSI (see Boduszek et al., 2016a for full descriptions of the four concepts).

### Identity Crisis

During adolescence, children explore different social groups yet may not be able to achieve pro-social group membership; referred to as an 'identity crisis' (Erikson, 1959; Waterman, 1985). Disparities between social groups become more distinct as members of anti-social groups experience rejection from their pro-social peers. This can result in lowered self-esteem with a higher likelihood of engaging in anti-social behaviour (Downs & Rose, 1991; Juvonen, 1991; Parker & Asher, 1987). There are numerous studies in support of a link between peer rejection and anti-social behaviour (e.g., Bagwell, Newcomb, & Bukowski, 2004; Laird, Jordan, Dodge, Pettit, & Bates, 2001; Rubin & Hewstone, 1998). The internal feelings experienced within an identity crisis can be intensified by external factors, such as family rejection (Hirschi, 1969; Baumeister et al., 1994; Boduszek et al., 2014b; Shaw & Scott, 1991; Simons, Whitbeck, Conger, & Conger, 1991). Although initial research focussed on inappropriate parenting styles/parental attachment being a predictor of criminal behaviour more recent research has shown a stronger relationship between parental supervision and anti-social behaviour (Boduszek et al., 2014b; Ingram, Patchin, Huebner, McCluskey, & Bynum, 2007).

### Exposure to criminal/anti-social environment

In line with Aker's (1979; 1985) Differential Reinforcement Theory, exposure to an anti-social/criminal environment, particularly during the process of an identity crisis, is more likely to lead to associations with offenders, influencing criminal attitudes and cognitions and leading to criminal behaviour (Andrews & Kandel, 1979; Holsinger, 1999; Mills, Kroner, & Forth, 2002; Mills, Anderson, & Kroner, 2004). In support of such theory, Rhodes (1979) found that offenders entering prisons with a low degree of anti-social attitudes develop more deviant attitudes while serving their sentence, due to contact with other prisoners.

### Processes involved in enhancing one's self-esteem

Developing a sense of belonging is believed to increase positive evaluations of oneself (Ellemers, Kortekaas, & Ouwerkerk, 1999; Tajfel & Turner, 1979). Drawing on the Social Comparison Theory (Festinger, 1954), individuals compare themselves to their respective group members (in-group) and other social groups' members (out-group), positively valuing their group over the other group, referred to as in-group favouritism (Tajfel & Turner, 1979). In turn, increasing the individual's self-esteem. When groups are valued more positively by society this is a fluid process. However, if groups are viewed negatively by society, e.g. anti-social/criminal groups, individuals may choose to adopt another social group identity (Hogg & Reid, 2006;

Tajfel & Turner, 1979) or adopt a 'social creativity strategy' (Tajfel, 1978).

*The moderating role of personality traits in the relationship between criminal/anti-social environment and the development of CSI*

Research suggests that there is a correlation between certain personality aspects, e.g. psychoticism (high levels portraying; impulsivity, lack of empathy, aggression, and egocentric behaviour) and neuroticism (high levels portraying; anxiousness, depression, feelings of guilt, and low self-esteem), and offending (Heaven, Newbury, & Wilson, 2004; Levine & Jackson, 2004). While some research has failed to identify a correlation between personality and the development of social identity (Reynolds et al., 2001) other research proposes that personality effects how people perceive their group and external groups (Luhtanen & Crocker, 1992; Seta, Seta, & Goodman, 1998). Turner (1999) acknowledged that personality has some impact on peoples' readiness to join a social group.

Although some view personality as a dynamic construct, individuals seek to obtain stability, which is in line with developing a constant, established social identity (Robins, Fraley, Roberts, & Trzesniewski, 2001). However, this may prove difficult for those whose environment is restricted to particular social groups, e.g., a prison setting. Situations such as this can lead to individuals exploring and instilling a change of identity (Burke, 2006).

**The developments in the measures of CSI**

Over the past six years there have been some developments in the measures of CSI. The earliest measure of CSI, the Measure of Criminal Social Identity (MCSI), was developed by Boduszek, Adamson, Shevlin, & Hyland (2012a) specifically for use on offender populations. Using the same principle as Cameron (2004), Boduszek et al. (2012a) devised an eight-item measure, incorporating the three subscales and concepts as in Cameron's (2004) measure (cognitive centrality, in-group affect and in-group ties). Cognitive centrality refers to the psychological prominence and importance of belonging to the criminal group. In-group affect explains the degree of positive feelings the individual has towards the criminal group and its' members. In-group ties relates to the perceived bond, i.e. emotional connection and loyalty, the individual has with the criminal group and its members.

Recently the MCSI has been revised (MCSI-R; Boduszek & Debowksa, 2017) due to critique that the MCSI lacked internal consistency among some participant samples and was too simplistic for such a complex psychological construct (Sherretts, Boduszek & Debowska, 2016). The content of the MCSI was extended in order to better reflect the three CSI factors (cognitive centrality, in-group affect, and in-group ties) and the number of items was increased to 18 (six for each dimension). Boduszek and Debowska (2017), using confirmatory factor analysis, tested and identified a bifactor

model, with the aforementioned three grouping factors and a general CSI factor, was the best fit to the data. In addition, they reported a good composite reliability of the three MCSI-R dimensions.

The following year, Spink, Boduszek, Debowska and Bale (2018) developed the Measure of Delinquent Social Identity (MDSI), which is an adapted version of Boduszek and Debowska's (2017) MCSI-R devised for juveniles. As the MDSI was devised for juveniles, it was reduced to 15 items using a four point Likert scale. The MDSI was shown to have good internal reliability and differential predictive validity.

**The present study**

As detailed above, the IPM-CSI (Boduszek et al., 2016a) offers a comprehensive explanation of the development of CSI. Although the tenets of the IPM-CSI are yet to be tested in a single study, individual research projects have investigated the model's elements. Given the novelty of the IPM-CSI the studies and their respective findings have not been collated and discussed. The purpose of the present review was to systemise our understanding of CSI and its correlates to date, in a process guided by the IPM-CSI. In doing so, papers were identified using a methodical process from which similarities and discrepancies across studies could be identified and findings synthesised. It is anticipated that the present study will further develop our understanding of the process of identity formation, assist in developing interventions/rehabilitation programmes and highlight directions for future research. The research question posed by the present paper was 'what empirical evidence exists in relation to the correlates of CSI?'

The present paper identified papers through the process of rapid evidence assessment. Although rapid evidence assessments are vulnerable to publication bias and may exclude dated studies they are seen as advantageous because they still utilise rigorous methods yet can produce results in significantly less time than more thorough methods, such as systematic reviews (Varker et al., 2015).

**Methods**

**Search Strategy**

A comprehensive literature search was undertaken in March 2017 utilising four electronic databases: PubMed, PsychInfo, ERIC, and Google Scholar. An additional search for articles published in the journal *Child Development and Adolescent Studies* was also performed to encompass studies relating to juveniles, which may not have been incorporated in other databases. Varying combinations of the following keywords were used to identify relevant articles: social, psychological AND identity AND child, youth, adult AND criminal, offender, offending.

The initial search identified 281 papers (ERIC = 57, Google Scholar = 107, PubMed = 74, PsychInfo = 43). All articles were added into Zotero reference management software whereby duplicates were eliminated (N = 102).

Preselection from study titles, abstracts, and keywords produced 34 papers.

### Selection Process

The following criteria were adhered to in the paper selection process for the present study:

1. The study was an empirical piece of research examining the correlates of CSI (including its sources and outcomes) in juvenile (< 18 years old) and/or adult (18 years or older) offenders.
2. The study used a validated measure of CSI.
3. The study assumed a quantitative approach adopting experimental, longitudinal or cross-sectional design.
4. The total number of participants was 50 or greater.
5. The study was written in English.
6. In order to guarantee high quality, only studies published in peer-reviewed journals were selected, excluding meeting abstracts, proceedings, masters and doctoral degree dissertations, technical reports, and similar documents.
7. The study was published within the last 15 years (2002–2017).

Final selection of relevant publications was conducted by the study author using the inclusion/exclusion criteria listed above. Additionally, in order to exclude studies which could have been based upon the same sample of participants.

studies identified after inclusion/exclusion criteria had been applied, were scrutinised for sample specifications. When the same sample was used across studies and the explored CSI correlates were repeated, only the earliest published study was retained. Using this procedure, eleven relevant empirical studies were identified (see Figure 2). The articles were published between 2003 and 2017, the majority within the last five years ( $N = 10$ ).

### Data extraction and analysis

Relevant information was extracted into a summary table. The following data from the studies were retrieved: author(s) and year of publication, study population and method of data collection, correlates of CSI measured, measure of CSI, type of analysis, and findings (see Table 1).

Of the eleven selected papers, many explored more than one correlate of CSI. The papers are discussed in terms of the identified correlates, relating to the groups of factors of IPM-CSI (identity crisis, exposure to criminal environment, self-esteem and personality) where applicable. Those correlates not considered in the IPM-CSI are discussed under separate sections (offending behaviour and suicidal ideation). Finally studies analysing CSI as a moderator are presented.

**Figure 2.**

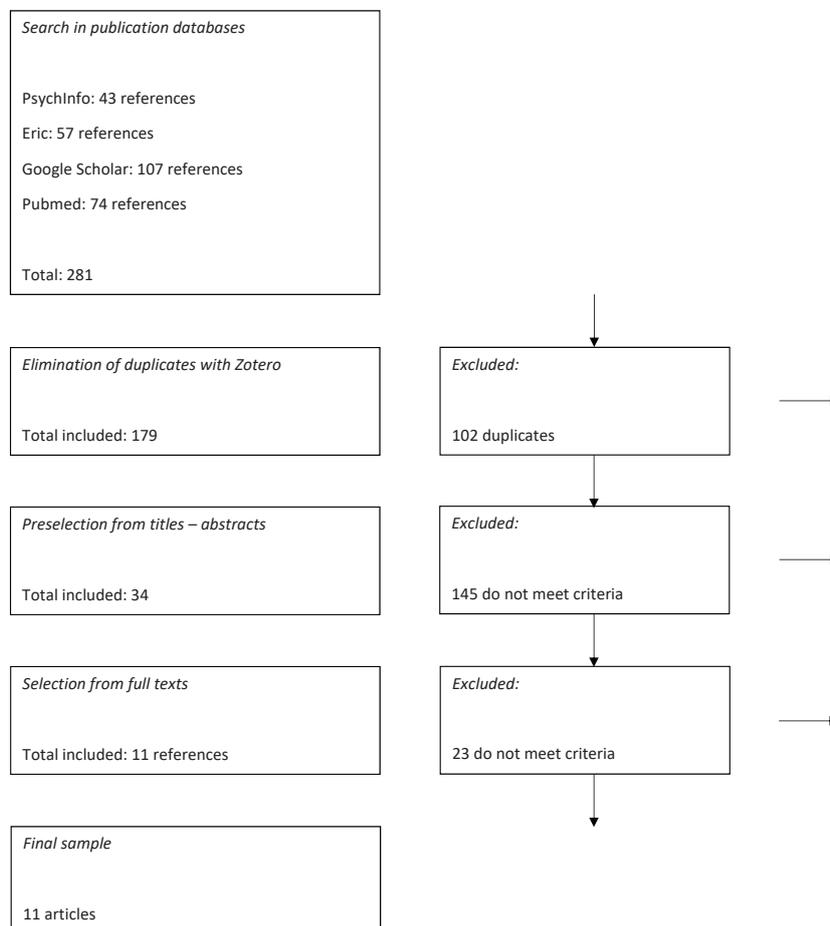


Table 1. Methodological Characteristics and Summary Results of the Studies Included in the Systematic Review (N = 11)

Author(s) and year of publication	Study population and method of data collection	Correlates measured	Measure of CSI	Type of analysis	Findings
*Boduszek et al. (2012b)	312 detained adult male offenders in Poland (M age = 33.85 years) – self-report	Criminal Associations (MCAA Part A; Mills & Kroner, 1999), Parental Supervision (Ingram et al., 2007), Self-esteem (Rosenburg Self-esteem Scale; Rosenberg, 1989)	Measure of Criminal Social Identity (MCSI; Boduszek et al., 2012a)	Structural equation modeling (SEM)	Direct positive, moderate-to-strong influence of associations with criminal friends on cognitive centrality ( $\beta = .32, p < .001$ ), in-group affect ( $\beta = .48, p < .001$ ), and in-group ties ( $\beta = .77, p < .001$ )  Positive influence of negative self-esteem on cognitive centrality ( $\beta = .21, p < .001$ )  Criminal friends moderated the relationship between parental supervision and cognitive centrality ( $\beta = 0-.15, p < .01$ ), supervision and in-group affect ( $\beta = 0-.22, p < .001$ ), and supervision and in-group-ties ( $\beta = 0-.35, p < .001$ )
*Boduszek et al. (2012c)	Same as Boduszek et al. (2012)	Criminal Attitudes (MCAA), Personality (The Eysenck Personality Questionnaire Revised-Abbreviated; Francis et al., 1992)	MCSI	Multiple linear regression	A significant positive relationship was identified between criminal thinking and in-group ties ( $r = .43, p < .001$ ), in-group affect ( $r = .40, p < .001$ ) and cognitive centrality ( $r = .23, p < .001$ )  A significant positive relationship was identified between neuroticism and in-group ties ( $r = .31, p < .001$ ), in-group affect ( $r = .25, p < .001$ ) and cognitive centrality ( $r = .24, p < .001$ )  A significant positive relationship was identified between psychoticism and in-group ties ( $r = .24, p < .001$ ) and in-group affect ( $r = .24, p < .001$ )
*Boduszek et al. (2013)	Same as Boduszek et al. (2012)	Criminal Attitudes and Associations (MCAA)	MCSI	Sequential moderated multiple regression analysis  SEM	Extraversion moderates the relationship between criminal thinking and in-group ties ( $\beta = .29, p < .001$ ) and in-group affect ( $\beta = .29, p < .001$ )  Positive direct influence of in-group affect ( $\beta = 0.34, p < .001$ ) and in-group ties ( $\beta = .33, p < .001$ ) on criminal thinking style

Table 1. Cont.

Author(s) and year of publication	Study population and method of data collection	Correlates measured	Measure of CSI	Type of analysis	Findings
*Boduszek et al. (2014)	Same as Boduszek et al. (2012)	Number of arrests Recidivism (times in prison) Type of Crime (violent/non violent)	MCSI	Multinomial logistic regression model	Indirect effect was observed between criminal friends and criminal thinking style via in-group affect ( $\beta = .19, p < .001$ ), and via in-group-ties ( $\beta = .26, p < .001$ ) Number of arrests associated positively with class 1 ( $\beta = .16, p < .001$ ) and class 4 ( $\beta = .12, p < .05$ ) Recidivism associated negatively with class 1 ( $\beta = -.67, p < .05$ ) and class 4 ( $\beta = -.22, p < .01$ ) Violent offending associated positively with class 4 ( $\beta = -.74, p < .05$ )
*Boduszek et al. (2016b)	126 detained juvenile male offenders in Pakistan ( $M = 16.28$ years) – self-report	Criminal Associations (MCAA Part A), Psychopathy (Levenson Self-report Psychopathy Scale; Levenson, et al., 1995)	MCSI	Correlation analysis	positive significant correlation between general CSI and criminal friends ( $r = .35, p < .001$ ) The primary psychopathy dimension was a significant moderator of the relationship between period of confinement and CSI
*Boduszek and Debowska (2017)	2192 detained adult male offenders in Poland ( $M = 34.78$ years) – self-report	Prisonization (Organizational Structure and Prisonization Scale; Thomas & Zingra, 1974), Self-esteem (The Self-Esteem Measure for Prisoners (Debowska et al., 2016) Recidivism (number of incarcerations) Type of crime (Violent/Non violent)	MCSI-R (Boduszek & Debowska, 2017)	Regression analysis	A significant negative relationship between self-esteem and cognitive centrality ( $\beta = -.23, p < .001$ ) and a positive relationship between self-esteem and in-group ties ( $\beta = .17, p < .001$ ) A positive relationship between number of incarcerations (recidivism) and in-group ties ( $\beta = .13, p < .01$ ) A positive relationship between prisonization and cognitive centrality ( $\beta = .13, p < .01$ ) and in-group ties ( $\beta = .27, p < .001$ ) A positive relationship between violent offending and cognitive centrality ( $\beta = 1.21, p < .001$ ) and in-group ties ( $\beta = 1.06, p < .001$ )

*Shagufia et al. (2015a)	415 detained juvenile male offenders in Pakistan ( $M = 16.53$ years) – self-report	Delinquent Behaviour	MCSI	Multinomial logistic regression model	An association between low levels of in-group affect ( $OR = .57, p < .01$ ) and high levels of in-group ties ( $OR = 1.44, p < .01$ ) with class 2.
*Shagufia et al. (2015b)	Same as Shagufia et al. (2015a)	Suicidal Ideation (BDI-II, Beck et al., 1996)	MCSI	SEM	A significant negative relationship between suicidal thoughts and in-group ties ( $\beta = -.51, p < .001$ )
*Sherretts et al. (2016)	458 detained mixed-gender offenders in Pennsylvania, U.S ( $M = 39.53$ years) – self-report	Criminal Associations (MCAA Part A), Psychopathy (Self-report Psychopathy Scale – Short Form, SRP-SF; Paulhus et al., 2016) Time spent in prison	MCSI	Hierarchical moderated regression analysis	ASB aspect of psychopathy associated positively with cognitive centrality ( $\beta = .16, p < .05$ ), in-group affect ( $\beta = .17, p < .01$ ) and in-group ties ( $\beta = .14, p < .05$ ) IPM aspects of psychopathy associated positively with in-group ties ( $\beta = .19, p < .01$ ) Erratic lifestyle associated positively with in-group ties ( $\beta = .20, p < .001$ ) IPM moderates the relationship between time in prison and in-group ties ( $\beta = .16, p < .05$ ) Callous affect moderates the relationship between CFI and in-group ties ( $\beta = -.14, p < .05$ )
*Sherretts et al. (2017)	Same as Sherretts et al. (2016)	Psychopathy (SRP-SF)	MCSI	Analysis of Variance (ANOVA)	Recidivists scored significantly ( $p < .007$ ) higher on cognitive centrality ( $M = 8.21, SD = 2.41$ ) than murderers scored on cognitive centrality ( $M = 7.26, SD = 3.14$ ) Recidivists scored significantly ( $p < .007$ ) higher on and in-group ties ( $M = 7.72, SD = 2.61$ ) than murderers scored on in-group ties ( $M = 6.87, SD = 2.68$ )
+Walters (2003)	148 detained male offenders in America ( $M =$ not reported) – self-report	Psychological Inventory of Criminal Thinking Styles (Walters, 1995)	Social Identity for Criminals (adapted version of Cameron, 2004)	ANOVA Analysis of Covariance (ANCOVA) Paired samples $t$ test	Cognitive centrality scores were significantly higher for novice prisoners from time 1 to time 2; 6months later ( $t = 2.40, p < .5$ ) In-group affect scores were significantly higher for experienced prisoners from time 1 to time 2; 6months later ( $t = 3.22, p < .05$ )

+ Studies which employed longitudinal design.

\* Studies which employed cross-sectional design.

## Results

### Identity crisis

Only one study explored parental supervision as a correlate of CSI (Boduszek, Adamson, Shevlin, Mallett, & Hyland, 2012b) identifying an indirect relationship. The parental supervision measure included questions regarding parental knowledge about a range of aspects of offenders' lives when they were at the school age, e.g., knowledge of close friends, parents and school teacher; what they were doing with friends; who they were with when they were not at home; and what they were doing at school. Structural equation modelling (SEM) revealed that associations with criminals moderated a negative relationship between parental supervision with cognitive centrality, in-group affect and in-group-ties. Therefore suggesting that a lack of parental supervision is only associated with CSI when the individual associates with criminal friends.

### Exposure to criminal environment

The present section incorporated studies that explored criminal associations, prisonization/time spent in prison or criminal attitudes. The relationship between associations with criminal friends and CSI has been detailed within three papers; one of these studying juveniles (Boduszek, Dhingra, & Debowska, 2016b) while the others studied adults (Boduszek et al., 2012b; Sherretts et al., 2016). Four papers explored the predictor of period of incarceration, or similar (Boduszek & Debowska, 2017; Boduszek et al., 2016b; Sherretts et al., 2016; Walters, 2003), but only two of these papers highlighted a direct relationship (Boduszek & Debowska, 2017; Walters, 2003). Two papers identified a direct effect between criminal attitudes and CSI (Boduszek, Adamson, Shevlin, & Hyland, 2012c; Boduszek, Adamson, Shevlin, Hland, & Bourke, 2013) while one paper identified personality moderated the relationship between criminal attitudes and CSI (Boduszek et al., 2012c).

The earliest researchers to explore the relationship between criminal associations and CSI were Boduszek et al. (2012c) who administered surveys to adult male prisoners. Results from sequential moderated multiple regression analyses identified a direct positive, moderate-to-strong influence of associations with criminal friends on cognitive centrality, in-group affect and in-group ties, with the strength of the relationship from weakest to strongest in this respective order. These findings were later supported by Boduszek et al. (2016b), who administered the same self-report measures (MCAA part A and MCSI) as Boduszek et al. (2012c), yet to a sample of male juveniles in Pakistan prisons. Using correlational analysis, Boduszek et al. (2016b) reported a positive significant correlation between general CSI and criminal friends. Findings therefore suggest that spending time with other offenders leads to a strong sense of general CSI and the separate dimensions of CSI. These findings are consistent, despite cultural differences and ranges of age in the samples utilised.

In contrast to the aforementioned findings, and despite all studies using the same measures of CSI and criminal associations, Sherretts et al. (2016) did not identify a direct relationship between criminal associations and CSI. Although not supported by further research, the disparity in findings may be due to Sherretts et al.'s (2016) mixed gender sample and other studies utilising a male only sample (Boduszek et al., 2012c; Boduszek et al., 2016b), inferring that there may be gender differences in the relationship between criminal associations and CSI. Considering an indirect effect, Sherretts et al. (2016) also measured psychopathy, using the Psychopathy Scale-Short Form (SRP-SF; Paulhus, Neumann, & Hare, 2016). Findings, from hierarchical moderated regression analysis, identified that the callous affect facet (lack of remorse, lack of empathy, shallow; Hare & Newman, 2008) of psychopathy moderated the relationship between criminal associations and in-group ties, when callous affect scores were high. Therefore suggesting that forming strong associations with offenders results in exhibiting loyalty towards them, yet only in those who lack empathy and are emotionally shallow.

Research studying the relationship between time spent in prison and CSI may produce similar findings to the aforementioned research bearing in mind that the more time spent in prison is likely to result in more time sent with offenders. Walters (2003), an early study into social identity of prisoners, aimed to explore the criminal thinking and identity of novice and experienced prisoners. The measures were conducted on two occasions, the second being six months after the first. Findings, from repeated measures analyses of variance (ANOVA) and covariance (ANCOVA), showed cognitive centrality increased for first time offenders between a six-month period, whereas only in-group affect increased for experienced prisoners between a six month period. Thus, novice prisoners tend to increase their identification with other offenders, whereas experienced prisoners tend to increase the amount of positive feelings towards other prisoners.

In some contrast, Boduszek and Debowska's (2017), through regression analysis identified a positive relationship between prisonization and cognitive centrality and in-group ties, suggesting that both criminal cognitions and loyalty towards other offenders increases through adapting to prison lifestyle.

Boduszek et al. (2016b) and Sherretts et al. (2016) measured period of confinement along with CSI, as detailed above. No direct relationship was found between period of incarceration and total CSI scores and separately the 3 facets of CSI, by either Boduszek et al. (2016b) or Sherretts et al. (2016). The reason for Boduszek and Debowska's (2017) positive findings may have been due to using a developed measure of CSI. Nevertheless indirect effects were identified by both authors (Boduszek et al., 2016b; Sherretts et al., 2016). Boduszek et al. (2016b) measured psychopathy, using Levenson Self-report Psychoapthy scale (LSRP; Levenson, Kiehl, & Fitzpatrick, 1995). In Boduszek et al.'s (2016b) study findings from hierarchical regression analysis, identified that the primary

psychopathy dimension was a significant moderator of the relationship between period of confinement and CSI, when psychopathy levels were high. Thus, offenders who spend more time in prison are more likely to identify with offenders when they possess psychopathic personality traits. Boduszek et al. (2016b) failed to present results for the relationships between period of confinement and psychopathy for the separate dimensions. Expanding on this, Sherretts et al. (2016) identified that high interpersonal manipulation scores, forming part of primary psychopathy, affected the relationship between period of incarceration and in-group ties, indicating that time spent in prison was likely to increase the emotional connection to other offenders, but only those with strong manipulative tendencies.

Using multiple linear regression analysis, Boduszek et al. (2012c) identified that all three facets of CSI (cognitive centrality, in-group affect and in-group ties) were found to be predictors of criminal thinking, with in-group ties having the strongest relationship. Hence suggesting that an emotional connection with other offenders reinforces crime related thoughts.

Boduszek et al. (2013), utilising the same sample and same measures as Boduszek et al. (2012c), applied SEM to identify that criminal attitudes associated positively with only in-group affect and in-group ties, not cognitive centrality.

Concerned with an indirect effect, Boduszek et al. (2012c) using sequential moderated multiple regression analysis, found the relationship between CSI (in-group ties and in-group affect) and criminal thinking was moderated by the extraversion dimension of Eysenck's personality factors. The positive relationship between in-group affect and criminal thinking was moderated by low levels of extraversion, whereas the positive relationship between in-group ties and criminal thinking was moderated by high levels of extraversion. Thus, implying that offenders with positive feelings towards other offenders are likely to have criminal attitudes if they are low on the aspect of extroversion, whereas those with an emotional connection with other offenders are likely to have criminal-like thoughts/attitudes if they are extroverts.

### **Self-esteem**

There are similarities in findings between cognitive centrality and self-esteem, with both Boduszek et al. (2012b) and Boduszek and Debowska (2017) finding a negative relationship between positive self-esteem and cognitive centrality, despite Boduszek and Debowska (2017) using a revised measure of CSI. Thus, findings imply that the formation of criminal cognitions is associated with negative self-evaluations. Both studies used different measures of self-esteem. Although both measures are self-report and utilise a Likert scale, the SEM-P encompasses questions based on prison specific self-esteem, whereas the RSES only focuses on general self-esteem. Both studies utilise a male sample from Polish prisons. However, Boduszek and Debowska (2017) use a much larger sample. Boduszek and Debowska (2017) in

their findings also found a positive relationship between in-group ties and positive self-esteem. Hence, whilst the psychological importance of criminal group membership is associated with negative self-esteem, loyalties and emotional connections to the group is associated with positive self-esteem.

### **Personality**

One paper is concerned with the relationship between personality and CSI. Boduszek et al. (2012c) conducted multiple regression analysis. The results of which showed a significant positive relationship between neuroticism and all three aspects of CSI and a significant positive relationship between psychoticism and in-group ties and in-group affect. Thus, individuals who are stressed/anxious/irrational/depressed are more likely to form a sense of CSI. Individuals who are impulsive/un-empathic/tough-minded are likely to develop strong emotional connections and positive feelings with other offenders.

Sherretts et al. (2016), using hierarchical moderated regression analysis, identified that the anti-social behaviour facet of psychopathy correlates with all three aspects of CSI and both erratic lifestyle and interpersonal manipulation aspects of psychopathy positively associate with in-group ties. Thus, criminals who are manipulative and/or have erratic lifestyles tend to have stronger emotional connections with other offenders. Considering the manipulative tendencies it is questionable as to whether these connection are real or falsified to achieve what they want. Anti-social behaviour is linked to offenders having a strong connection and being loyal to other offenders and also viewing them as important and positive.

### **Offending behaviour**

The present section comprises of studies measuring reoffending (number of incarcerations / number of arrests), violent offending and delinquent behaviour. Three papers studied reoffending as correlates of CSI. Two papers measured violent offending (Boduszek et al., 2014a; Boduszek & Debowska, 2017) and delinquent behaviour was studied as a correlate of CSI by Shagufta, Boduszek, Dhingra, & Palmer (2015a).

Using regression analysis, Boduszek and Debowska (2017) found the only significant predictor of number of incarcerations was the in-group ties factor, suggesting that some individuals re-offend because criminal behaviour has been normalised within their social circle.

In line with this, Sherretts, Boduszek, Debowska, and Willmott (2017), using the same sample and measure of CSI as Sherretts et al. (2016), revealed through ANOVA that recidivists (those who had been in prison more than once previously), compared with murderers, were more likely to report enhanced ratings on in-group ties, but also on cognitive centrality. Thus, suggesting that re-offenders not only offend because such behaviour is normalised but also due to it being important to them to belong to that social group.

Boduszek et al. (2014a) employed latent class analysis (LCA) in their study. Latent class analysis is a statistical

method concerned with assigning people to mutually exclusive classes based on observed categorical data (Schreiber, 2017). Using LCA to identify homogeneous groups of CSI the following five classes were identified; 'High CSI' (Class 1; 17%), 'High Centrality, Moderate Affect, Low Ties' (Class 2; 21.7%), 'Low Centrality, Moderate Affect, High Ties' (class 3; 13.3%) and 'Low Cognitive, High Affect, Low Ties' (class 4; 24.6%) and the baseline or reference group, 'Low CSI' (Class 5; 23.4%). Using multinomial logistic regression model, Boduszek et al. (2014a) revealed that number of arrests and times in prison were significantly associated with Class 4 (Low Cognitive, High Affect, Low Ties). However, number of arrests was positively related, whereas times in prison was negatively associated. Thus, suggesting that those with stronger emotional attachment to other offenders are more likely to have had more arrests, yet those who spent more times in prison were less likely to have strong emotional bonds to offenders. Some rehabilitation programmes in prison (Thinking Skills Programme) are based on improving cognitive skills, such as not associating with other offenders. Thus, dependent on whether the sample took part in intervention programmes, may explain why they were less likely to have emotional bonds with offenders. This is something to consider in future research. These findings identify the pertinence of considering number of arrests and number of times in prison as separate facets of reoffending. Boduszek et al. (2014a) also identified a positive association between violent offenders and class 4 ('Low Cognitive, High Affect, Low Ties'), noting that violent offenders were over two times more likely to be in Class 4 compared to offenders in class 5 (low on all dimensions of CSI). Class 4 was characterised by a high level of in-group affect, indicating that those with an emotional attachment to other offenders are more likely have a history of violent offending.

Boduszek and Debowska (2017), using regression analysis, identified a relationship between in-group ties and cognitive centrality with violent offending. These findings indicate that those with an emotional attachment to other offenders are more likely have a history of violent offending but also identifying oneself as a criminal and having loyalty towards other offenders condones acting in a similar way to offenders. Both studies base violent offending on those in the sample who were convicted for violent crimes, yet use different forms of methodology. Boduszek and Debowska (2017) categorise offences as violent/non-violent yet do not make reference to considering the modus operandi of each offence therefore leaving room for error in the categorisation process. This could mean that those categorised as violent offenders may not have been violent in their offence and vice versa. Although both studies used similar samples in terms of characteristics, Boduszek and Debowska's (2017) sample was much larger, meaning their findings may be more representative of the population. There are also differences in the measures used as Boduszek and Debowska (2017) use a revised measure of MCSI whereas Boduszek et al. (2014a) do not, which may account for

the difference in findings, especially since the number of in-group affect items was increased from two to six in the MCSI-R.

Using LCA, Shagufta, Boduszek, Dhingra and Palmer (2015a) identified the best fitting latent class model was a three-class solution. The classes were labelled: "major delinquents" (Class 1; 29.8%), "moderate delinquents" (Class 2; 64.9%) and "minor delinquents," the baseline/normative class (Class 3; 5.4%). Using multinomial logistic regression, findings showed that Class 2 membership (moderate delinquency) was related to lower levels of in-group affect and higher levels of in-group ties. In other words, a weak sense of belonging, but strong loyalty, to other juvenile offenders results in a likelihood of delinquent behaviour. Thus, it is not about being part of the group, but the emotional connection to the group, which is important.

### Suicidal Ideation

While most studies consider the correlates of CSI as negative factors, one study considers how CSI can act as a protective factor against harmful behaviours. Using SEM, Shagufta, Boduszek, Dhingra, & Palmer (2015b) identified a significant negative relationship between suicidal thoughts and in-group ties, indicating that having a strong emotional connection to other offenders serves as a protective factor against suicide ideation.

### CSI as a moderator

Only one study considered CSI as a moderator. Boduszek et al. (2013) applied SEM revealing in-group affect and in-group ties moderated the relationship between criminal associations and criminal thinking. Therefore, associating with other offenders is likely to result in criminal-like thoughts for those who develop an emotional attachment and loyalty to other offenders.

## Discussion

The aim of the present study was to collate and explore studies concerned with the associations of variables with CSI, based within youth and adult offender populations. Particular focus was given to the variables outlined within the IPM-CSI. The main purpose of the paper was to review existing empirical studies elucidating correlates of CSI incorporated in the IPM-CSI and indicate further direction for research. Specifically, the present study allowed all associated studies to be located, using a systematic approach, and findings to be analysed.

Although there are numerous existing studies concerned with the association between parental attachment/parental supervision and offending behaviour/anti-social behaviour (Baumeister et al., 1994; Boduszek et al., 2014a; Boduszek et al., 2014b; Ingram et al., 2007; Shaw & Scott, 1991; Simons et al., 1991), no studies directly consider the effect of parental factors on CSI. This is, perhaps, because the majority of studies utilise an adult sample and therefore data would be retrospective and thus less reliable. The IPM-CSI suggests an indirect relationship

between a dysfunctional family and one study did identify that the relationship between parental supervision and CSI was moderated by criminal associations (Boduszek et al., 2012b). Therefore studies support that a dysfunctional family alone may not result in the development of CSI, but the interplay of other factors, such as exposure to criminal environment, can lead to a CSI. This support is from an adult population and therefore it should be expanded to a juvenile population, who are experiencing the identity crisis at the time of research. Further support is also required for indirect links between peer rejection/weak bonds with society and CSI.

Exposure to a criminal environment has been researched by measuring criminal associations and prisonisation/time in prison, for which direct relationships with CSI were identified. Considering criminal associations, research suggests that the association may depend on gender and therefore further research, encompassing female populations, is required to explore this further. Disparities lay in which aspects of CSI are affected by exposure to a criminal environment. This may be due to the difference in measures, methodology or samples used. Attitudes towards criminal/non criminals were measured using criminal attitudes in all studies. Although shown to impact on all aspects of CSI, the level of impact criminal attitudes has upon the different aspects of CSI varies. The IPM-CSI suggests that this relationship is moderated by psychopathy. In support of this, one paper showed that the extraversion aspect of personality moderates the relationship between criminal attitudes and in-group affect and in-group ties (Boduszek et al., 2012c).

Findings from the papers surrounding self-esteem have shown disparities in the direction of the relationship between self-esteem and CSI, depending upon the individual facets of CSI. Further research should assist in identifying such discrepancies. Due to the research not exploring a cause/effect relationship between the factors, it is difficult to identify whether low self-esteem predicts CSI or is a consequence of it. This relationship may also vary depending upon the aspect of CSI. In line with the IPM-CSI, research lacks in exploring the relationship between identity crisis, self-esteem and CSI.

As already identified, personality facets have shown to act as moderators in support of the IPM-CSI. Although a lack of research supports a direct relationship with CSI, there is sufficient research exploring the moderating effects of psychopathy, in line with the IPM-CSI. The relationship between exposure to criminal environment, measured by time in prison and criminal associations, and CSI has been shown to be moderated by the different aspects of psychopathy, specifically IPM and callous affect.

Other factors have also been associated with CSI. For example, developing strong bonds with other offenders has been shown to prevent thoughts of suicide. This shows that CSI can have a positive impact as opposed to purely negative consequences. CSI has also been shown to be associated with offending behaviour and recidivism. However, studies do not depict whether this is a cause of CSI or as a result of such. The consequences of CSI are

yet to be explored, as the model is limited to the reasoning behind the development of CSI. It is important to identify the positive and negative consequences of CSI to identify what interventions are required.

#### **Limitations of existing studies**

The majority of studies reviewed are cross-sectional in nature. It is therefore only possible to speculate about causality of factors. Although the model suggests a temporal order of the process of CSI, it is difficult to defend the model without such empirical support. The only support for factors within the model, using a longitudinal study, is for the association between exposure to a criminal environment and CSI (Walters, 2003). Walter's (2003) research shows the importance of a longitudinal study as he identifies prisoner's increasing in only specific CSI traits, dependant upon whether they have been in prison before. Use of a longitudinal study measuring all factors of the model would allow for the development of all factors to be explored within the same sample, controlling for individual differences. Nonetheless, such research has its limitations in increased research duration and costs, along with the likelihood of higher attrition rates. There are no existing quasi-experimental studies relating to CSI. For example, comparing the CSI of two groups – offending individuals placed in a prison environment (treatment group) with offending matched controls from non-prison settings. Such a study design would be beneficial to further exploring the relationship between prisonization and CSI.

The majority of studies presented focus on adult male populations based within prisons. To corroborate findings reported to date, more research is needed with young people who may better remember aspects of their early lives. Furthermore, researching an already existing CSI does not assist in identifying when CSI developed and over what period of time. Researching juvenile offenders, ranging in age, would provide a fruitful contribution to the early developments of CSI. Research based on female offender populations is also scant, but just as important as research on male offender populations. Studies are limited to Poland, Pakistan and North American populations. It is therefore important to expand upon research in different countries to allow for a better understanding of any cultural differences in the development of CSI.

#### **Recommendations**

In considering the above methodological limitations, as well as the restrictions of the IPM-CSI in exploring the consequences of CSI, a set of recommendations are outlined below. Such recommendations will assist in the systemisation of future research and development of knowledge surrounding the psychosocial processes of CSI and associated consequences.

- 1) Studies should reflect a longitudinal design in order to support the temporal changes proposed by the IPM-CSI model.
- 2) Concerned with theoretical practice, expansion of the model should be sought from longitudinal studies.

- 3) It is pertinent to ensure research focuses on female populations as the processes involved in CSI may differ between males and females. Research on female offenders has a huge practical implication as the contribution of females within the offending population is increasing (Ministry of Justice, 2016).
- 4) Studies should focus on the juvenile offender population in order to improve the understanding of the early developments of CSI and reduce the reliance on retrospective data.
- 5) Research should focus on the separate dimensions of CSI as the consequences of each facet may differ.
- 6) Consistency in use of measures is important when collating and comparing findings from different studies as it allows more reliable analyses to be drawn.
- 7) Research is directed to testing the associations between dysfunctional parenting, peer rejection and societal bonds with CSI.
- 8) The model of IPM-CSI should be tested as a whole, which will allow the model to be tested on a single sample, reducing the impact of individual and cultural differences.

### Limitations and implications of the study

The present paper should be considered in light of the following limitations. The search was limited to paper titles, abstracts and keywords. Although most research would highlight in the title that the focus was on CSI and if not it would be expected to be covered in the abstract, there is a chance that some research could have been overlooked. Further, research may relate to aspects of CSI without directly referring to CSI and/or its' facets. This highlights the importance of studies utilising a consistent measure. For the present study only research in peer-reviewed journals were considered. Whilst this is believed to eliminate research perceived as poor (Ware, 2008) the present findings are affected to some extent by publication bias or the tendency for research to only be published if it reports significant results (Perestelo-Pérez, 2013). Finally, only articles published in English were included within the review, which could have excluded some important non-English based samples.

Despite the aforementioned limitations, using a Rapid Evidence Assessment eleven articles published in peer-reviewed journals were identified. This provides valuable contributions to the theoretical perspective of CSI by collating and synthesising research within one paper. This is of particular use to the design of intervention programmes where succinct information is paramount to the timely development of such programmes. No study thus far has brought together existing CSI studies in one paper.

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