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Gender Differences in Predictors of Violent and Non-violent Juvenile Offending

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Abstract

In response to concerns regarding the rise in female juvenile violent crime and the dearth of gender specific research, this study aimed to identify predictors of violent offending in female offenders. Data was extracted from risk assessments of 586 male and female juvenile offenders (aged 11-17 years) conducted between 2005 and 2009 by the Youth Offending Service in Gloucestershire, an English county. Information regarding the young people's living arrangements, family and personal relationships, education, emotional/mental health, thinking and behaviour, and attitudes to offending was recorded. Comparisons were made between the violent male offenders ($n = 182$), the violent female offenders ($n = 111$), the non-violent male offenders ($n = 153$), and the non-violent female offenders ($n = 140$) for these variables. These were followed by a multinomial logistic regression analysis. The findings indicated that engaging in self-harm was the best predictor of being a female violent offender, with the predictors of giving into pressure from others and attempted suicide nearing significance. Furthermore, non-violent females were significantly less likely to lose control of their temper and more likely to give in to pressure from others than their violent counterparts. Non-violent males were significantly less likely to lose control of their temper and more likely to self-harm and give in to pressure from others than violent males. Although many similarities existed between genders for predictors of violent offending, the findings of this study indicate that more attention needs to be paid to the mental health of female offenders.

Keywords: *sex; aggression; women; adolescent; delinquent*

Gender Differences in Predictors of Violent and Non-violent Juvenile Offending

In Britain, while rates of juvenile male crime remain consistently higher than for their female counterparts, the incidence of crime committed by female juveniles is rising at a disproportionate rate. Research conducted by the Youth Justice Board (YJB) identified a general increase of 18% in female criminality between 2000/2001 and 2005/2006 (YJB, 2009). Of particular concern is the increasing rate of violent crime being carried out by juvenile females; this domain of offending is the fastest growing of all offence types (YJB, 2009). Females were found to be responsible for approximately 28% of violent crimes against the person by juveniles in 2005/2006 (YJB, 2009). This increase in female juvenile violent crime is not unique to Britain; similar findings have been reported in Australia, the United States of America and Canada (Carrington, 2006; Savoie, 1999; Siegel & Senna, 2000). The goal of the current study was to investigate gender differences in predictors of violent and non-violent juvenile offending in a UK sample and consider the implications of findings to current practice in the treatment of juvenile offenders.

Women are less likely to commit crimes than men; a gender gap widely acknowledged (Steffensmeier & Allan, 1996). However, increases in rates of violent crime committed by women would pose the question as to whether this gender gap is closing (Chesney-Lind, 2004). However, it must be noted that changes in the response of the criminal justice system with relation to reporting and recording of offences, as well as conviction rates of female juveniles who commit acts of violence may account for a proportion of the increase. Furthermore, it has been suggested that society's increasing lack of tolerance for female violence may account for a further proportion of the increase (Chesney-Lind & Pasko, 2013; Zahn et al., 2010). As such, questions remain as to whether crime figures accurately reflect the amount of crime committed by women (Zahn et al., 2010).

Before endeavouring to explain the potential rise in violent offending in juvenile females, it is first necessary to consider explanations of the existing gender differences in the amount and type of crimes being committed by the two genders. Males are more likely to commit more serious offences, such as acts of violence, than females (Siegel & Senna, 2000). General strain theory (GST) (Agnew, 1992), offers an explanation as to the higher levels of violent crime amongst males, theorising that females have higher tolerance for negative life events than males, thereby protecting females from turning to violent crime in response to such events.

A further explanation for this finding is differences in socialisation processes (Siegel & Senna, 2000). When confronted with stress, females are more likely to become depressed, whereas males are more likely to show aggression (Mirowsky & Ross, 1995). Siegel and Senna (2000, p.246) suggest that American culture "polarises males and females by forcing them to obey mutually exclusive gender roles or 'scripts'. Girls are expected to be 'feminine', exhibiting traits such as being tender, sympathetic, understanding, and gentle. In contrast, boys are expected to be "masculine", exhibiting assertiveness, forceful competitiveness, and dominance."

It has been further suggested that females who internalise traditional gender definitions are less likely to commit crime than females who do not (Ford, Stevenson, Wienir, & Wait, 2002). Although delinquent females have been found to hold traditional gender role definitions with reference to certain aspects in their life, such as family and interpersonal relationships, they endorse fewer traditional views as to what is appropriate behaviour for a girl than non-delinquent females (Berger, 1989).

The findings of a meta-analytic review of sex differences in aggression in Western and Non-western societies, also suggest that higher levels of physical aggression in males is

due, in part, to adherence to gender roles, with socialisation processes leading to aggression being more acceptable, even encouraged, in males (Archer, 2004).

Despite these single factor theories, it is widely recognised that adolescent aggression occurs as a result of a dynamic interaction between social, biological and psychological elements, as well as an integration of characteristics and environmental influences (Lerner, 1998). However, whilst psychological theories and research can account for the disproportionate amount of violence committed by males compared to females, relatively little is known as to the cause of the recent rise in female violence.

Historically, due to the higher rate of violent offending amongst juvenile males than females, the majority of studies and subsequent theories as to the development of juvenile violent offending have been based on male sample groups (Rutter, Giller, & Hagell, 1998; Zahn et al., 2010). It has been argued that, by using an "add women and stir" approach to sample groups in studies of delinquency, ensuing theories may help to explain male delinquency but fail to bring to light anomalies in females, and as such are not adequate in explaining female delinquency (Chesney-Lind, 1989). Due to a dearth of literature on female juvenile violent offenders, traditionally findings from studies of male juvenile violent offending have been extrapolated to female youths (Hubbard & Pratt, 2002). Zahn et al. (2010) comment that 'although the literature examining the causes and correlates of male delinquency is extensive, the extent to which these factors explain and predict delinquency for girls remains unclear' (p.1).

Over the last few decades, there has been an upsurge in the amount of research and literature on the topic of female crime (see Acoca, 1999; Chesney-Lind & Pasko, 2013; Putallaz & Bierman, 2004; Steffensmeier & Allan, 1996; Zahn et al., 2010). Of the increasing amount of research into gender differences in the development of violence, the findings have been somewhat contradictory. Some studies suggest significant differences

between genders in predictors of adolescent violence (Ellickson & McGuigan, 2000; Harachi et al, 2006). Whereas others (Moffitt, Caspi, Rutter, & Silva, 2001) conclude that risk factors for violent offending are largely similar for boys and girls.

A longitudinal study carried out by Harachi et al. (2006) investigated gender differences in risk factors specific to aggression and violence. Their findings suggested a similarity across genders in predictors of aggressive behaviour. When comparing groups with moderate to high levels of aggression to those with little or no aggression they found that predictors of higher levels of aggression in both genders were; more attention problems, more family conflict, and lower school commitment. However, they also found what they claimed to be unique predictors for each gender: Boys had lower family involvement and levels of parental education; predictors in girls were depression, low income, and having a single parent.

The limited existing research on female juvenile violent offending has identified the following potential risk factors: Abuse and witnessing violence (Chauhan & Reppucci, 2009; DiNapoli, 2003; Ilomaki et al.,2006; Odgers et al., 2007; Weaver, Borkowski & Whitman,2008); parental factors (Brennan, Hall, Bor, Najman, & Williams, 2003; Deschenes & Esbersen, 1999; Viemero, 1996) such as being raised by a single parent; familial factors such as family conflict or a broken primary family (DiNapoli, 2003; Harachi et al., 2006; Ilomaki et al., 2006); a lack of commitment to schooling and reduced levels of academic achievement (Deschenes & Esbersen, 1999; Ellickson & McGuigan, 2000; Harachi et al., 2006); and depression (Harachi et al., 2006; Odgers et al., 2007). Of the very limited amount of research carried out into personality predictors of female juvenile violent offending, the findings indicate that females have lower levels of affective empathy (Jolliffe & Farrington, 2007), higher levels of self-esteem, and more feelings of guilt (Deschenes & Esbensen, 1999).

In addition to the paucity of studies looking at gender differences in predictors of juvenile violence, the conclusions that can be drawn from existing studies are hindered due to three key limitations. The first is that in many studies there is a failure to distinguish between violent and non-violent offending; where distinctions are not made, it is not then possible to draw conclusions about sub-types of offenders (Ellickson & McGuigan, 2000). Second, where studies may distinguish between violent and non-violent offenders, it is not always clear as to whether the offenders are mutually exclusive in their offence type. Third, there is often a failure to clarify the definition of violent behaviour being used, with some studies including indirect aggression, such as verbal threats, and others only including acts of direct physical aggression (Leschied, Cummings, Van Brunschot, Cunningham, & Saunders, 2001).

As female juveniles remain the minority group for violent offending, past studies have also been hampered by difficulties obtaining sufficiently large sample groups, leading to problems when analysing and interpreting data (Moffitt et al., 2001). Although the last two decades has seen an improvement in the sample size of violent girls in studies particularly in America with sample sizes upwards of 5000 females (Blum, Ireland, & Blum, 2003; Deschenes & Esbensen, 1999), there remains a distinct lack of research carried out with a UK sample looking specifically at risk factors for violent offending in juvenile females.

In order to aid the prevention of female juvenile violent offending, it is essential that there be more research carried out into gender differences in risk factors for violence (Ellickson & McGuigan, 2000). Opinion is divided as to whether risk factors differ among violent and non-violent offenders (Piquero, Jennings, & Barnes, 2012). There is both evidence to suggest that risk factors for violent and non-violent offending are the same (Elliott, Hatot, Sirovatka, & Potter, 2001) and the suggestion that, despite some overlap, there are violence specific pathways (Lynam, Piquero, & Moffitt, 2004; MacDonald, Haviland, & Morral, 2009).

There is a call for more research underpinned by findings that female juvenile violent offenders are more likely than their male counterparts to drop-out of intervention programmes, which has been attributed, at least in part, to interventions not being gender-specific (Acoca, 1999) and therefore failing to meet females' needs. Chesney-Lind and Pasko (2013) comment that the 'dearth of knowledge means that those who work with girls have little guidance in shaping programs or developing resources that can respond to the problems many girls experience' (p.10). It is suggested that rehabilitative efforts with offenders should be based on the Risk-Need-Responsivity (RNR) Model (Andrews & Bonta, 2010). The model suggests that 1) the amount and intensity of treatment should be matched to the level of risk posed by an offender, 2) that treatments should address the specific criminogenic needs of an offender, and 3) that the delivery of treatment programs should take into account the individual characteristics of offenders (Andrews & Bonta, 2010). In order to adhere to these principles when treating female violent juveniles it is necessary to consider their level of risk, criminogenic needs and individual characteristics. As outlined above, certain factors such as familial issues, schooling issues and childhood abuse are considered to be potential risk factors for offending, however, it is suggested that although such factors are associated with offending, they do not represent criminogenic needs in that they are not directly linked to offending (Callaghan, Pace, Young, & Vostanis, 2003). Although the RNR framework would suggest that it is only necessary to address criminogenic needs, it is further suggested that as non-criminogenic needs may predispose a child to mental health problems which have, in turn, been identified as a risk factor for offending, these issues must also be addressed (Callaghan et al., 2003).

The efficacy of interventions with female juvenile violent offenders is of particular importance given that juvenile female offenders are at higher risk than their male counterparts of developing more serious outcomes from engaging in violent behaviour, such

as personality disorder (Loeber & Keenan, 1994). Furthermore, despite female levels of violence being lower than males, female juveniles displaying violent behaviour are at greater risk than males of continuing their offending in adulthood; a phenomenon known as the 'gender paradox' (Howell, 2003).

As noted above, a number of studies have not included in their analyses a comparison group of non-violent offenders making it impossible to determine if their findings are truly reflective of female violent offenders or just of female offenders in general. Although there is some incongruity as to whether risk factors vary according to offence type (Piquero et al., 2012), the current study included a comparison group of non-violent offenders to further explore this issue. In addition, as evidence suggests that violent criminals can be generalists (i.e. commit both violent and non-violent crimes) (Elliott et al, 2001), it was ensured that the violent offenders in this study had not received any convictions for additional non-violent offences.

A review of the literature highlights a dearth of such research being carried out within the UK in particular. The purpose of the current study was therefore to explore gender differences in predictors of violent juvenile offending in a UK sample but to include a wider range of risk factors than previously examined.

In accordance with previous findings, it was hypothesised that the following risk factors would be more prevalent in the histories of violent juvenile females than violent juvenile males: 1) living in a deprived household, 2) having suffered from abuse and/or neglect, 3) witnessing violence, 4) a history of truanting and expulsion from school, 5) mental health referrals, 6) attempted suicide, and 7) self-harm.

Additional risk factors were explored to determine if they differentiated female juvenile violent offenders from female non-violent offenders and their male counterparts: The existence of a family member involved in criminal activity; living in deprived/disorganised

condition; experiencing a significant bereavement or loss; having a Special Educational Need (SEN); and basic numeracy/literacy difficulties.

Owing to a dearth of literature in the area of gender differences in the thinking and behaviour of juvenile violent offenders as well the attitudes held by them, the following predictor variables were also analysed: Understanding of the consequences of their actions for themselves; impulsivity; a need for excitement; lack of social skills; lack of temper control; giving in to pressure from others; the acceptance of responsibility for actions; remorse; and an understanding of their actions on the victim.

Method

Participants

An initial sample of 687 juvenile offenders was identified for possible inclusion in the study who had been assessed using the ASSET form. The ASSET is a structured and standardised assessment profile tool for youth offenders used in England and Wales. It is administered to every juvenile offender on their entry into the criminal justice system by a member of the Youth Offending Team (YOT). ASSET identifies risk factors linked to the individual's offending behaviour (as listed below) and uses this information to plan and deliver interventions. ASSET has been found to be a good predictor of re-offending (Baker, Jones, Roberts, & Merrington, 2002; Wilson & Hinks, 2011), and an effective means by which to increase knowledge of juvenile offenders. All offenders had been charged with violent or non-violent offences in the period from 2005 to 2009 and were aged between 11 and 17 years at the time of their offence. Some cases were omitted from this initial sample for two reasons; individuals were not included where assessments were incomplete, or where they had been convicted of a sexual offence. This latter exclusion criterion was used because studies indicate that the profiles of juvenile sex offenders differ to those of non-sexual

offenders (Van Wijk et al., 2005). A final sample of 586 juvenile offenders was included in the study.

The sample was divided into four categories based on gender and offence type: 182 male violent offenders (mean age 15.1, *SD* = 1.6); 111 female violent offenders (mean age 15.3, *SD* = 1.4); 153 male non-violent offenders (mean age 15.4, *SD* = 1.6); 140 female non-violent offenders (mean age 15.2, *SD* = 1.4).

Offenders in each offence group were mutually exclusive in terms of the nature of their offence, i.e. violent or non-violent as determined from ASSET forms listing previous offences. Non-violent offences included: Non-domestic burglary; theft and handling; vehicle theft; motoring offences; public order; domestic burglary; drugs offence; robbery; fraud and forgery; and criminal damage. Violent offences included: Actual bodily harm (ABH); common assault; assault; grievous bodily harm (GBH); murder; threats to kill; and violent disorder.

Procedure

Data regarding the presence or absence of the 22 risk factors specified in the introduction (see Appendix 1) were extracted from the electronic ASSET form for each offender in the sample. Each offender received a score of 1 or 0 depending upon whether a factor was present or absent in the offender's case history.

The data accessed for this study were historical and archival therefore it was not possible to seek consent from individuals since to do so would risk causing them psychological harm (e.g., by identifying them to others as an ex-offender). Archived information can be used without prior consent from participants (Howitt & Cramer, 2005). Data were anonymised at source to protect the identities of the participants.

Results

To investigate whether males and females, and violent or non-violent offenders, differed in the potential risk factors in their backgrounds two stages of analysis were conducted. First chi-square tests were carried out in order to observe any variation within the four comparison groups. Following this, a multinomial logistic regression was conducted to ascertain whether gender (male, female) and offence type of an offender (violent, non-violent) could be predicted based on the variables which were found to have a significant level of association from the chi-square analyses.

Tests of Association: Chi square Analyses

Three series of 22 chi-square analyses were conducted comparing a) male and female violent offenders (see Table 1), b) violent female and non-violent female offenders (see Table 2), and c) violent male and non-violent male offenders (see Table 3). The Yates' Continuity Correction was included to compensate for any overestimation of the chi-square output (Pallant, 2007). Where multiple comparisons are made within one study, it is recommended to make adjustments for the potential for statistical error. A Bonferroni correction can be calculated in order to protect against the possibility of a type 1 error occurring (Pallant, 2007). However, it has also been suggested that the significance threshold for the Bonferroni correction is too conservative (Perneger, 1998) leading to an increased likelihood of a type 2 error. A Bonferroni correction was calculated (adjusted $\alpha = .0022$) and applied to the data, however in light of the conservative nature of this correction, the findings with and without the Bonferroni correction applied are reported.

Comparison of violent female offenders and violent male offenders. Following a Bonferroni correction, significant gender differences were found in the variables of abuse/neglect, self-harm and attempted suicide (see Table 1). Without the Bonferroni correction, female violent offenders were also significantly more likely than their male counterparts to be considered by the YOS to be living in deprived and disorganised

conditions. Further to this, female offenders were significantly more likely than males to have a family member involved in criminal activity, as well as being more likely to have witnessed violence in the home. Male violent offenders were more likely to have had a special educational need (SEN) identified and more likely to have experienced numeracy/literacy difficulties than females, although females were more likely to have regularly truanted from school. In the area of emotional and mental health, females were significantly more likely to have been referred to a mental health service than males. No significant associations were observed for the thinking and behaviour variables.

Cramer's V was calculated to ascertain the degree of association between each potential predictor variable and gender of the violent juvenile offenders. A Cramer's V of 0.30+ indicates a medium association between two variables and 0.50+ indicates a large association (Pallant, 2007). The variable of self-harm had close to a large association with gender (0.47) and attempted suicide had a medium association with gender (0.32). All other potential predictor variables had only a small association with gender of violent offender.

Comparison of violent female offenders and non-violent female offenders.
Following the Bonferroni adjustment, the only significant association was with control of temper; with this more often being a difficulty for violent females than non-violent females (see Table 2). The Cramer's V value (0.32) for this variable indicated that it had a medium association with type of offence for female offenders. Prior to the Bonferroni correction, factors which were significantly more frequent amongst violent females were a lack of remorse, attempting suicide, and truanting. Of these variables, truanting and attempted suicide were also highlighted in Table 1 as being specific to female violent as opposed to male violent offenders.

Comparison of violent male offenders and non-violent male offenders. Following the Bonferroni adjustment, the sole significant difference between violent and non-violent

male juvenile offenders was in the area of temper control. The Cramer's V value (0.34) showed a moderate association with type of offence. Prior to the Bonferroni correction, violent as opposed to non-violent male offenders were significantly more likely to have been excluded from school, be impulsive and lack remorse. Further, violent males were significantly less likely to give in to pressure from others and to self-harm than non-violent males.

Tests of Prediction

   Comparison of violent and non-violent, female and male offenders - Multinomial logistic regression analyses. To explore whether the significant associations found (prior to Bonferroni correction) could act as significant predictors of offence type (violent, non-violent) and gender (male, female) one multinomial logistic regression analysis was conducted with the following four criterion groups: Violent female, non-violent female, violent male, and non-violent male offender.

   Logistic regression requires a minimum case:variable ratio of 10 participants in the smallest group being predicted per predictor variable (Peduzzi, Concato, Kemper, Holford & Feinstein, 1996). As the smallest sample group in this study was 111 participants (violent females), it was possible to enter 11 predictor variables into the multinomial logistic regression. As more than 11 significant associations were found in the chi-square analyses, variables were selected for inclusion in the multinomial logistic regression based on their level of statistical significance with those variables possessing the highest level of significance being included. The 11 predictor variables entered were: Deprived household; disorganised household; history of abuse/neglect; having witnessed violence; truanting; attempted suicide; self-harm; poor control of temper; lacking understanding of consequences of actions; lacking remorse; and gives into pressure from others.

Violent girls versus violent boys. When assessing the predictors that differentiate violent girls from violent boys, the predictor variable of self-harm was significant (see Table 4), with girls being more than ten times more likely to have engaged in self-harm than boys (OR = 10.10). No other variables in the model were statistically significant.

Violent girls versus non-violent girls. Two significant predictor variables were found which differentiated violent girls from non-violent girls (see Table 5). The variable of a lack of a control of temper was found to be a highly significant predictor with violent girls being nearly four times more likely to lack control of their temper than non-violent females (OR = 3.83). In addition, the variable of giving into pressure from others was more than twice as likely to be present in non-violent girls than in violent girls (OR = 0.45).

Violent boys versus non-violent boys. Three predictors were found to significantly differentiate violent boys and non-violent boys (see Table 6). Violent boys were found to be significantly less likely to self-harm than non-violent boys. Non-violent boys were more than four times more likely to self-harm than violent boys (OR = 0.22).   Non-violent boys were twice more likely to give in to pressure from others than violent boys (OR = 0.48). Violent boys were found to be more than five times more likely to lose control of their temper than non-violent boys (OR = 5.30).

Discussion

The current study sought to explore the existence of gender differences in risk factors for violent youth offending as well as to ascertain the extent to which these risk factors could be seen as predicative of violent offending in both gender groups. In response to shortcomings identified in previous studies, this study aimed to ensure that any differences between genders were specific to violent juveniles by making further comparisons to male and female non-violent juveniles.

Based on the findings of previous research it was hypothesised that gender differences would exist in the areas of mental and emotional issues, witnessing violence, schooling, and experiences of abuse and neglect. It was also hypothesised that further differences *may* exist between genders in previously unexplored areas of thinking patterns and attitudes to offending.

Between Gender Differences

Our findings, in part, support the initial hypotheses in that they are consistent with previous studies which have found that violent female juveniles were more likely than their male counterparts to live in a deprived household (Harachi et al., 2006), to have experienced abuse or neglect (Rivera & Widom, 1990), committed self-harm (Crick & Grotpeter, 1995) and attempted suicide (Harachi et al., 2006). This is consistent with the findings of Corneau and Lanctot (2004) who concluded that females displaying a variety of delinquent behaviour were more likely than male juvenile delinquents to attempt suicide and be referred to psychological services.

However, the findings did not indicate that all of the risk factors could be considered to be predictive of violent female offending. The results of the tests of prediction in this study indicated that the sole predictor of violent youth offending which differentiated between males and females was that of self-harm. Violent females were over ten times more likely to have self-harmed than violent males. This finding is supportive of research into gender differences in general youth offending which has concluded that female young offenders are more likely than their male counterparts to commit deliberate self-harm (Lader, Singleton, & Meltzer, 2003). Given that depression is seen to be a risk factor for self-harm (Skegg, 2005), the current study in part supports Harachi et al.'s (2006) conclusion that depression was predictive of violence in young females more so than violence in males.

As reflected in the current study, self-harm has been associated with anger problems (Laye-Gindhu & Schonert-Reichl, 2005). A link has been found between explicit aggression and incidence of deliberate self-harm (Fliege, Lee, Grimm, & Klapp, 2009). Sourander et al. (2006) investigated predictors for acts of deliberate self-harm at age 15. They found that parental reports of aggression at age 12 predicted acts of deliberate self-harm at age 15. However, child self-reports did not indicate such levels of aggression, although self-report of internalising issues such as depression and somatic complaints were found to be predictive of deliberate self-harm. Sournader et al. (2006) proposed that aggression and internalising problems can be viewed as warning signs of future acts of self-harm. A further study also explored the link between emotional and behavioural problems and deliberate self-harm (Brunner et al., 2007) finding aggressive behaviour to have an influence on acts of occasional deliberate self-harm. However, they found that associations were not gender specific and further commented that emotional and behavioural factors cannot yet be seen as causal. Causality notwithstanding, Brunner et al. highlight the need for a greater awareness of the issue of self-harm in order to properly target interventions.

The finding that violent girls were more likely than violent boys to have experienced abuse/neglect is supportive of the findings of Rivera and Widom (1990) who found that girls who had been abused or neglected were more likely to commit an act of violence than boys. Furthermore, links have been found between early childhood abuse and incidence of self-harm in adolescence and young adulthood (Fliege et al., 2009; Odgers, Robins, & Russell, 2010), with internalizing problems such as depression being more prevalent amongst females who experience childhood victimisation than males (McGee & Baker, 2002). However, such findings could be considered a reflection of the findings that females, in both an offending and non-offending population, are more likely than males to have experienced abuse during childhood (Finkelhor & Dziuba-Leatherman, 1994, as cited in Howell, 2003). Further to this,

it must be noted that females are more likely than males to report incidents of abuse

(Nofziger & Stein, 2006). The findings of the current study with reference to self-harm could

be seen as a reflection of higher levels of self-harm amongst females in the general

population (Hawton & Harriss, 2008).

In the area of thinking and behaviour, the results of this study indicated that

impulsivity and a lack of temper control was particularly prevalent amongst both female and

male violent young offenders. This is contrary to the findings of Heilbrun (1982) which

indicated a significant difference in levels of impulsivity involved in violent crime between

males and females. In the area of attitudes to offending there were no significant differences

between violent girls and boys.

Within Gender Differences

Violent girls were less likely than their non-violent counterparts to truant from school,

although they were more likely to attempt suicide, lack control of their temper and lack

remorse. Of particular note was the finding that self-harm was not specific to violent girls;

there was no significant difference between violent and non-violent females.   However,

violent and non-violent females did differ significantly in the variable of attempted suicide.

The differentiation between suicide and self-harm is supportive of research which has

suggested that self-harm does not increase the likelihood that a person will commit suicide,

although there is thought to be a partial correlation between self-harm and attempted suicide

(Bolognini, Plancheral, Stephan, & Halfon, 2003; Hawton & Harriss, 2008; Kerfoot, 1996).

Those risk factors which differentiated between violent and non-violent boys were

that of exclusion from school, self-harm, impulsivity, lack of temper control, gives in to

pressure from others, and a lack of remorse. Violent male juveniles were more likely to be

excluded from school, be impulsive and lack control of their temper than non-violent males.

They were however less likely to show remorse, give in to pressure from others and self-harm.

The lack of a significant difference between levels of abuse/neglect experienced by violent and non-violent girls, as well as violent and non-violent boys contradicts the claims of Nofziger and Kurtz (2005) that being victimised during childhood and adolescence increases the probability that an individual will display violent behaviour. The findings of the current study are indicative that experiencing abuse/neglect is not more prevalent in the histories of violent young offenders.

It is of particular interest that for both males and females there was a significant difference between violent and non-violent offenders in the level of remorse displayed; violent offenders were less likely to display remorse than non-violent offenders. This supports the findings of Daly (2008) who suggested that violent offenders in both gender groups are less likely than non-violent offenders to admit that their actions were wrong, tending to condone their own actions by claiming they acted in a rational way towards what they considered to be a wrong or threatening situation.

It is important to note that although the predictor of self-harm was found to distinguish between male and female violent offenders, it failed to distinguish between female violent and female non-violent offenders. These findings are contrary to that of Harachi et al. (2006). Although the current study also offers support for a distinction between male and female violent offenders, it does not verify the findings that the distinguishing risk factor of self-harm can be seen as a predictor specific to violent female offenders.

Limitations

Although the current study did make the distinction between violent and non-violent juvenile offenders and ensured that the groups were mutually exclusive, it was not able to

take account of the type of violence that was committed by each individual since sufficient information was not available in the assessments utilised. For example, it has been suggested that there are different risk factors for violence according to whether the act of violence is relational (a person known to the offender), or predatory (a stranger) (Ellickson & McGuigan, 2000). Ellickson and McGuigan found that low self-esteem (a factor associated with self-harm and attempted suicide (Thompson & Bhugra, 2000)), differentiated between girls who displayed relational violence and those who displayed predatory violence. Ellickson and McGuigan also found that risk factors for predatory and relational violence differed across gender. These findings suggest that it may be necessary for further studies to take the type of violence into account.

A further factor for consideration is that of unknown possible diagnosis of conditions such as conduct disorder or attention deficit disorder (DSM-IV, 2000). Due to a lack of information as to the outcome of mental health assessment, the impact of biological risk factors linked to a diagnosis is unknown. Future research would benefit from the inclusion of reliable clinical diagnostic information.

The sample group used in the study is taken solely from young offenders who pass through the criminal justice system in one region of the UK. It is therefore not possible to generalise findings to a national or international population. Although the violent offender group in this study had been convicted solely for violent crimes, it was unknown as to whether they had committed a non-violent offence previously for which they were not convicted, further to this, violent offenders included in this study may have subsequently committed non-violent offences.

Research Implications

The findings of this study indicate that gender differences in predictors of violent offending exist in the area of mental health, specifically that of self-harm. However, of

interest is the finding that this predictor is not specific to female violent offenders with this

variable also being prevalent in non-violent females.

The apparent lack of significant differences between male and female violent young

offenders in the areas of thinking and behaviour, and attitude to offending is of particular

interest. The findings of the current study are not supportive of previous studies which found

that violent female juveniles have higher levels of empathy than males (Larden, Melin, Holst,

& Langstrom, 2006) and are less likely to be impulsive and callous than male violent

offenders (Meier, Slutske, Arndt, & Cadoret, 2008).   The findings of the current study are

more supportive of the findings of Moffit et al (2001) who suggested there was little

difference between male and female violent offenders. This would suggest that for some

criminogenic needs gender specific interventions are not required. However, despite such

similarities, it is evident that self-harm is a prominent issue particularly for young female

offenders; as such there is a need to consider this issue when providing support.

Exploration of additional risk factors in future studies, such as mental health

diagnoses, may highlight the existence of further significant differences that need to be

accommodated in the design of intervention programmes. Given the links found between risk

factors for violent offending, longitudinal studies are needed to establish causality.

Conclusion

Currently, the majority of interventions with juvenile offenders are gender-neutral

(Hipwell & Loeber, 2006). However, it has been suggested that in order for interventions to

be successful, steps should be taken to create gender specific components to interventions

(Acoca, 1999). In accordance with the findings of the current study it is suggested that,

where necessary for the individual offender, a focus be placed on mental health issues

experienced by violent juvenile females in order to address underlying psychosocial risk

factors for deliberate self-harm, such as familial issues, depression, anxiety disorders and poor problem solving skills (Skegg, 2005).

Although specialist services for juvenile offenders offering intervention in the area of mental health exist, it is suggested that improvements are made in order to aid earlier identification of mental health problems, earlier intervention in order to prevent progression to more serious offending, and long-term support to reduce the likelihood of re-offending (Callaghan, Pace, Young, & Vostanis, 2003; Jenson, Potter, & Howard, 2001). Considering the mental health issues experienced particularly by young female offenders, it is suggested that mental health interventions be made more accessible to those who require help. In addition, interventions for both male and female young offenders should address the issues of physical and sexual maltreatment if required.

As violent female juveniles were more likely to truant from school than males, it is suggested that support strategies be put in place to offer encouragement to attend school. Irving and Parker-Jenkins (1995) found involving parents in the process of reducing truanting beneficial. They also proposed that schools offer pastoral support for students who persistently truant; a service which is of particular importance where parents are unable or unwilling to cooperate.

The findings of this study suggest that there is a need to target the issues of temper control and lack of empathy in violent juvenile offenders. Although interventions exist to address the areas of thinking and attitudes, attention must be paid to ensure that interventions are based on published evidence as to 'what works' with young offenders. Interventions should undergo evaluation and fully accredited interventions should be developed based on the increasing body of knowledge as to the criminogenic needs of juvenile offenders.

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Appendix

ASSET risk factor definitions

Living Arrangements	
Deprived	Parents receiving benefits
	Council housing
Disorganised	Parents struggle to keep appointments with YOT and external organisations
	Home is considered to be untidy, chaotic
	Child's life lacks structure

Family and personal relationships	
People involved in criminal activity	Close family member with involvement in the criminal justice system
Abuse/neglect	Self-reported emotional/physical/sexual incidents of previous/current abuse
Witness violence	Self-reported witnessing of domestic violence
Significant bereavement/loss	Loss of family member or close friend

Education	
SEN identified	Special Educational Need as diagnosed by school
Regular truanting	Defined as less than approximately 85% unauthorised absence
Numeracy/literacy difficulties	Judged by school
Exclusion	Details from previous school

Emotional/mental health	
Attempted suicide	Self-report from child/adolescent
Referral/contact with mental health service	Self-report from child/adolescent
	Information from parents
Self-harm	Self-report of incidents

Thinking and behaviour	
Lacks understanding of consequences of actions	Presence or absence of items in 'thinking and behaviour' and 'attitude to offending' categories is as judged by:
Impulsive	
Need for excitement	• child/adolescent
Lacks social skills	• police
Can't control temper	• YOS staff
Give in to pressure from others	

Attitude to offending	
Not accept responsibility	Presence or absence of items in 'thinking and behaviour' and 'attitude to offending' categories is as judged by:
Lacks remorse	
Lacks understanding of effect on victim	
	• child/adolescent
	• police
	• YOS staff

Note. ASSET forms are completed with information from: the adolescent; parent/s; school (if consent is given from parents); social services; police.

Table 1

Percentage Incidence of Potential Predictors and Significance Level of Association for Male and Female Violent Offenders

Potential predictors	% violent males (n=182)	% violent females (n=111)	X^2	Cramer's V
Living arrangements				
Deprived	18%	32%	6.22*	0.15
Disorganised	3%	10%	5.54*	0.15
Family and personal relationships				
Family member involved in criminal activity	17%	28%	4.27*	0.13
Abuse/neglect	13%	31%	13.12**	0.22
Witnessed violence in the home	21%	23%	4.83*	0.14
Education				
Regular truanting	19%	30%	4.36*	0.13
Numeracy/literacy difficulties	17%	7%	4.47*	0.13
Emotional/mental health				
Attempted suicide	3%	24%	28.44**	0.32
Self-harm	4%	42%	62.65**	0.47

Note. Only significant results have been reported. For full list of risk factors see Appendix 1.
*$p<.05$, **$p<.001$.

Table 2

Percentage Incidence of Potential Predictors and Significance Level of Association for Violent Female Offenders and Non-violent Female Offenders

Potential predictors	% violent ($n = 111$)	% non-violent ($n = 139$)	X^2	Cramer's V
Education				
Regular truanting	31%	47%	6.01*	0.16
Emotional/mental health				
Attempted suicide	24%	12%	5.42*	0.16
Thinking and behaviour				
Lacks control of temper	75%	43%	23.91**	0.32
Attitude to offending				
Lacks remorse	32%	17%	6.96*	0.18

Note. Only significant results have been reported. For full list of risk factors see Appendix 1.
*$p<.05$, **$p<.001$.

Table 3

Percentage incidence of Potential Predictors and Significance Level of Association for Violent Male Offenders and Non-violent Male Offenders

Potential predictors	% violent ($n = 182$)	% non-violent ($n = 142$)	X^2	Cramer's V
Education				
Exclusion	32%	21%	4.13*	0.12
Emotional/mental health				
Self-harm	4%	13%	7.30*	0.16
Thinking and behaviour				
Impulsive	74%	60%	6.23*	0.15
Lacks control of temper	68%	34%	36.38**	0.34
Gives into pressure from others	32%	47%	7.26*	0.17
Attitude to offending				
Lacks remorse	25%	13%	6.64*	0.15

Note. Only significant results have been reported. For full list of risk factors see Appendix 1.
*$p<.05$, **$p<.001$.

Table 4

Multinomial Logistic Regression Predicting the Likelihood of being a Male or Female Violent Offender

Predictor variable	*OR*	*B*	*SE*	95% CI
Deprived	1.65	0.50	0.32	[0.88, 3.10]
Disorganised	2.74	1.01	0.65	[0.77, 9.80]
Abuse/neglect	1.58	0.46	0.38	[0.75, 3.34]
Witnessed violence	1.00	0.002	0.44	[4.43, 2.35]
Truanting	1.55	0.44	0.31	[0.85, 2.82]
Attempted suicide	2.74	1.01	0.55	[0.93, 8.10]
Self-harm	10.10**	2.31	0.45	[4.16, 24.52]
Lacks control of temper	0.93	-0.07	0.31	[0.51, 1.70]
Lacks understanding of consequences	0.58	-0.54	0.34	[0.30, 1.13]
Lacks remorse	1.42	0.35	0.31	[0.76, 2.62]
Gives into pressure from others	0.54	-0.61	0.32	[0.29, 1.01]

Note. OR = odds ratio; CI = confidence interval. **p <0.001.

Table 5

Multinomial Logistic Regression Predicting the Likelihood of being a Female Violent or Female Non-Violent Offender

Predictor variable	*OR*	*B*	*SE*	95% CI
Deprived	1.74	0.55	0.68	[0.92, 3.28]
Disorganised	1.24	0.22	0.56	[0.41, 3.75]
Abuse/neglect	0.74	-0.31	0.36	[0.36, 1.50]
Witnessed violence	1.20	0.18	0.44	[0.50, 2.86]
Truanting	0.41	-0.90	0.29	[0.23, 0.72]
Attempted suicide	1.96	0.68	0.42	[0.87, 4.44]
Self-harm	1.16	0.15	0.33	[0.60, 2.24]
Lacks control of temper	3.83**	1.34	0.31	[2.08, 7.05]
Lacks understanding of consequences	1.54	0.43	0.38	[0.74, 3.23]
Lacks remorse	1.76	0.56	0.34	[0.91, 3.41]
Gives into pressure from others	0.45*	-0.79	0.32	[0.24, 0.85]

Note. OR = odds ratio; CI = confidence interval. *$p<0.05$, **$p <0.001$.

Table 6

Multinomial Logistic Regression Predicting the Likelihood of being a Male Violent or Male Non-Violent Offender

Predictor variable	*OR*	*B*	*SE*	95% CI
Deprived	1.34	0.29	0.34	[0.69, 2.59]
Disorganised	0.33	-1.12	0.62	[0.10, 1.11]
Abuse/neglect	0.95	-0.06	0.41	[0.42, 2.12]
Witnessed violence	0.81	-0.21	0.43	[0.35, 1.90]
Truanting	0.56	-0.58	0.29	[0.31, 0.99]
Attempted suicide	2.29	0.83	0.74	[0.54, 9.69]
Self-harm	0.217*	-1.53	0.49	[0.08, 0.57]
Lacks control of temper	5.30**	1.67	0.27	[3.13, 8.97]
Lacks understanding of consequences	0.83	-0.19	0.29	[0.47, 1.46]
Lacks remorse	1.74	0.55	0.34	[0.89, 3.38]
Gives into pressure from others	0.48*	-0.74	0.26	[0.29, 0.79]

Note. OR = odds ratio; CI = confidence interval. *$p<0.05$, **$p<0.001$.