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## **Rates of self-reported delinquency among Western Australian male and female high school students: The male-female gender gap**

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**Abstract**

The Adapted Self-Report Delinquency Scale (ASDS) was administered to 328 (174 males and 154 females) adolescents from eight high schools in Perth, Western Australia. The ages of the sample ranged from 13 to 17 years. Males reported a greater percentage level of involvement than females in 36 of 40 individual delinquent behaviours comprising the ASDS. A between-subjects multivariate analysis of variance using a Bonferroni adjusted alpha revealed a significant multivariate main effect of Gender,  $F(6, 318) = 3.98, p < .001$ , partial  $\eta^2 = .08$ . No significant main effect of Age was evident. Univariate  $F$ -tests revealed that males scored significantly higher than females on only one of seven delinquent factors (Physical Aggression). These data are discussed in the light of established evidence showing male predominance in delinquency, recent reports suggesting a male-female gender gap, and theories that have attempted to explain this disparity in offending among males and females.

**Keywords:** Juvenile delinquency, self-report, high school, gender differences, adolescents, offending behaviour, teenagers, males and females.

Juvenile delinquency is “one of the most serious problems of modern society with multiple negative effects on health, educational, financial, vocational, and judicial systems” (Kofler-Westergren, Klopff, & Mitterauer, 2010, p. 33). Data clearly demonstrate that delinquent behaviour has impacted heavily the world over. In the USA, for example, 16% of violent crimes (murder and non negligent manslaughter, forcible rape, robbery, and aggravated assault) and 26% of property crimes (burglary, larceny-theft, and motor vehicle theft), respectively are perpetrated by juveniles (Puzzanchera, 2009). In the UK 12% of assaults, 10% of thefts, 4% of criminal damage, 3% of drug selling offences, 2% of vehicle-related thefts, and 1% of burglary/robbery are committed by 10 to 25 year olds (Roe & Ashe, 2008). The most frequent acts of juvenile delinquency in Australia include property damage (25.5%), burglary and theft (21.8%), offences against the person (10.9%), against good order (9.2% e.g., breaches of orders, resisting arrest), driving and motor vehicle offences (6.5%), and drug offences (4.9%) (Fernandez, Walsh, Maller, & Wrapson, 2009).

Almost a decade ago, we reported in this journal the rates of self-reported delinquency among Years 8 to 12 students attending high schools in Australia. It was clear from these data that males participated significantly more than females in all forms of delinquent behaviour (Carroll, Green, Houghton, & Wood, 2003). Indeed, male predominance in offending is well established (Dawson & Straus, 2011) with findings consistently showing males engage in officially reported delinquent behaviour more so than females (e.g., Australian Institute of Criminology, AIC, 2010; Farrington, 1986; Moffitt, 1993; Siegel, Welsh, & Senna, 2006; Flatley, Kershaw, Smith, Chaplin, & Moon, 2010). The dominance of young men represented in crime rates is a global phenomenon (Carrington, 2006), and the gender-deviance nexus with

males having a higher rate of crime/delinquency is one of the strongest relationships in deviance research (Cheung & Cheung, 2010).

The reasons for the gender predominance have been explained in a number of theories, with three, namely general strain theory (GST; Agnew, 1992), self-control theory (SCT; Gottfredsen & Hirschi, 1990) and reputation enhancement theory (RET; Emler, 1984), offering unique insights. Briefly, for GST, although the process of offending occurs similarly for males and females, the way in which they interpret and react to the strains and negative emotions associated with the offending is different (Broidy & Agnew, 1997). Male strain is more conducive to violent and property crimes whereas for females, the strain is more conducive to the escapist form of crime. Furthermore, because males tend to externalize their stress (whereas females tend to internalize their stress), they get involved in more criminal/delinquent acts than do females. For SCT, because females have more self-control than males, they are less deviant; this is said to stem from gender-based socialization in which girls have been subject to greater intensive parental control since childhood (see Blackwell & Piquero, 2005). Finally, according to RET, delinquency is viewed as self-presentation that establishes a rational and non-pathologic social identity (See Emler & Reicher, 1995). Choice of reputation is affected by gender with females committing fewer delinquent acts and/or admitting to committing such acts, compared to males, as a means of protecting their reputations (for a comprehensive review, see Carroll, Houghton, Durkin, & Hattie, 2009).

Recent research suggests, however, a narrowing of the male and female gender gap in offending (see Snyder & Sickmund, 2006; Statistics Canada, 2007; Tracey, Kimberly, & Stephanie, 2009). Young women now represent the fastest growing population within juvenile justice systems the world over (Tracy, Kempf-Leonard, & Abramoske-James, 2009). For

example, data released by the Federal Bureau of Investigation (see Snyder, 2008) show that arrest rates for male and female juveniles in the USA increased from 1984-1997, but when these rates declined between 1997 and 2006, the rate of decline was much less for females (-13.5%) compared to males (-23%). Similar trends were observed for specific types of offences, for example, burglary (Males -31.1%, Females -24.2%); violent crime including murder (Males -14.3%, Females -12.7%); property crime (Males -38.9.3%, Females -17.7%); and carrying weapons (Males -8.5%, Females -0.8%). In some categories of offending female arrest rates increased at a greater rate than for males: Other assaults (Males -4.4%, Females +10.1%); robbery (Males +5%, Females +16.6%); disorderly conduct (Males -4.6%, Females +20.1%); and drug abuse violations (Males -7.9%, Females +5.9%) (see Snyder, 2008). Tracey et al. (2009) concluded from these data that “the offending behaviour of females cannot be dismissed as merely a less frequent or less analogue of that of males” (p. 210). This assertion is further supported by data showing violent crime perpetrated by girls is rising at levels far greater than that for boys in the USA, Canada and the UK (Carrington, 2006).

These trends also appear to be reflected in the offending behaviour of Australian youth. According to the Australian Institute of Criminology (2010) from 1996/97 to 2008/2009, juvenile offender rates declined by 13% for males, but increased by 46% for females. Consequently, Kjelsberg and Rustad (2009) called for researchers and policy makers throughout the Western world to focus attention on females, because they constitute a growing proportion within the justice (and juvenile) system. Chen and Giles (2004) provided support for this assertion from Canadian data on charged offences (1983-2000). These data demonstrated that there was strong evidence of convergence between males and females for the majority of the 20 offence categories studied. In a second study which analysed data on arrests (1960-1995) in the

USA, O'Brien (1999) also reported convergence between males and females for robbery, burglary, and motor vehicle theft. The opposite was true, however, for homicide.

Although data such as reported above are important, the vast majority of studies from which they are taken have almost exclusively focused on incarcerated adult or juvenile populations and/or individuals who have misdemeanours officially recorded against them in the justice or juvenile system. It is acknowledged that official records tend to underestimate juvenile delinquency (Moffitt & Caspi, 2001) since many youths who commit crimes never receive an official caution or warrant, or enter the juvenile justice system (Maxfield, Weiler, & Widom, 2000). This has been validated by self-report data which suggest that somewhere between 50% and 90% of young people engage in behaviours that involve breaking the law, often without prosecution (Dryfoos, 1990; Moran & Hagell, 2001). Farrington (1986) and Mak (1993) have shown that when individuals anonymously record their involvement in delinquent activities, many undetected crimes are revealed.

Hence, self-reported delinquency in community samples such as in educational institutions may provide another perspective on the convergence of male and female offending rates because they (the data) are independent of the behaviour of police (Dawson & Straus, 2011). For example, Dawson and Straus (2011) examined self-reported rates of offending in male and female university students from 32 nations. Findings revealed that the average rate of offending for males was 1.9 times greater than that for females, with male predominance particularly evident in violent crimes (3.5 times that of females) and property crimes (1.7 times).

Little research has examined the differences in rates of delinquency among mainstream high school male and female students. Rather, the focus has been primarily on males and hence the percentage of young girls indulging in such activities remains unclear (Carroll et al., 2009). Of

the Australian research conducted Carroll et al. (2003) found that from a sample of 965 high school students, males reported significantly higher levels of involvement than females in abuse of property, hard drug-related offences, physical aggression, stealing offences, school misdemeanours, soft drug use offences, and vehicle-related offences. Similar findings were reported by Houghton, Carroll, Tan, and Hopkins (2008). Nevertheless, it remains the case that only a limited number of studies have attempted to specifically compare gender differences in male and female juvenile offending (Tracey, Kimberly, & Stephanie, 2009). This present research goes some way to addressing this by comparing the self-reported rates of delinquency of Western Australian male and female high school adolescents and in doing so, providing further evidence of convergence in male and female offending per se.

## **Method**

### **Participants and settings**

A total of 328 (174 males and 154 females) high school adolescents ranging in age from 13 to 17 years from eight separate high schools in the metropolitan area of the Western Australian capital city of Perth participated. Of the sample 251 were in Grades 8 and 9 (13-14 years of age: lower high school) and 77 were in Grades 10 and 11 (15-17 years of age: Upper high school). Of the eight schools, three were in low socio-economic status areas (SES), four in middle SES areas, and one was in a high SES area as determined by an index defined at the postcode level from the Australian Bureau of Statistics (2003). These schools were those that agreed to participate from an initial random selection of 12 schools.

All participants completed the *Adapted Self-Report Delinquency Scale* (ASDS; Carroll, Durkin, Houghton, & Hattie, 1996) in their regular classrooms under examination-like conditions. In the schools, each administration was conducted in groups of between 10 and 15

students. In some instances, the administration was carried out in smaller groups of about four students. These smaller groups were essential given that some participants had records of behavioural problems and in some cases had associated literacy difficulties.

### **Instrumentation**

The *Adapted Self-Report Delinquency Scale* (ASDS; Carroll et al., 1996) is a self-report scale containing 47 items covering a wide spectrum of frequently occurring delinquent activities (from minor infractions to more serious offences) in Australia, with wording consistent with adolescent usage. It has a Grade Four (approximately 9-10 years of age) reading level. Participants report the frequency in which they engaged in delinquent acts during the last 12 months, using a six-point scale (*never, 1-3 times, 4-6 times, once a month, more than once a month, and more than once a week*). Of the 47 items, one item reports police warnings (“Been warned by the police - but not charged - for something you did?”) and one item reports court appearances (“Appeared in the Children’s Court for something you did”) and are included in the scale to gain a measure of self-reported official delinquency status. Additionally, four “lie” items (“Not kept a promise?”, “Been late for school, a meeting, an appointment, etc.”, “Done something that your parents did not want you to do?”, “Told a lie to someone?”) are interspersed among the delinquency items to verify reliability (Mak, 1993). Exploratory and confirmatory factor analyses have consistently revealed seven internally consistent subscales (see Carroll et al., 2009 for a comprehensive review). The most recent factor analysis (Carroll, Houghton, Wood, Perkins, & Bower, 2007) revealed similar consistency of the subscales along with the following reliability coefficients: Abuse of Property (7 items),  $\alpha = .91$ ; Hard Drug-Related Offences (5 items),  $\alpha = .89$ ; Physical Aggression (3 items),  $\alpha = .88$ ; Stealing Offences (5 items),



$\alpha = .90$ ; School Misdemeanours (7 items),  $\alpha = .86$ ; Soft Drug Use Offences (5 items),  $\alpha = .88$ ; and Vehicle-Related Offences (9 items),  $\alpha = .94$ .

In this present study the internal reliability coefficients for the seven subscales of the *ASDS* were: Abuse of Property (7 items),  $\alpha = .91$ ; Hard Drug-Related Offences (5 items),  $\alpha = .77$ ; Physical Aggression (3 items),  $\alpha = .81$ ; Stealing Offences (5 items),  $\alpha = .84$ ; School Misdemeanours (7 items),  $\alpha = .89$ ; Soft Drug Use Offences (5 items),  $\alpha = .87$ ; and Vehicle-Related Offences (9 items),  $\alpha = .91$ .

### **Procedure**

Approval for the research was obtained from the Human Research Ethics Committee of the administering institution. Twelve state schools, four from each of high, middle and low SES areas, from the metropolitan region of Perth, Western Australia, were randomly selected as a representative sample of Western Australian high school students. The principals of all 12 schools were then approached for permission to undertake the research and of these eight principals agreed to participate. An information sheet explaining the purpose and nature of the study, along with an assurance of confidentiality and a consent form were sent home to the parents of all students in each of a number of randomly selected classes in all of the participating schools. The students and their parents were required to give consent to participate. Overall, there was a positive response rate of 54%.

The *ASDS* (Carroll et al., 1996) was administered by two of the authors to the high school students who had agreed to participate. Participants were verbally informed by the researchers about the nature of the study and again assured of confidentiality and anonymity of their responses. Participants were requested to complete the *ASDS* without peer discussion and were informed that should they encounter any problems with the questions, they were to raise their

hand to obtain support from the researcher administering the questionnaires. The instructions for administration were consistent across administrations. In the smaller groups for participants with literacy difficulties, one of the researchers read the questions verbatim to the participants. Each administration took approximately 30-45 minutes.

## **Results**

Initially, a multivariate analysis of variance (MANOVA) was conducted to establish if significant differences existed between males and females on the seven delinquency variables of the *ASDS*. The Wilks' criterion was used to evaluate multivariate significance. The findings from univariate *F*-tests, using a Bonferroni adjusted alpha ( $\alpha$ ) level of .007 for the *ASDS* variables, to control for Type 1 errors are then provided. Effect sizes and power estimates are also reported. This is followed by an examination of the total percentage involvement in each of the *ASDS* items for males and females.

### **Male and female self-reported delinquency**

A between-subjects MANOVA on the seven dependent variables of the *ASDS* revealed no interaction effects, and no significant main effect of Age (lower vs upper high school level). There was, however, a significant multivariate main effect of Gender,  $F(6, 318) = 3.98, p < .001$ , partial  $\eta^2 = .08$ . Using a Bonferroni adjusted  $\alpha$  level of .007 only one (Physical Aggression) of the seven self-reported delinquency variables reached statistical significance, with males scoring significantly higher than females. The univariate *F*-tests and observed means for the main effect of Gender are shown in Table 1.

[Table 1 about here]

As can be seen in Table 2, on an item by item basis males reported a greater percentage level of involvement than females in 36 of the 40 individual delinquent behaviours. The highest total

percentage levels of self-reported involvement appear to correspond with level of category seriousness. That is, between 71% and 86% of participants reported involvement to some degree during the previous 12 months in most of the activities comprising the school misdemeanours factor. Although males reported greater involvement in each of the items measuring school misdemeanours, the differences compared to females were only between 2% and 9%; the exception to this being “teasing or making fun of others” and ‘hitting, pushing, slapping someone’ (where differences were around 17%). The lowest levels of involvement were in hard drug-related offences (ranging from 3%: “Used other hard drugs such as heroin”, up to 11%: “Used or threatened to use force to get money or things from another person”). Within this category, however, females reported greater percentage levels of involvement than males in “Using amphetamines (such as speed, ecstasy, uppers), LSD (also called acid), or other hallucinogens” and “Using other hard drugs such as heroin”. These two delinquent behaviours along with two further items from abuse of property (“Deliberately damaged school desks, windows, or other school property”; “Put graffiti on walls, toilet doors, bus panels, or other public places”) were the individual delinquent behaviours in which female involvement was greater than that of males. With reference to the physical aggression factor, males reported levels of involvement two to three times greater than that for females (i.e., “Deliberately hurt or beat up someone”, “Taken part in a fist fight in which a group of people was against another group”, “Used a weapon of some sort (e.g., knife, stick, chains, or bottle) in a fight”. This was also the case where a physical presence was required (i.e., “Used or threatened to use force to get money or things from another person”)

[Table 2 about here]

**Discussion**

Maxfield, Weiler, and Widom (2000) and Moffitt and Caspi (2001) suggested that official records tend to underestimate juvenile delinquency since many young persons who commit crimes never enter the juvenile justice system. This may be particularly true of females, who on the face of it commit fewer acts of delinquency than males. Moffitt and Caspi (2001) highlighted that females may indulge more in covert delinquent activities, hence their under-reporting. According to Dryfoos (1990), Dunford and Elliott (1982), and West and Farrington (1977), self-report data demonstrate that almost 50% of young person's engage in delinquent activities at some time during their adolescent years and as much as 98% of adolescent delinquent behaviour is not reported in official data. Furthermore, when individuals anonymously record their involvement in delinquent activities, many undetected crimes are revealed (Blackburn, 1993; Farrington, 1986; Mak, 1993) and where gender differences are concerned, data are not confounded with the differential response of the police or courts (Dawson & Straus, 2011).

It should be acknowledged, however, that crime rates based on self-reported behaviours alone does have its limitations. For example, chronic and high risk offenders are more likely to be under-represented and some researchers suggest that corroborative information such as file data and observations be used (see Enzmann & Podana, 2011). In the present study parental consent was required for participation given that participants were of school age. It is therefore possible that many of the students who commit delinquent acts did not complete the survey due to lack of parental consent or that they themselves did not wish to disclose their illegal activities. It should also be acknowledged that if data had been collected from remote and/or geographically isolated schools results may have been different.

The current study sought to examine mainstream male and female high school students' rates of delinquent activities, particularly in terms of the male-female gender gap in offending. To provide the best test of this, data should be longitudinal. In the present research, data were cross-sectional which precludes establishing time order, and therefore a degree of caution is warranted in any interpretation. Nevertheless, these current data offer some support for other findings, which suggest a narrowing of the gender gap (Chen & Giles, 2004; Office of Juvenile Justice and Delinquency Prevention, 2007; Snyder & Sickmund, 2006; Tracey, Kimberly, & Stephanie, 2009).

Given there were no significant differences between males and females in six of the seven categories of delinquent behaviour (i.e., vehicle-related offences, school misdemeanours, soft drug use offences, stealing offences, abuse of property and hard drug-related offences), offers support, albeit indirectly, for the Australian Institute of Criminology (2010) who reported that from 1996/97 to 2008/2009, juvenile offender rates declined by 13% for males, but increased by 46% for females. Conversely, the findings are conflicting with Carroll et al. (2003) who found a total male predominance in all types of delinquent activities, and with Roe and Ashe (2008) whose data suggested that higher rates of offending among males was a continuing trend. In line with this it is worth noting, however, that on an item-by-item basis males in the present study did report a greater level of involvement than females in 36 of the 40 individual delinquent behaviours. It is worth noting, however, that although the students in the present study were 13-14 years of age, the instrument required them to reflect on their delinquent offences during the previous 12 months (i.e., when they were 12-13 years of age). It may be the case that once some young people reach mid to late adolescence they become more entrenched in offending behaviour and the gender gap expands.

Moffitt and Caspi (2001) highlighted that females may indulge more in covert delinquent activities and that these are under-reported. Females in this present research self-reported similar rates as males in categories of delinquency which while not entirely overt in nature, did require some element of openness, such as, vehicle-related offences (taken, stolen, driven a car or a motorbike at high speeds, raced others), school misdemeanours (disrupted others activities, sworn at, hit, teased others), and abuse of property (deliberately damaged property in public places). It may also be the case that soft drug use involved overt involvement since this is viewed by young people as socially conforming during adolescence because it seems to be the norm among some peer groups (Durkin & Houghton, 2000). Recent evidence from large scale surveys of Australian high school students offers further support for this assertion: approximately 90% of 12 to 17 year olds have drunk alcohol and by mid adolescence approximately 33% report weekly use of alcohol; and 20% report lifetime use of marijuana compared to 4% reporting more hard drug use such as amphetamines (Frye, Dawe, Harnett, Kowalenko, & Harlen, 2008; White & Hayman, 2006).

Contrary to popular media reports, but in line with other multi cross-nation research findings (e.g., Dawson & Straus, 2011), this present study found a significant difference between males and females for delinquent activities comprising physical aggression (e.g., deliberately hurt or beat up someone, taken part in a fist fight in which a group of people was against another group, used a weapon of some sort in a fight). This is supportive of general strain theory which not only suggests that males become more involved in delinquent acts but also that male strain is more conducive to violent-type crimes (Broidy & Agnew, 1997). Furthermore, it corroborates reputation enhancement theory which has demonstrated that females withhold their involvement in highly public overt acts such as those involving physical aggression for fear of damaging their

reputations (see Carroll et al., 2009). Overall, the rates of offending and more specifically for physical aggression is also congruent with Carroll et al. (2003) and Houghton et al. (2008) who also found significantly higher levels of male involvement in offences involving physical aggression. While it cannot be definitively argued that there are increasing trends in female offending and that this is eroding the male-female gap, it does appear to be the case that with the exception of physical aggression, mainstream high school females are involved in a range of delinquent activities at similar rates to their male counterparts.

In conclusion this study has along with other studies demonstrated the feasibility of using self-report data, even though there are some limitations. Furthermore, despite not using longitudinal data similar rates of juvenile offending were found for males and females. What is now required is further research using more sensitive time series measures of juvenile offending so that more definitive estimates of the convergence between male and female offending might be obtained. These studies should also recruit incarcerated youth so that a more rigorous test of the convergence between male and female rates of offending can be undertaken.

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