CRIME AND JUSTICE
Bulletin

NSW Bureau of Crime Statistics and Research

Contemporary Issues in Crime and Justice **Number 153**

November 2011

Uses and abuses of crime statistics

Don Weatherburn

Aim: *To promote a better understanding of the uses and abuses of crime statistics amongst students, journalists and the interested public.*

Method: *Description of the main uses of crime statistics, coupled with analysis and examples of common abuses.*

Results: *Crime statistics have a wide variety of valid uses; including the measurement of crime trends and the evaluation of crime control initiatives. They are, however, frequently misinterpreted by the media and misrepresented by politicians.*

Conclusion: *The increase in media access to information about crime has not been matched by an increase in the quality of media reporting on crime. The misuse of crime statistics by the media has impeded rational debate about law and order.*

Keywords: *crime statistics, media, crime victim surveys, headlines, courts.*

INTRODUCTION

Between 2000 and 2009, the Australian national murder rate fell by 39 per cent, the national robbery rate fell by 43 per cent, the national burglary rate fell by 55 per cent, the national motor vehicle theft rate fell by 62 per cent and all forms of other theft fell by 39 per cent (Australian Bureau of Statistics, 2010). Australia is now into its 11th straight year of falling or stable crime rates. Property crime rates in some States are lower than they've been in more than 20 years (Moffatt & Goh, 2010). You might think this a cause for celebration but the vast majority of Australians still think crime is going up (Roberts & Indermaur, 2009). The reason for this is fairly clear. Most people get their information about crime from the media—and large sections of the media habitually distort, misrepresent and exaggerate the facts on crime.

The abuse of crime statistics is so common it has in some quarters engendered great skepticism about them. The saying there are 'lies, damned lies and statistics' is probably nowhere more frequently uttered than in the context of crime statistics. Yet whether we like them or not, crime statistics are here to stay. We have to make judgments about the prevalence of crime, about trends in crime, about the distribution of crime and about the impact of Government efforts to prevent and control crime. We cannot base these judgments on personal experience and anecdote. They have to be based on statistical information. The challenge facing those who produce and use crime statistics is how to do so in a way which is not misleading and which helps rather than hinders our understanding of crime. This bulletin is designed to help those unfamiliar with crime statistics to understand their uses and abuses.

THE DIVERSITY OF CRIME

A crime for our purposes is an act or omission punishable by law. The acts and omissions punishable by law are vast and varied. Our commonsense picture of crime includes offences like murder, assault, robbery, rape, burglary, drug trafficking and gang violence but the criminal law encompasses much else besides. Other common offences include failing to pay your train or bus fare, using offensive language, possessing or using cannabis, tax evasion and fraud. Enormous diversity of offending can be found even within most categories of crime. The offence category of assault, for example, includes everything from pushing someone in the chest to beating them so severely they suffer broken limbs. The offence category of fraud includes everything from service station 'drive-offs' to 'insider trading'.

In the face of this diversity there is little point in asking whether 'crime is up' and little meaning to be attached to claims that 'crime is increasing'. Over any particular period of time and in any particular location, some categories of crime may be rising, some may be stable and others may be falling. It hardly ever happens that all categories of crime in a given location are rising or falling at once. So when someone says 'Is crime on the increase?' it is always prudent to ask what period, what category of crime and what location they have in mind. Since crime can rise rapidly when it starts from a low base, it is also prudent to ask whether the category of crime in question is prevalent or fairly rare. Before we can begin to see how these questions are answered, though, we need to discuss the sources of information about crime.

This bulletin has been independently peer reviewed.

SOURCES OF INFORMATION ABOUT CRIME

There are two principal sources of information about crime and a number of secondary sources. The two principal sources are crimes recorded by police and crime victim surveys. The secondary sources include police charge data, accident and emergency data and self-report data. In the next two sections of this bulletin we discuss the nature, strengths and weaknesses of each of these sources of information.

POLICE RECORDED CRIME

Whenever someone reports a crime to police, or police discover what they believe to be a crime, police generally record it. These records of crimes reported to and recorded by police form the basis of police crime statistics. They are an extremely valuable source of information. Among other things, each record contains information on the nature of the recorded crime, the circumstances in which it occurred, the location of the crime, the time it occurred, whether the offender was armed with a weapon, what sort of weapon was involved, whether the offender appeared to be affected by alcohol and, if something was stolen, the nature of any object stolen. National figures on a selection of important crimes reported to and recorded by police are published by the Australian Bureau of Statistics (ABS) in the annual report *Recorded Crime — Victims* (Australian Bureau of Statistics, 2011a).

CRIME VICTIM SURVEYS

Crime victim surveys are a second important source of information about crime. Despite the name, crime victim surveys are not surveys of victims of crime. They are representative sample surveys of some defined population, usually the general adult population. Respondents in such surveys are typically asked whether they have been victims of various types of crime and, if so, whether they reported the crime to police. If the survey sample is representative of the population from which it is drawn, it can be used to obtain estimates of the prevalence of these types of crime in that population and estimates of the proportions of victims reporting these crimes to police. The ABS conducts an annual crime victim survey known as *Crime Victimisation Australia* (Australian Bureau of Statistics, 2011b). From time to time it also conducts a special survey on personal crime known as the *Personal Safety Survey* (Australian Bureau of Statistics, 2006) as well as crime victim surveys within particular jurisdictions.

POLICE CHARGE DATA

Figures on crimes recorded by police are of little assistance when we want to know whether crime committed by particular groups (e.g. juveniles) is increasing because in most instances of offending, the offender is unknown. The 90-day clear-up rate for home burglary in New South Wales (NSW), for example, is less than five per cent (NSW Bureau of Crime Statistics and Research, 2011). To determine whether offending by particular groups is increasing it is necessary to examine the profile of people charged with criminal offences or against whom other forms of criminal proceedings are initiated (e.g. caution, referral to a Youth Justice Conference). National figures on offenders proceeded against can be found in the ABS publication *Recorded Crime — Offenders* (Australian Bureau of Statistics, 2011c).

COURT DATA

Although useful for a wide range of purposes (e.g. measuring conviction rates, monitoring sentencing patterns), court data are not very often used as a source of information about crime trends or the prevalence of crime. When they are, it is mainly as a means of measuring recidivism or re-offending. Researchers interested in the factors that affect rates of re-offending or in the effectiveness of various policies or programs in reducing re-offending often make their assessments based on either the *time to re-conviction*, the *percentage of offenders re-convicted* and/or the *number of re-convictions*.

SELF-REPORT DATA

Some types of crime have no obvious victim and, as a consequence, are rarely reported to police. Illegal drug use and tax evasion are two examples. In these circumstances it is sometimes possible to obtain a measure of offending by surveying the population of interest and asking them whether they have committed one or more specified offences over (say) the previous 12 months. As with crime victim surveys, if a survey of self-reported offending is representative of a particular population it can be used to obtain estimates of the prevalence of offending in that population. Australia does not have a general purpose self-reported crime survey. However the National Institute of Health and Welfare does publish a regular survey on self-reported drug use, known as the *National Drug Strategy Household Survey* (AIHW, 2011).

ACCIDENT AND EMERGENCY DATA

When data on recorded crime are not available or deemed unreliable for a particular purpose, it is sometimes necessary to use accident and emergency data. The usefulness of accident and emergency data stems from the fact that accidents and medical emergencies are common consequences of some types of crime. Research has shown, for example, that drink drivers account for a high proportion of single vehicle night-time crashes (Douglass, Freedman, & Clark, 1974). Single vehicle night-time crashes are therefore sometimes used as a ‘proxy’ measure for trends in the incidence of drink-driving. Users of prohibited drugs, such as heroin, cocaine and amphetamines are prone to overdose on these drugs. For this reason, emergency department data are sometimes used to measure trends in illegal drug use (Snowball, Moffatt, Weatherburn, & Burgess, 2008).

HOW RELIABLE ARE THESE SOURCES?

POLICE RECORDED CRIME

The great strength of police crime data is that it is both voluminous and rich. This makes it possible to examine spatial and temporal variations in crime in fine detail. We can, for example, map the distribution of recorded crime street by street or search narrative descriptions of crime on police incident reports to obtain information about the characteristics of offenders and victims or clues as to the causes of crime in particular locations or at particular times.

The great weakness of police recorded data is that not all crimes are reported to or recorded by the police. This makes recorded crime data a poor guide to the true prevalence of a crime problem except in those few cases where virtually all the offences are reported to or discovered by police (e.g. motor vehicle theft, homicide). *The fact that many offences are not reported to police, however, does not mean that police recorded crime data are a poor guide to trends in crime*. As long as the proportion of offences that are reported and recorded is relatively stable over time or comparable across locations, a doubling or halving of the actual rate of offending will produce a doubling or halving of the recorded rate. In fact even if the recorded rate does nothing more than go up and down with the actual rate, the recorded rate of offending will still serve as a good indicator of *changes* in the incidence of crime or *differences* between areas in its prevalence.

CRIME VICTIM SURVEYS

Because they measure both reported and unreported crime, crime victim surveys give a much more accurate picture of the true prevalence of crime than police crime data. Furthermore, because the same question can be put to respondents in different jurisdictions, they make it possible to compare the prevalence of crime across jurisdictions (e.g. States). They are also useful in interpreting police crime data because they contain information on whether changes have occurred in the willingness of victims to report crime to police.

Their major weaknesses are that: (a) they cannot provide information about victimless crimes (e.g. illegal drug use); (b) they are of little use in obtaining information about serious but very rare crimes (e.g. extortion) or crimes involving child victims (e.g. child sexual assault); and (c) they compare poorly to police data in terms of detail they provide about the circumstances surrounding particular offences.

POLICE CHARGE DATA

Police charge data are a useful guide to the spatial and temporal variation in the incidence of offending by particular groups, but only where the rate at which criminal proceedings are initiated against a group is a measure of that group's rate of participation in crime. This is true for some offences (e.g. homicide) but not for others. Police have considerable discretion about how to respond to minor offences committed by juveniles. In NSW, they may warn the young offender, issue a caution, refer the young offender to a Youth Justice Conference or arrest and charge the young offender. An increase in the frequency with which juveniles are being arrested and charged may mean juvenile offending is on the increase but it may also mean that police have become less willing to warn, caution or conference young offenders. As a rough rule of thumb, the less serious the offence, the less reliable police charge data are as a guide to offending.

COURT DATA

To use court data as a measure of re-offending, we need to be able to assume that higher rates of conviction are an indication of higher rates of offending. This is a fairly safe assumption when comparing similar groups of offenders in a particular jurisdiction at the same time and where the definition of 'reconviction' excludes offences whose incidence is strongly affected by policing policy (e.g. breaches of court orders). It is not a safe assumption when examining trends in reconviction over time or when comparing differences in reconviction across jurisdictions (e.g. between States or over time). The passage of time can change the ability of police to detect offending, their willingness to prosecute offenders and their effectiveness in prosecuting offenders. Differences in laws, prosecution policy and offender characteristics, on the other hand, can result in differences between jurisdictions in reconviction rates that have nothing to do with re-offending.

SELF-REPORT DATA

Studies of the correlates of officially recorded and self-reported offending generally find a fair degree of concordance, at least for serious offences (Hindelang, Hirschi & Weiss, 1979; Farrington, 1989; Kazemian & Farrington, 2005). Nonetheless, like all surveys, surveys of self-reported offending are vulnerable to response bias. Respondents embarrassed about what they have done may be reluctant to report it, particularly if they fear that discovery of their offending will have adverse consequences for them (e.g. bail or parole revocation). Surveys of self-reported offending also share one of the weaknesses of victim surveys – they are of little use in obtaining information about the prevalence of rare but serious crimes.

ACCIDENT AND EMERGENCY DATA

The two main limitations of accident and emergency data are: (a) many offences do not result in accidents or emergencies; and (b) factors other than crime can influence accidents and emergencies. A drop in heroin overdose, for example, might signal a drop in heroin use but it might also signal a drop in the purity of heroin. A fall in single vehicle night-time accidents might indicate a lower percentage of drivers are driving under the influence of alcohol but it might also result from an increase in petrol prices and a consequent fall in the average number of

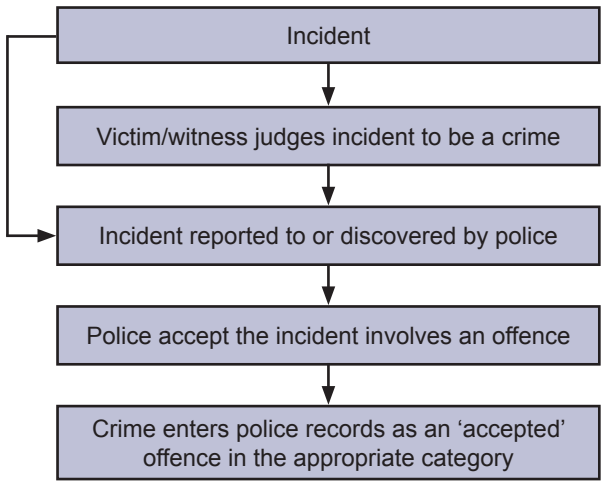
road trips. These problems can be overcome by controlling for other factors likely to influence the outcome being monitored — but the mere fact that we have to introduce these controls means the outcome indicators we are analyzing do not, by themselves, give an unambiguous picture of crime trends.

MEASURING TRENDS IN CRIME

THINGS TO REMEMBER

The primary source of information about crime trends in Australia is crime recorded by police. To fully understand the uses and abuses of police crime statistics, we need to examine this source much more closely. Figure 1 shows the steps involved in recording crime.

Figure 1: Steps involved in recording crime



Before an incident is recorded as a crime a number of things have to happen. As illustrated in Figure 1, first someone (e.g. the victim or a witness) must decide that it constitutes a crime. Secondly, they have to decide whether or not to report it to police. Thirdly, if it is reported to police (rather than discovered by them), the police must decide whether the report is genuine. Fourthly, if the police accept the report as genuine, the report of the incident must be placed in an appropriate category. Only then will it be counted as an instance of a particular offence.

There are many important factors that can distort the relationship between the actual and the recorded crime rate. The recorded rate of a particular offence is affected not only by crime but also by:

1. Public opinion on what constitutes a crime
2. Public willingness to report crime
3. Police crime recording practices
4. Policing policy/police resources
5. The criminal law
6. Chance and seasonal variation
7. Whether an offence is normally reported or discovered.

In this section we discuss the way in which each of these factors affects the production of crime statistics.

PUBLIC OPINION ON WHAT CONSTITUTES A CRIME

Earlier we noted that in order to report a crime to police a victim or witness must first decide that a crime has been committed. People vary considerably in their views about what constitutes a crime. In the 2002 ABS National Crime Victim Survey (Australian Bureau of Statistics, 2003), 69 per cent of those who said they had been assaulted in the previous 12 months did not report the assault to police. Only 57 per cent of these respondents considered the incident to have been a 'crime'. Changes in public opinion about what counts as a crime will inevitably influence the number of crimes that are reported to police.

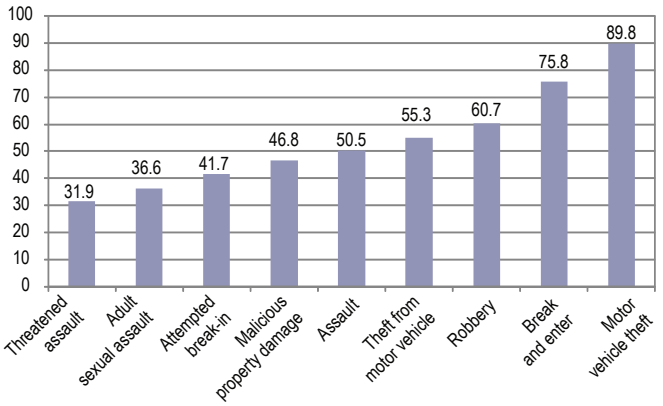
PUBLIC WILLINGNESS TO REPORT CRIME

Even when people believe they have been the victim of a crime they do not always report it to police. The reason for non-reporting varies from offence to offence. The most common reason given by assault victims for not reporting the assault is that the offence was too trivial or unimportant, the offence was a personal matter, or the victim felt he/she would take care of it themselves. The most common reason given for not reporting robbery is that the victim thought that there was nothing the police could or would do (Australian Bureau of Statistics, 2003). People usually report motor vehicle theft and burglary, on the other hand, because if they do not report the offence, they cannot claim on insurance.

Figure 2 shows the percentage of crimes reported to police. The data are drawn from the national crime victim survey conducted by the Australian Bureau of Statistics in the financial year 2009/2010 (Australian Bureau of Statistics, 2011b). It can be seen that the percentage of crimes reported to police ranges from 31.9 per cent in the case of threatened assault to nearly 90 per cent in the case of motor vehicle theft.

Because the willingness to report crime to police varies over time, recorded crime rates can go up or down for reasons that

Figure 2. Percentage of crimes reported to police



Source: Australian Bureau of Statistics (2011b)

have nothing to do with crime. They can vary between areas for the same reason. The problem of variation in reporting is particularly acute where the authorities are making efforts (as in the case of child sexual assault and violence on school grounds) to encourage victims and witnesses to report crime to police. Trimboli (2010) cited this as one of the reasons for the increase in assaults on school grounds in NSW.

POLICE CRIME RECORDING PRACTICES

Changes in the way crime is recorded can also have a significant effect on trends in recorded crime. Figure 3 shows the number of offences involving steal from the person between October 2000 and October 2002. Between July and August in 2001 the number of stealing offences jumped dramatically from 990 offences to 1,590 offences. The increase in recorded offences was not the result of an increase in crime. It was the result of an instruction from senior NSW Police Force clarifying the legal distinction between larceny and stealing from the person. Prior to the clarification some proportion of stealing offences would have been incorrectly recorded as larceny offences.

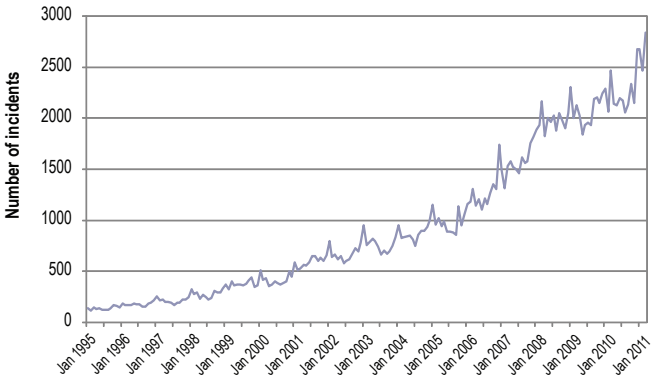
Figure 3. Trend in steal from person (NSW: October 2000 - October 2002)

POLICING POLICY/POLICE RESOURCES

Figure 4 shows the monthly number of bail breach offences recorded by the NSW Police Force between January 1995 and March 2011. It looks as if the number of bail breach offences is rising rapidly. The increase, however, is not a result of any change in the willingness of offenders to breach the conditions of their bail. In fact, strictly speaking, breaching the conditions of a bail is not even a criminal offence (though it usually does lead to a defendant having their bail revoked). The growth in recorded bail breach offences is the result of a deliberate police strategy in NSW designed to increase the level of surveillance of offenders released on bail.

Sometimes arresting someone for one offence generates others. When police arrest intoxicated people for 'offensive behavior', for example, they often end up charging them with resist arrest and/or assaulting police as well. This is one reason why areas that have high recorded rates of offensive behavior, also often

Figure 4. Trend in incidents of breach bail (NSW: January 1995 - March 2011)

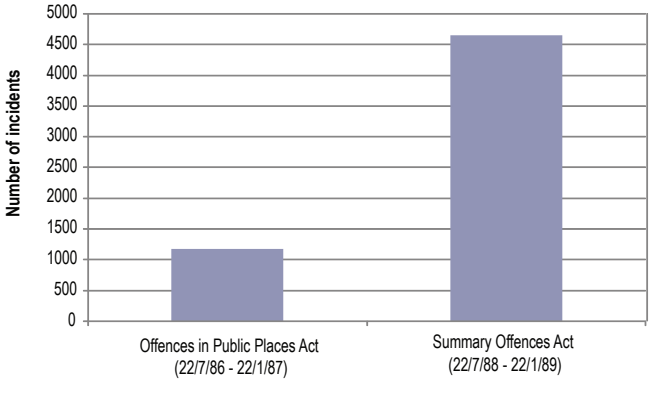


have high rates of offences involving 'resist arrest' and/or 'assault police' (Jochelson, 1997). The policing of offensive behavior is not the only instance where increased police activity can result in a higher level of recorded crime. The growing use of drug detection dogs is widely expected to produce an increase in the number of drug possession offences recorded by NSW Police Force.

THE CRIMINAL LAW

In 1988, the *NSW Summary Offences Act* came into effect, replacing the former *NSW Offences in Public Places Act (1979)*. Under the *Offences in Public Places Act* (1979), language was deemed 'offensive' if it would have been justifiably regarded so by reasonable persons 'in all circumstances'. The Summary Offences Act retained part of this clause but dropped the requirement concerning 'in all circumstances' (Bonney, 1989). In her evaluation of the *Summary Offences Act* (1988), Bonney (1989) noted a 293 per cent increase in reports of offensive behavior in the six-month period immediately following the introduction of the *Summary Offences Act* (1988) (see Figure 5). The proportion of offences involving offensive language also increased from 64.7 per cent of offences to 71.3 per cent of offences.

Figure 5. Offensive behaviour incidents before and after legislative change



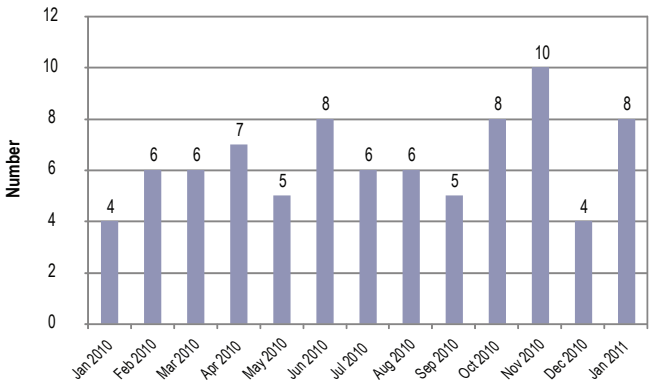
This is not because NSW residents became more offensive under the *NSW Summary Offences Act (1979)* or because they became more prone to swearing in a public place. The increase in crime occurred because of a change in the legal definition of what constitutes a crime.

CHANCE AND SEASONAL VARIATION

There is no telling when a juvenile might give in to the impulse to steal a car or break into a house, when someone might lose all self-control and murder their family or when an organised crime figure might organize a 'hit'. Sometimes these events are spread out in time. Sometimes they are clustered. When offences are clustered together in time we speak about a 'spate' of offending.

The random nature of homicide is illustrated in Figure 6, which shows the number of murder victims each month in NSW over the period January 2010 to January 2011. The variation is quite marked. Occasionally a group of offences cluster together, as happened in November 2010.

Figure 6. Trend in NSW murder victims: January 2010 - January 2011



It would be misleading to say that the State murder rate increased rapidly in September, October and November 2010, before falling in December if the variation in Figure 6 is attributable to chance. In fact, testing reveals that the variation in Figure 6 is well within the bounds of chance (Kendall's tau = 0.26, p = 0.23).

Figure 7 shows trends in the incidence of non-domestic assault between January 2001 and March 2011. Notice the spike in offending that happens every summer. It would be highly misleading to say in January that the assault rate had risen rapidly over the last six months without pointing out that this happens every year and that the assault rate will fall again as winter approaches.

DISCOVERED VERSUS REPORTED OFFENCES

Some offences are discovered by police rather than reported to them. Examples include most drug offences, as well as offences involving breach of bail, breach of parole, betting and gaming offences, prostitution, pornography, and public order offences. The recorded rate of discovered offences depends greatly on policing policy and police resources. For example, if police decide to crack down on drug possession offences, the recorded rate of drug possession offences is likely to go up.

As a general rule, the rate of offences reported to police gives a more reliable picture of trends in crime than the rate of offences that are discovered. However there are some notable exceptions. Consider the situation for heroin overdoses and arrests for using and possessing narcotics (N.B. the vast majority of narcotic offences involve heroin). Figure 8 shows the monthly number of arrests for narcotics use/possession and the number of emergency department admissions for heroin overdose between January 1999 and January 2010.

To the extent that the heroin overdose rate is a measure of heroin use, (rather than something like the quality/purity/availability of the drug), the concordance between narcotic use/possession arrests and overdoses, particularly after 2001, suggests that an increase in arrests for narcotic use/possession signals an increase in heroin consumption.

Figure 7. Trend in non-domestic assault NSW: January 2001 - March 2011

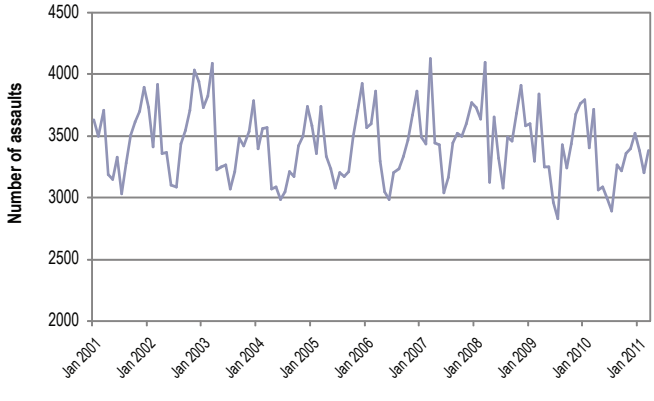
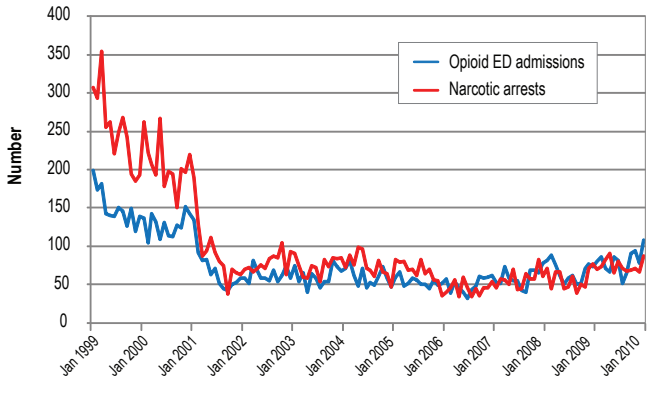


Figure 8. Trend in ED admissions for heroin overdose and narcotic use/possession arrests



THE GOLDEN RULE

It should by now be clear that changes in the police recorded rate of crime need to be treated cautiously. The golden rule is that *we do not observe a change in crime; we infer a change in crime*. The inference is based on answers to the following five questions:

1. Has the recorded rate of some offence changed?
2. Is the change attributable to chance or seasonal variation?
3. Does it involve an offence that victims report to police or an offence that is normally only recorded when police discover it?
4. Is there any reason to believe police have changed in their willingness to record crime or in the way they record it?
5. Is the trend consistent with other relevant data (e.g. accident or emergency data, self-reported offending data, crime victim survey data)?

USES OF CRIME STATISTICS

MEASURING CRIME TRENDS

We turn now to the uses of crime statistics, starting with the measurement of crime trends. Figure 9 shows the annual homicide rate in Australia between 1989/1990 and 2007/2008. Despite the widespread belief in Australia that crime is rising (Davis & Dossetor, 2010); the Australian homicide rate is actually in decline.

So, too, are most police-recorded property offences. Figure 10 shows the decreasing national recorded rates of robbery, burglary, motor vehicle theft and 'other theft' offences between 2000 and 2009. The rate of robbery has been scaled up by a factor of 10 so as to make it easier to see the trend (robbery is far less prevalent than the other offences).

MEASURING VARIATION IN PREVALENCE

The fact that crime is rising in an area does not necessarily mean the area has a crime problem. Areas with rising crime rates may still have very low crime rates relative to other areas. Similarly, the fact that an area has stable crime trends does not mean it has no significant crime problem. Areas with no upward trend in crime may still have very high crime rates relative to other areas. To properly characterize crime in a geographic area, we need to know whether offences are rising or falling *and* how rates of crime in that area compare to other areas.

We can measure differences in the incidence of crime between areas using police-recorded crime data but these data only give us a picture of *relative* rates. They can tell us that the recorded rate of robbery in area A is twice that in area B but not the true rate of robbery in either area. If there are differences between two areas in willingness to report robbery, we will not know how the two areas compare in terms of robbery rates. In fact, differences between areas in the reporting or recording of crime can sometimes create a very misleading picture of the differences in actual crime rates. This is where victim surveys become very useful.

Figures 11 and 12 provide a good example of just how useful crime victim surveys can be. Figure 11 compares the police-recorded rate of assault in NSW and Victoria in 2009.

Figure 9. Trend in homicide rate (Australia: 1989/90 - 2007/8)

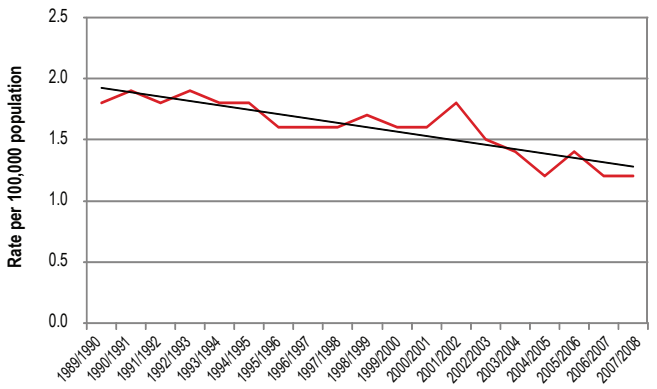


Figure 10. Trends in selected offence rates (Australia: 2000 - 2009)

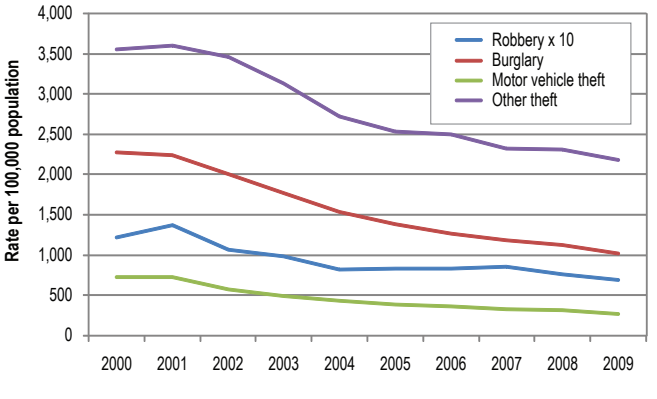


Figure 11. Police recorded assault rate NSW and Victoria: 2009

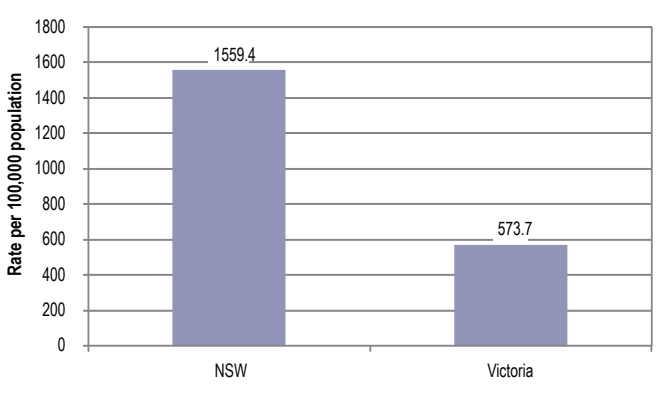


Figure 12. Percentage of survey respondents reporting an assault (NSW and Victoria: 2009/2010)

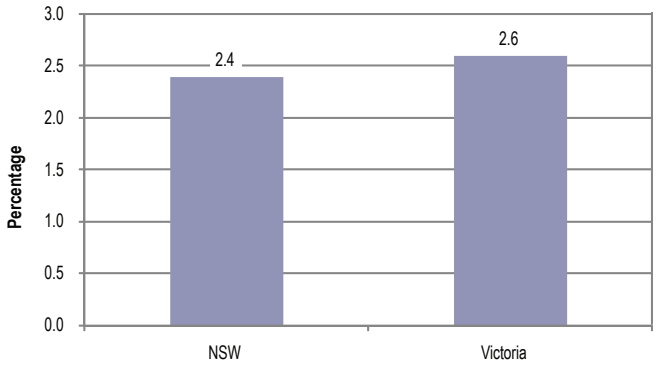
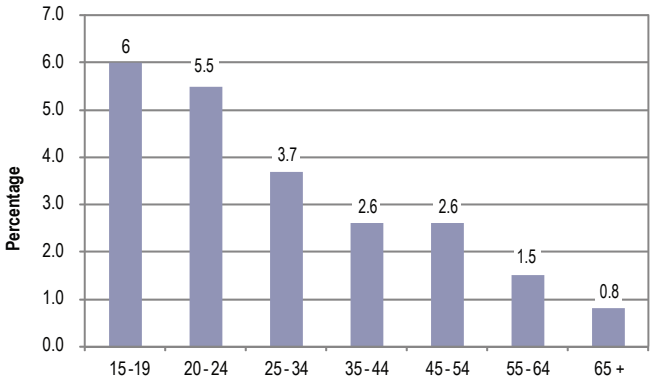


Figure 13. Prevalence of assault victimisation by age



If you believe the Victorian police figures, the Victorian assault rate is only about half that of NSW. Given the demographic, social and economic similarity between the two States, this seems somewhat surprising. Figure 12 compares the estimates of assault prevalence in NSW and Victoria obtained by the Australian Bureau of Statistics in its latest crime victim survey (Australian Bureau of Statistics, 2011b).

If the Victorian assault rate was, in fact, half that of NSW, one would expect the prevalence of assault in NSW, as measured by the crime victim survey, to reflect this. It does not. According to the victim survey, the prevalence of assault in NSW and Victoria is fairly similar. The apparent discrepancy between Figures 11 and 12 could be explained by supposing that victims of assault in NSW more often experience multiple assaults than their Victorian counterparts. But a much simpler and far more plausible explanation is that Victorian police are not recording all the assaults reported to them. This explanation is supported by research conducted by the Australian Bureau of Statistics (2005).

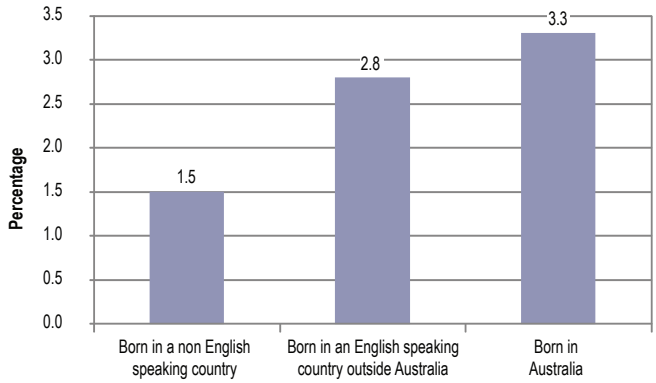
DETERMINING WHO IS MOST AT RISK

Crime victim surveys can also be used to see how the risk of becoming a victim of crime varies across individuals or households with different characteristics. Figure 13 shows how the risk of assault varies by age. Although violence against the elderly attracts a great deal of media attention, the risk of assault is much higher for young people.

Figure 14 shows how the risk of assault varies by country of birth. Although crime amongst immigrant groups gets a great deal of media attention, the risk of assault is actually higher among Australian born residents.

This is useful information for targeting crime prevention and victim support services. It also helps guide researchers trying to unravel the various ways in which personal and lifestyle factors influence the risk of becoming a victim of crime.

Figure 14. Prevalence of assault victimisation by birthplace



MAPPING THE DISTRIBUTION OF CRIME

When we want to know where crime is concentrated it often helps to map the distribution of crime. There are many ways of mapping crime but here we illustrate just two. Figure 15 shows what is called a choropleth map of the distribution of alcohol-related assaults recorded by the police across the Local Government Areas of the Sydney Statistical Division during 2010.

The darker the colour, the higher the rate of crime per head of population. The highest *rates* of police-recorded assault in the Sydney Statistical Division are to be found in areas such as Campbelltown, Penrith, Blacktown, Hawkesbury, Gosford and Wyong. Past research by the NSW Bureau of Crime Statistics and Research (hereafter referred to as the 'Bureau') has shown that regional variation in assault rates in NSW is strongly correlated with rates of alcohol consumption, even after other factors such as age and socioeconomic status have been taken into account (Stevenson, Weatherburn & Lind, 1998).

Even within an LGA, there is enormous variation in crime. Figure 16 shows a point map of the distribution of individual occurrences of assault in Kings Cross in 2010. It can be seen

Figure 15. Choropleth map of alcohol related assault rates by Local Government Area in Sydney Statistical Division, 2010

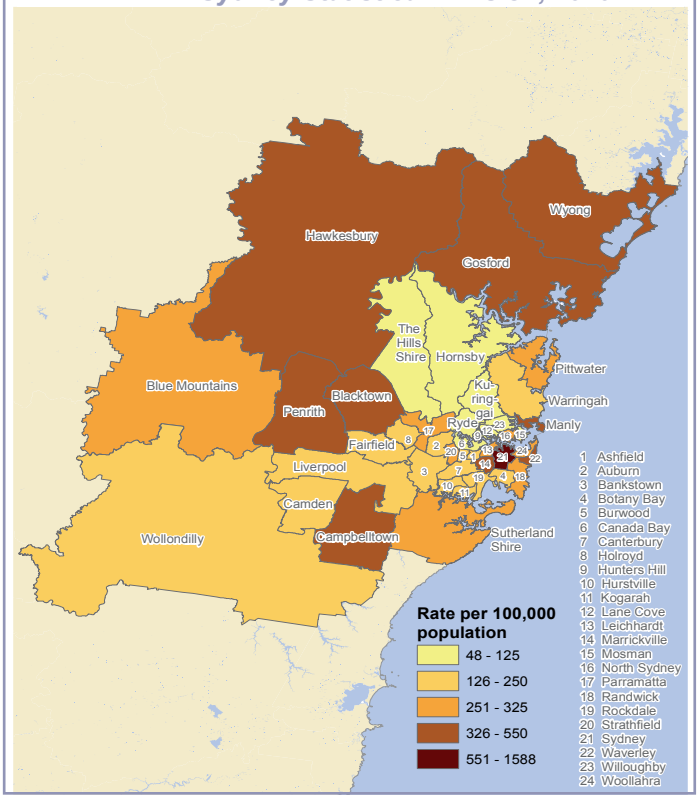
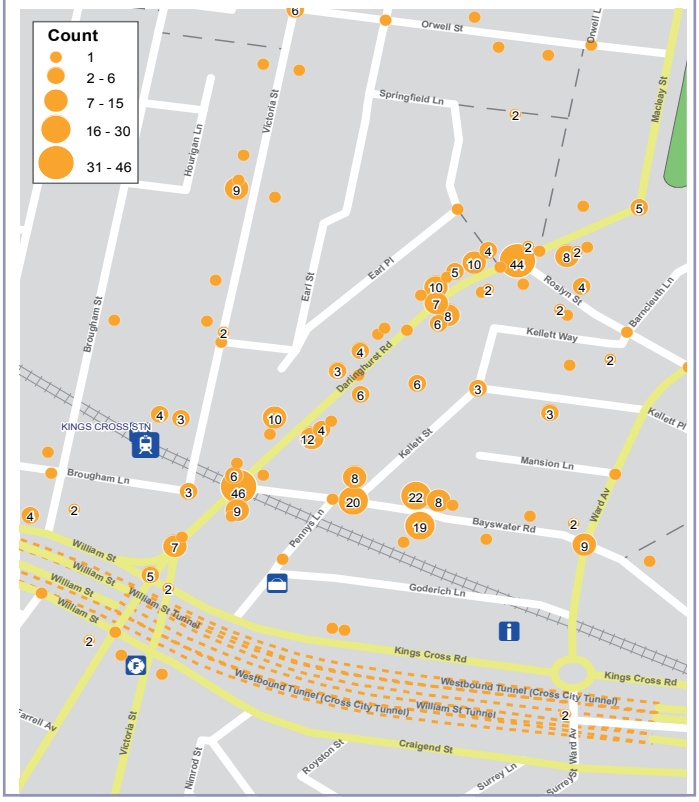


Figure 16. Incidents of alcohol related assault in Kings Cross, 2010



that the highest number of incidents is on Darlinghurst Road near William Street and on the same road near Roslyn Street. Substantial numbers of offences also occur on Bayswater Road between Kellett Street and Ward Avenue.

Police and crime prevention experts use crime maps to make decisions about the allocation of crime prevention resources or services for victims of crime. They also use crime maps to help identify facilities or factors that might be attracting crime. Citizens can use crime maps, on the other hand, to help petition police for more protection or to assist them in making decisions about where to live.

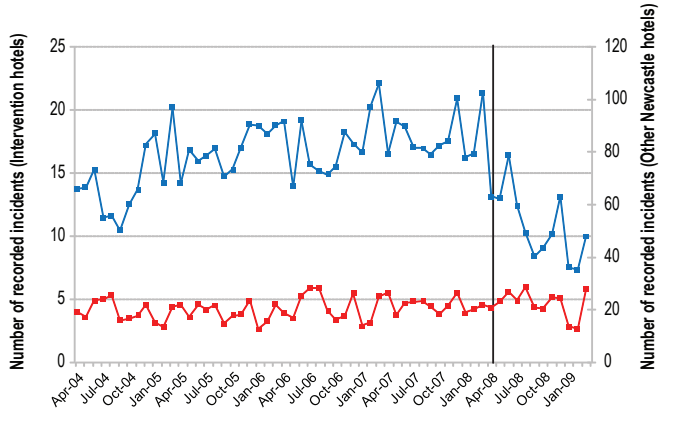
EVALUATING LAW AND ORDER POLICY

One of the most important uses of crime statistics is to gauge the effectiveness of Government and police efforts to reduce crime and re-offending. A recent evaluation of changes to liquor licensing rules in Newcastle CBD provides a good example of how crime data can be used to evaluate law enforcement policy.

In July 2007 the NSW Police Force lodged a complaint with the NSW Liquor Administration Board (LAB) against four Newcastle licensed premises on the grounds that they were causing "undue disturbance of the quiet and good order of the neighbourhood". This complaint was made against a backdrop of considerable community dissatisfaction with high levels of alcohol-related violence in and around the Newcastle CBD. The Board reached its decision on 14 March 2008 and imposed significant restrictions on 14 of the 15 premises.

A team from the Bureau and Newcastle University evaluated the initiative by comparing the trend in recorded assaults in Newcastle before and after the imposition of these restrictions with the trend in recorded assaults over the same period in Hamilton, an adjacent suburb that had no restrictions placed on its licensed premises (Jones et al., 2009). Figure 17 shows the results. The number of assaults fell significantly in Newcastle (blue line) but there was no similar downward trend in Hamilton (red line), suggesting that the restrictions on liquor licensing had successfully reduced the incidence of assault in Newcastle.

Figure 17. Trend in number of assault incidents: (Newcastle and Hamilton)



TESTING HYPOTHESES ABOUT CRIME

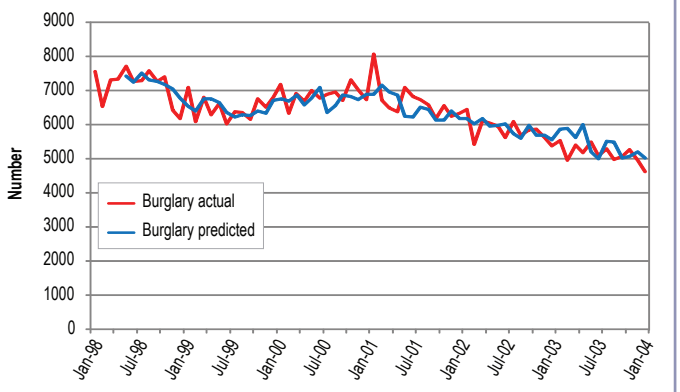
One of the great crime puzzles in Australia is why property crime rates in Australia have been falling almost continuously since 2001, when they rose so rapidly during the 1980s and 1990s. Various explanations have been put forward to explain the drop in crime, including a fall in heroin use, increases in the rate of entry of heroin users into treatment, improvements in the economy (lower rates of unemployment, higher average weekly earnings) and greater use of imprisonment.

One way of testing these explanations is to build a statistical model of crime based on these factors to see: (a) how well the model predicts the trend in crime; and (b) what factors in the model explain most of the variation in crime. Moffatt et al. (2005) did this for burglary and robbery in NSW.[1] Figure 18 shows their results for burglary.

The red line shows the actual numbers of burglaries. The blue line shows the number of burglaries predicted by the statistical model. The model is based on measures of heroin use, treatment for heroin dependence, prison use and a measure of average weekly earnings.

The variables in the statistical model that did most to explain the fall in burglary were those measuring entry into treatment, prison time and average weekly earnings. This finding tentatively suggests that the heroin shortage, tougher sanctions and an improving economy all combined to reduce crime. The conclusion is only tentative because no similar studies have been conducted in other States and Territories and it is always possible that some factor or factors not measured by Moffatt et al. (2005) (e.g. an aging population, increases in migrant populations that have low rates of offending) accounts for the downward trend in crime.

Figure 18. Actual and predicted burglaries: NSW: Jan 1998 - Jan 2004



ABUSES OF CRIME STATISTICS

The primary abusers of crime statistics are the media. There is a vast literature on the subject of media reporting of crime but, for reasons of space, we will confine ourselves here to highlighting some of the main ways in which crime statistics are abused, illustrating those abuses with actual examples where possible. Readers interested in learning more about research on crime and the media will find discussions by the Australian Psychological Society (2000) and Reiner (2007) useful starting points.

MISUSE OF CRIME STATISTICS BY THE MEDIA

Selective use of data

Of all the various ways in which the media abuse crime statistics, selective reporting of data is by far the most common. There are two main forms of selective reporting. The first involves picking a period when the recorded crime rate is unusually low and comparing it to a month or year when the crime rate is unusually high. A good example of this problem appeared in a Sydney newspaper in November, 2008. The Bureau provided a copy of the data shown in Table 1 to a newspaper and advised the journalist that:

> As you will see all the trends are either down or stable across the State.

The newspaper ignored the advice and printed the headline shown in Figure 19, declaring that the number of drink-drivers (PCA offenders) booked for drink driving had jumped almost 10 per cent in the last two years. The figure was obtained by calculating the percentage increase in the number of PCA offences between July 2005-June 2006 and July 2007-June 2008. But the change in question was nothing more than random

*Table 1. Incidents of selected driving offences recorded by NSW Police Force: Number and Trends^*

Driving offence	July 2003 - June 2004	July 2004 - June 2005	July 2005 - June 2006	July 2006 - June 2007	July 2007 - June 2008	24 month trend and average annual percentage change
Drive under influence of alcohol or drugs	1,315	1,300	1,207	1,290	1,094	Down 15.2%
Exceed prescribed content of alcohol (PCA) limit	26,377	27,450	25,284	25,990	27,548	Stable

^ Shows the results of a statistical test for a significant upward or downward trend in the monthly number of criminal incidents recorded from July 2003 to June 2008 and July 2006 to June 2008. Where the trend is significant (i.e p<0.05), the percentage change in the number of incidents between the last 12-month period and the preceding 12-month period is shown. 'Stable' indicates there was no significant upward or downward trend.

Figure 19.

Drink drive accelerates

Edith Bevin and Rhys Haynes

MOTORISTS are continuing to ignore the drink-driving message with the number of drivers caught drunk behind the wheel jumping almost 10 per cent over the past two years.

Figures obtained *The Daily Telegraph* show 27,548 drivers were booked for drink driving in 2007-08, up from 25,284 in the prior two years.

And alcohol was a contributing factor in 36 of the fatal crashes in the state so far this year.

The tragic death of Tahlia Gilmour, 4, killed after her family car was hit by an alleged drink driver, sparked renewed debate on lowering the legal alcohol limit.

The Daily Telegraph is backing a campaign for zero tolerance. Traffic Services Branch acting Superintendent Dave Evans said the only way to ensure that you were under the limit before driving was not to drink at all.

The National Drug Research Institute backed the call by the police, saying any amount of alcohol before driving was a risk.

The news comes after a three day police blitz on drink drivers that started last Thursday, with 108,220 breath tests snaring 268 motorists in NSW over the weekend.

"Police caught 268 motorists in a 72-hour period who were willing to drink, then get in their cars and put the lives of other road-users at risk. We've been saying it for years. If you drink and drive you're a bloody idiot and this result proves many people are not heeding the message," Supt Evans said.

Two people died in separate crashes on the state's roads during the operation, taking the annual road toll to 339.

How much is too much? Have a say in our drink driving survey dailytelegraph.com.au

No statements: The driver of a BMW which crashed into a power pole and finished on its side in the front yard of a house Pictures: Gordon McCornickle

Too drunk for police interviews

Kara Lawrence

FOUR occupants of a BMW which crashed in the front yard of a Sydney home at the weekend were too drunk to be interviewed by police.

Police said the one female and three male passengers had not yet given statements to police.

The 27-year-old driver — who crashed a $200,000 BMW 7-series on Blaxland Rd, Denistone, bringing down a power pole and slamming into a front yard on Saturday morning — is also yet to be interviewed by police.

"No statements have been taken because of their level of intoxication," Inspector Steve Henkel said. Police are awaiting the results of a blood test before before charges will be laid.

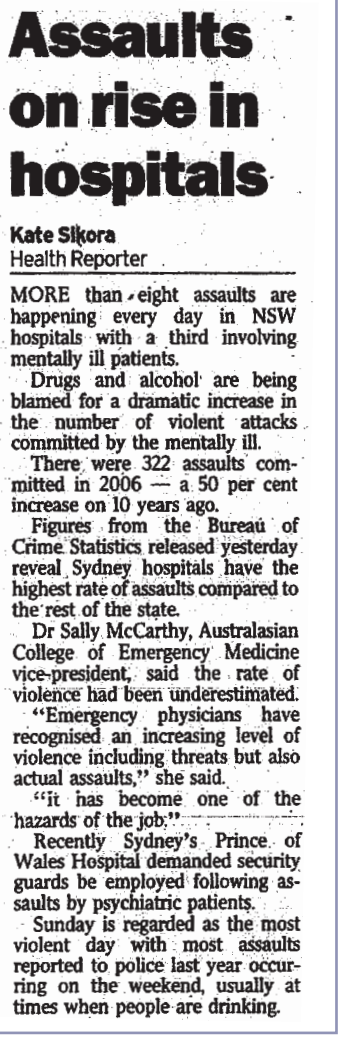
Test results will not be known for a week.

The passengers suffered minor injuries and were lucky to escape with their lives, Insp Henkel said.

Police at the scene said the man was speeding at about 140km/h when the car crashed.

The driver, from Mortdale, resisted police attempts to get him into an ambulance and fell on his face.

Figure 20.



Assaults on rise in hospitals

Kate Sikora
Health Reporter

MORE than eight assaults are happening every day in NSW hospitals with a third involving mentally ill patients.

Drugs and alcohol are being blamed for a dramatic increase in the number of violent attacks committed by the mentally ill.

There were 322 assaults committed in 2006 — a 50 per cent increase on 10 years ago.

Figures from the Bureau of Crime Statistics released yesterday reveal Sydney hospitals have the highest rate of assaults compared to the rest of the state.

Dr Sally McCarthy, Australasian College of Emergency Medicine vice-president, said the rate of violence had been underestimated.

"Emergency physicians have recognised an increasing level of violence including threats but also actual assaults," she said.

"it has become one of the hazards of the job."

Recently Sydney's Prince of Wales Hospital demanded security guards be employed following assaults by psychiatric patients.

Sunday is regarded as the most violent day with most assaults reported to police last year occurring on the weekend, usually at times when people are drinking.

variation. Over the financial years July 2003-June 2004 to July 2007-June 2008, the trend in PCA offences remained stable, as indicated by the final column in the table. The other main category of drink drive offence actually went down!

The second form of selective reporting involves giving an incomplete picture of the trend in crime. On the 11th of September 2008, The Bureau put out a report showing that the number of assaults on hospital premises had risen from 1996 to 2001, remained relatively stable between 2001 and 2005 and then fallen sharply in 2006. The first line of the media release accompanying the report read:

> New research by the NSW Bureau of Crime Statistics and Research has found that the number of assaults on hospital premises is now falling after increasing substantially between 1996 and 2001.

The following day, the headline shown in Figure 20 appeared. The newspaper ignored the short-term trend, giving its readers that assaults on hospitals are more prevalent now than they have ever been.

Selective reporting of facts

Another common tactic is to make selective use of the facts. On the 30th of June 2008, a Sydney newspaper sought data from the Bureau on recent trends in the number of offenders under the age of 10 being picked up by police. When the Bureau provided the data to the journalists writing the story, they were advised that the number of 8 and 9 year olds coming to the attention of police had fallen from 130 per month in 2005 to 94 per month in 2007.

They were also advised that less than one per cent of the population aged 8 or 9 had any contact with police and further, that it was legally impossible to charge someone under the age of 10 with a criminal offence because he or she would be below the legal age of criminal responsibility. Undeterred by this, the newspaper published a story under the headline "Kid Crime Rampage" (see Figure 21).

The story stated that police had logged 7,724 offences by children under the age of 10 between January 1st 2005 and, September 30th, 2007. It did not inform its readers that the number of juveniles under the age of 10 coming into contact with police was falling or that less than one per cent of all juveniles under the age of 10 were coming to the attention of police. The issue of criminal responsibility was finessed in the following

Figure 21.

Thieves and drug dealers aged 8 let off with warnings

KID CRIME RAMPAGE

EXCLUSIVE

By KELVIN BISSETT and SAMANTHA WILLIAMS

KIDDY criminals are being apprehended by police at an alarming rate of more than 50 a week for offences including assaults, car theft, malicious damage, armed hold-ups and drug dealing.

Figures on crime rates among 8, 9, and 10 year olds compiled by police show the distressing extent of the mayhem in some areas caused by children running wild.

The Daily Telegraph can reveal police logged 7724 offences by children under 10 between January 1, 2005 and September 30, 2007.

The crimes are very adult but police and welfare agencies admit they have no legal power to charge or punish these pint-size thugs, thieves, vandals and rapists.

The only option is a stern lecture

Continued Page 4

terms: “police and welfare agencies admit they have no legal power to charge or punish these pint-sized thugs, thieves, vandals and rapists”. Quite why they have no legal power was never explained.

Misleading commentary

Crime clear-up rates are a perennial favourite of journalists because, for property offences at least, they are generally fairly low. Journalists usually present information on clear-up rates as if they measure the percentage of offenders who are caught. But this is a mistake. The clear-up rate is a measure of the probability of being caught for a *particular* offence, not a measure of the probability of being caught for *any* offence.

The distinction is important. Stevenson, Forsythe and Weatherburn (2001) found that imprisoned burglars committed an average of nine burglaries a month before they were caught. It can be shown that if the probability of arrest for any one burglary is five per cent, the expected number of burglaries before the first arrest is 20. This suggests that most high rate burglars are caught fairly quickly. In fact research confirms that the percentage of burglars and motor vehicle thieves who are caught is much higher than the clear-up figures would suggest. Weatherburn et al. (2009) found that although the clear-up rate for burglary and car theft is less than five per cent, the capture rates of burglars and car thieves over a two year period were, respectively, 16.6 and 13.5 per cent.

Clear-up rates can be misleading for other reasons as well. In NSW, crimes are ‘cleared’ for the most part by initiating criminal proceedings (e.g. charging the offender). In many cases of assault and sexual assault, the only witness to the crime is the victim. If the victim does not want to give evidence (and many do not) charges cannot be laid and, technically, the offence cannot be ‘cleared’.

These sorts of subtleties are usually ignored. In September 2008, a Sydney journalist sought a regional breakdown of crime clear-up rates across NSW. In the course of supplying the requested data, the Bureau cautioned the journalist against treating the clear up rates as a measure of police or justice system performance for all the reasons just explained. Figure 22 shows the story that came out the following day.

The commentary in the story was highly misleading. The journalist ignored the advice given about the unreliability of police clear-up figures as a measure of police and criminal justice performance. She also ignored the fact that, at the time of writing, NSW was into its eighth straight year of falling crime rates. The reason for ignoring all this material is obvious—to have acknowledged it would have undermined the newsworthy (but false) suggestion that police are losing the fight against crime.

Misrepresentation of facts

On occasion the media get the facts completely wrong, sometimes in circumstances where it is hard to escape the conclusion that the error is deliberate. On the 16th of June 2008, the Bureau put out a report showing *no* link between the heroin shortage and the rise in amphetamine use. The first line of the media release said:

> New research by the NSW Bureau of Crime Statistics and Research shows that there is no link in NSW between the decline in heroin use and the rise in amphetamine type substance (ATS) use.

Figure 23 shows the story that appeared in a Sydney newspaper the following day. The newspaper completely misrepresented the findings in the report. No other evidence or opinion was cited in support of the newspaper’s claim that the heroin shortage had increased the use of amphetamines. Rather than reporting the data released by the Bureau, the paper printed a completely unfounded story.

Figure 22.

The criminal state of law and order

Streets police cannot defend

Bashed bloody,

Delays just add to humiliation

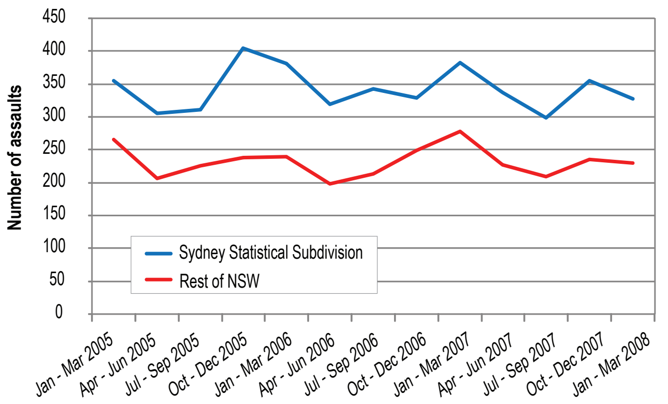
Figure 23.

Users switch to ice

Heroin blitz forces drug change

As another example, consider Figure 24 below. It shows that, between January 2005 and March 2008, there was no upward trend in attacks with a knife or other sharp object either in Sydney or in the rest of NSW. A table showing this was given to a journalist with written advice to the effect that statistical testing revealed no upward trend in knife attacks.

Figure 24. Trend in assault with knife/sword/ scissors/screwdrivers



The headline that appeared following release of the data is shown in Figure 25.

Figure 25.

Stabbings skyrocket as knives plague city

By LAUREN WILLIAMS and GEMMA JONES

SOME children carry knives like "fashion accessories", with dozens of people stabbed across Sydney every week, doctors and police said yesterday.

Suburbs in Sydney's south-west and west have emerged as the most dangerous, with at least 26 people stabbed each week, *The Daily Telegraph* has learned.

There were 1300 stabbings in Sydney last year and 2319 across NSW, a 38 per cent jump in just seven years.

New figures show that 34 people have been stabbed to death in Sydney in the past three years.

While central Sydney is the most dangerous area, Blacktown, Fairfield and Liverpool have nearly double the stabbings of other suburbs.

There has been a 40 per cent jump in knife assaults in Fairfield and Liverpool in just 12 months.

St Vincent's Hospital's data shows the number of life-threatening stabbings tripled in the past three years.

It comes as a schoolboy knifed in the heart on Manly Beach on New Year's Eve learned last week that his attacker would not face court.

John Danieli, 17, nearly died but the DPP later withdrew charges.

The HSC student went to the aid of a friend who was also allegedly stabbed by a 15-year-old after an altercation. A surgeon only saved John's life by plugging a hole in his heart with his finger.

"It sends the message that it is OK to pull out a knife and stab someone, this is outrageous," John's father Sam Danieli said.

Shadow legal affairs spokesman Greg Smith said a jail term should replace the $550 fine for possessing a knife in a public place.

The call has been backed by the head of St Vincent's emergency department.

"There used to be a saying that the gun was a form of communication. I'd say it's definitely knives now," Dr Gordian Fulde said.

Figures from the NSW Institute of Trauma Injury Management show a steady increase in serious injuries in the past four years, with 67 last year, up from 54 in 2004.

"We get kids stabbed on a train, or at parties," CEO Danny Cass said.

"The message is — this is not a fashion accessory, they can really cause a lot of damage."

Edward Spowart, 54, became one of the victims from western Sydney when he was murdered in Granville in April.

"I just can't comprehend any more what is happening after seeing what has happened in my own family," his sister, Suzanne Spowart, said.

■ … 2007, there were 2319 stabbings, up from 1694 knifings seven years ago.
■ Stabbings are up 40 per cent in Fairfield and Liverpool in last 12 months.
■ St Vincent's Hospital treated nine serious stab wounds in 2005. Last year doctors treated 22.

Almost killed . . . Sam and Maria Danieli with their teenage son John and (top left) John recovering in hospital after he was stabbed in the heart on Manly Beach. *Picture: JUSTIN LLOYD*

Partygoer the latest victim of suburban violence

By GEMMA JONES

A 21-YEAR-old man suffered serious stab wounds and four others were badly injured after 20 thugs gatecrashed a party in Sydney's south.

Police were yesterday hunting for several men who crashed the teenager's party in Buckwall Ave, Greenacre about 10.45pm on Saturday.

A large group of men in their 20s hurled objects at the residence.

Five party-goers were injured as they challenged the intruders, including a 21-year-old man who suffered a serious stab wound to the stomach.

Others suffered head wounds, fractures, lacerations and bruising.

The offenders, described as of Middle Eastern/Mediterranean appearance, fled before police arrived.

In a separate incident, a man was found stabbed in High St, Granville, just before 2.50am yesterday.

The 44-year-old had a serious stab wound to his neck.

He was taken to Westmead Hospital for emergency surgery.

A woman found in a nearby unit with a laceration to her arm was also taken to hospital for treatment.

The stabbings came as a corner store in Homer St, Earlwood, was held up at knifepoint just before 9am yesterday.

A customer aged in his late 20s and wearing a white baseball cap left the mini-mart before returning with a kitchen knife.

He jumped the counter and demanded cash and 90 packets of cigarettes, police said.

Misleading headlines

Sometimes headlines are so misleading they contradict the story beneath. In March 2011, the Bureau gave a Sydney newspaper some data on the number of assaults occurring on

Figure 26.

Schools can't stop violence

BRITTANY STACK

VIOLENCE in NSW schools is spiralling out of control with the number of assaults jumping dramatically over the past five years.

It has been horrifically highlighted by a series of race-related schoolyard brawls last month and a notorious YouTube video in which a bullied boy is assaulted, then fights back, slamming his attacker to the ground.

Bureau of Crime Statistics and Research figures show physical attacks involving NSW students have risen sharply since 2006.

Last year, 1731 violent incidents in primary and secondary schools were reported to police, compared with 1393 five years ago.

In 2010, there were 88 assaults on school premises involving weapons, including an incident where a child drew a gun during a violent attack.

Fifty-seven children used knives and sharp implements including swords, scissors and screwdrivers during schoolyard brawls last year.

Eleven used clubs or iron bars, six used bricks or missiles, three used glass and one used a syringe.

A series of race-related brawls have taken place at western Sydney high schools in the past month.

A boy, 17, is before the courts in relation to the alleged stabbing of a 20-year-old man at Fairfield High School on February 23.

Two teenagers have been arrested over a stabbing attack on a 16-year-old at Granville Boys High School on March 4 and police are investigating a brawl between students and parents outside a Hoxton Park school on March 2.

Federation of Parents and Citizens' Organisations spokeswoman Sharryn Brownlee said the trend was worrying.

"It's disappointing to see the increase in incidence despite some of the good work we know is happening and some of the good policies that have been put in place," Ms Brownlee said.

"This data shows that more needs to be done. Governments may need to put in place better individual student behaviour control mechanisms.

"As most incidents take place in the playground, more teachers on playground duty and better supervision may be required."

Bureau of Crime Statistics and Research director Dr Don Weatherburn said schools must halt the violence.

"You do that by having a clear anti-bullying policy — clear rules about what happens to students who get involved in fights," he said.

"That, more than anything else, will keep the assault rate on school grounds down to a minimum.

"We did some research on this some years ago and found that schools with very clear rules regarding bullying and assaults, and clear consequences for people who got involved in assaults, had much lower rates of violence than schools where the policies on bullying were vague or unstated

WEAPONS USED IN SCHOOLS	
Knife/Sword/Scissors/Screwdriver	57
Club/Iron Bar/Pipe	11
Brick/Rock/Stone/Missile	6
Glass/Bottle	3
Firearm	1
Hammer/Spanner/Wrench	1
Syringe	1
Other Prohibited Weapon/Dangerous Item	7
Total assaults at NSW schools in 09/10	1819

school grounds. The journalist was also given advice on the best strategies for reducing school violence. The headline given to the story appears in Figure 26.

The headline insists that schools are powerless when it comes to school violence. The story, however, quotes the author in suggesting a variety of ways in which schools can stop violence between students.

THE ABUSE OF CRIME STATISTICS BY POLITICIANS AND POLICE

The media are not by any means the only abusers of crime statistics. As with journalists, politicians and police sometimes engage in selective use of data, selective reporting of the facts and misleading commentary.

It is not uncommon, for example, to hear police downplay an increase in recorded domestic assault as nothing more than an increase in the willingness of victims to report the offence. Indeed, police sometimes treat news of an increase in domestic assault as a good thing rather than a bad thing. On the 2nd of August 2005, for example, the Victorian Police Commissioner put out a media release welcoming a substantial increase in reported incidents of domestic violence as evidence that police were doing a good job (Victoria Police, 2005). The suggestion in the media release was that the heightened police focus on domestic violence had resulted in an increase in victim willingness to report the offence. But no evidence was adduced to support this claim. In the absence of such evidence it would have been just as reasonable to interpret the trend as evidence of police failure.

Exploiting the lag in reporting

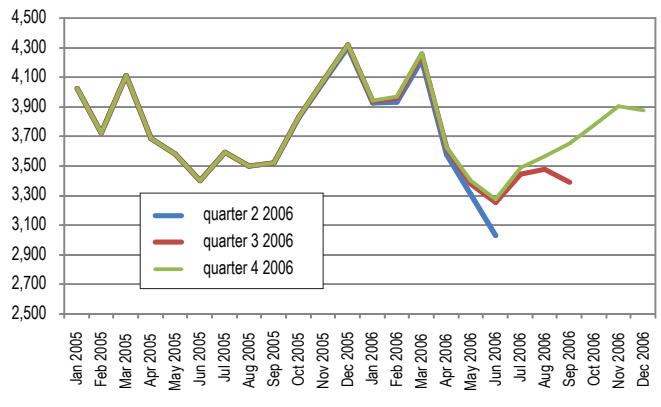
Some types of abuse of crime statistics are uniquely the province of police and politicians. One of the most egregious tactics is to exploit the lag in crime reporting. To understand this tactic, suppose that on August 1st 2010 we count the number of crimes recorded by police as having occurred during July 2010 and that we repeat this exercise on the 1st of September 2010. The number of crimes we count in August as having happened in July will be smaller than the number of crimes we count in September as having happened in that same July.

Why is this so? Because by the end of August police will have discovered and recorded crimes that occurred in July but which they were unaware of on the 1st of August. This lag in reporting is particularly notable for offences such as assault, sexual assault and fraud, because it often takes some time for the victims of these offences to report them or (in the case of fraud) for police to discover them. One of the consequences of the lag in reporting is that if we extract crime data for a period too soon after the end of that period, crime will appear to be trending down. Figure 27 illustrates the point.

Each line on the graph shows the trend in recorded domestic assault from January 2005 to December 2006. The lines differ solely in terms of which quarter the data were extracted from the NSW crime recording system (COPS). The green line shows the trend in domestic assault as it appeared in the fourth quarter of 2006. The red line down shows the trend in domestic assault when the data were extracted in the third quarter of 2006. The blue line shows the trend in domestic assault when the data were extracted in the second quarter of 2006.

The period when the data are extracted can make a big difference to the number of recorded assaults and the trend in assault. When the domestic assault data were extracted in the second quarter of June 2006, it appeared that just over 3,000 assaults were recorded for the month of June. When the data for June 2006 were re-extracted in September of that year, the number of assaults recorded for June 2006 had been revised upward to 3,274 assaults. The downward trend evident in June had also given way to an upward trend. The same process occurred in September. When the September quarter domestic assault data were extracted, 3,390 domestic assaults were recorded for the month of September. When the domestic assault data for September were re-extracted in the fourth quarter of 2006, the number of recorded assaults for September had climbed to 3,656. The downward trend in August and September 2006 had also given way to an upward trend.

Figure 27. Trend in domestic assault by data extraction quarter



Politicians and police sometimes seek to capitalize on this effect. The early release of crime statistics by the Victorian police just prior to the 2010 Victorian State Election appears to have been a case in point (Brouwer, 2011). One should always be wary of calls for daily or weekly release of statistics. They are usually made by people who have little understanding of crime statistics or who would like to create a situation where crime always appears to be coming down.

Misuse of drug enforcement statistics

When police say they are going to reduce the incidence of motor vehicle theft or robbery or burglary we can see whether they are succeeding or failing by looking at the trend in recorded motor vehicle thefts, robberies or burglaries. If they are succeeding, we expect the number of motor vehicle thefts, robberies and burglaries to be in decline. If police are succeeding in their efforts to stem the flow of illicit drugs into the country, you might expect to see a drop in drug seizures. But when it comes to drug trafficking, police and politicians often turn this argument around.

Home Affairs Minister Brendan O'Connor, for example, recently cited a growth in drug seizures between 2010 and 2011 as evidence of the contribution of Australian Federal Police to stamping out illicit drugs (AAP, 2011). A growth in drug seizures might be construed as evidence that smaller quantities of illegal drugs are reaching the street if you can show that the quantity of drugs seized has grown both in absolute terms *and* as a proportion of total illicit drug imports. But we do not know the total volume of illicit drug imports with any precision. The claim that an increase in drug seizures represents more effective policing should therefore be seen for what it is — idle conjecture.

Another common misuse of drug enforcement statistics involves the use of street drug price data to overstate the impact of drug seizures on drug markets. The tactic involves stating the street value of illegal drugs seized as if this were the financial loss suffered by the drug importer/distributor. The practice is highly misleading because the price paid per gram for drugs purchased by drug importers and distributors is always far less than the price per gram they charge drug retailers and far less again than the price consumers pay per gram for illegal drugs on the street. Drug importers and distributors do not 'lose' profits they never had. Their actual (financial) loss is the money spent purchasing drugs that have been seized. In many cases the replacement value of the seizure is quite small (Reuter & Kleiman, 1986).

CONCLUSION

The information gathered by police and statistics agencies about crime has enormous potential to assist in improving the safety of citizens and the administration of criminal justice. It can be used to assess which areas and streets are most crime-prone and at what times of the day, week, month or year; which categories of crime are rising and in what locations; who is at high risk of crime and why; and which crime control strategies are working and which are not. It can be used to ensure that adequate resources are set aside to deal efficiently, effectively and equitably with those who are charged with criminal offences. It can be used to ensure that adequate services are provided to assist and support victims of crime.

Over the last ten years in Australia, the level of Government and police sophistication in the use and analysis of crime statistics for policy and program evaluation purposes has grown substantially. Police use of geospatial techniques to identify crime hotspots is now commonplace. Rigorous evaluations of the effect policing strategies on crime and correctional programs on re-offending are becoming much more common. Public access to crime data has also changed greatly. Though the pace of change varies from State to State, most jurisdictions now provide much greater public access to statistical information about crime and justice than they did a decade ago. In most States and Territories, for example, the media and the general public can obtain ready access to information about crime trends, broken down by crime type and local area. In some states, such as NSW, comprehensive access to crime data and crime maps is available on line.

The increase in public access to information about crime has not been matched by a comparable increase in the quality of media reporting on the subject. The misuse of crime statistics by the media to sensationalize crime and justice has left a large proportion of the public with the mistaken impression that crime is rising when it is not (Jones et al., 2008) and with a grossly inflated picture of the risk of falling victim to crime (Weatherburn, Matka, & Lind 1996). So far as the criminal justice system is concerned, it has fostered a widespread but mistaken view that few offenders get caught, that most of those caught are not convicted and that those convicted are treated leniently by the courts (Jones et al., 2008; Indermaur & Roberts, 2009). These misperceptions have in turn undermined public confidence in the administration of justice and public understanding of what works in preventing and controlling crime (Jones et al., 2008).

Small wonder then that, by comparison with the standard of public debate about other areas of public policy, the standard of public debate about law and order is extremely low. Knowledge, as the saying goes, is power. Journalists are now in a uniquely powerful position to keep the public informed about what is happening in crime and justice, to hold Governments to account and to raise informed concerns about specific law and order issues. Unfortunately, many still seem to view crime and criminal justice data as little more than a convenient means by which to increase circulation or ratings. This bulletin should help readers obtain a better understanding of the use of crime statistics, while strengthening their capacity to spot instances of flagrant abuse. Whether it will encourage more responsible journalism remains to be seen.

ACKNOWLEDGEMENTS

I would like to express my gratitude to Katrina Grech, Florence Sin, Jessie Holmes and Lily Trimboli for their assistance in preparing this bulletin. Sincere thanks also to my external reviewers for their constructive and helpful criticism of an earlier draft.

NOTES

1. Moffatt et al. (2005) originally examined the period January 1998 to December 2003 but the series was later extended.

REFERENCES

AAP (2011). Australian Police in Record Drug Seizures. *News Digital Media*. Retrieved November 15, 2011, from http://www.news.com.au/breaking-news/national/australian-police-in-record-drug-seizures/story-e6frfku9-1226081881733.

Australian Bureau of Statistics. (2003). *Crime and Safety, Australia 2002*. Cat. No. 4509.0. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics. (2005). *Differences in Recorded Crime Statistics*. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics. (2006). *Personal Safety Survey 2005*. Cat. No. 4906.0. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics . (2010). *Recorded Crime — Victims 2009*. Cat. No. 4510.0. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics. (2011a). *Recorded Crime — Victims 2010*. Cat. No. 4510.0. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics. (2011b). *Crime Victimization Australia 2009-10*. Cat. No. 4530.0. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics. (2011c). *Recorded Crime — Offenders 2009-10*. Cat. No. 4519.0. Canberra: Australian Bureau of Statistics.

AIHW. (2011). 2010 National Drug Strategy Household Survey Report. *Drug Statistics Series* (No. 25). Cat. No. PHE 145. Canberra: AIHW. Retrieved August 30, 2011, from http://www.aihw.gov.au/publication-detail/?id=32212254712.

Australian Psychological Society. (2000). *Media Representations and Responsibilities*. Australian Psychological Society. Retrieved November 15, 2011, from http://www.psychology.org.au/Assets/Files/media_position_paper.pdf.

Bonney, R. (1989). *The NSW Summary Offences Act 1988*. Sydney: NSW Bureau of Crime Statistics and Research.

Brouwer, G.E. (2011). *Investigation into an allegation about Victoria Police crime statistics*. Melbourne: Office of the Victorian Ombudsman.

Davis, B. & Dossetor, K. (2010). Misperceptions of crime in Australia, *Trends & Issues In Crime and Criminal Justice (*No. 396). Canberra: Australian Institute of Criminology.

Douglass R., Freedman J., & Clark F. (1974). *The Effect of Lower Drinking Ages on Youth Crash Involvement*. Ann Arbor: The University of Michigan, Highway Safety Research Institute.

Farrington, D. P. (1989). Self-reported and official offending from adolescence to adulthood. In M. W. Klein (Ed.), *Cross-National Research in Self-Reported Crime and Delinquency* (pp.399-423). Dordrecht, The Netherlands: Kluwer Academic Publishers.

Hindelang, M.J., Hirschi, T., & Weis, J.G. (1979). Correlates of Delinquency: The illusion of discrepancy between self-report and official measures. *American Sociological Review*, *44*, 995-1014.

Jochelson. R. (1997). Aborigines and public order legislation in New South Wales. *Crime and Justice Bulletin* (No. 34). Sydney: NSW Bureau of Crime Statistics and Research.

Jones, C., Weatherburn, D., & McFarlane, K. (2008). Public confidence in the New South Wales criminal justice system. *Crime and Justice Bulletin* (No. 118). Sydney: NSW Bureau of Crime Statistics and Research.

Jones, C., Kypri, K., Moffatt, S., Borzycki, C., & Price, B. (2009). The impact of restricted alcohol availability on alcohol-related violence in Newcastle, NSW. *Crime and Justice Bulletin* (No. 137). Sydney: NSW Bureau of Crime Statistics and Research.

Kazemian, L., & Farrington, D.P. (2005). Comparing the Validity of Prospective, Retrospective and Official Onset for Different Offending Categories. *Journal of Quantitative Criminology*, *21*(2), 127-147.

Moffatt, S., Weatherburn, D., & Donnelly, N. (2005). What caused the drop in property crime? *Crime and Justice Bulletin* (No. 85). Sydney: NSW Bureau of Crime Statistics and Research.

Moffatt, S., & Goh, D. (2010). An update of long-term trends in property and violent crime in New South Wales: 1990-2010. *Bureau Brief* (No. 58). Sydney: NSW Bureau of Crime Statistics and Research.

Reiner, R. (2007). Media made criminality: the representation of crime in the mass media. In M. Maguire, R. Morgan & R. Reiner (Eds.), *The Oxford Handbook of Criminology* (pp. 302-337). Oxford University Press: Oxford, UK.

Reuter, P., & Kleiman, M. (1986). Risks and prices: An economic analysis of drug enforcement. In N. Morris & M. Tonry (Eds.), *Crime and Justice: An Annual Review of Research*, (Vol. 7, pp. 289-340). Chicago: University of Chicago Press.

Roberts, L.D., & Indermaur D. (2009). What Australians think about crime and justice: results from the 2007 Survey of Social Attitudes. *Research and Public Policy Series* (No. 101). Canberra: Australian Institute of Criminology.

Snowball, L., Moffatt, S., Weatherburn, D., & Burgess, M. (2008). Did the heroin shortage increase amphetamine use? A time series analysis. *Crime and Justice Bulletin* (No. 114). Sydney: NSW Bureau of Crime Statistics and Research.

Stevenson, R., Forsythe, L., & Weatherburn, D. (2001). The stolen goods market in New South Wales, Australia: an analysis of disposal avenues and tactics. *British Journal of Criminology*, *41*(1), 101-118.

Stevenson, R., Weatherburn, D., & Lind, L. (1998). The Relationship between alcohol sales and assault in New South Wales, Australia. *Addiction*, *94*(3), 397-410.

Trimboli, L. (2010). Assaults on school premises in NSW: 2005-2009. *Bureau Brief* (No. 50). Sydney: NSW Bureau of Crime Statistics and Research.

Victoria Police (2005). *Victoria Police responds to domestic violence*. Retreived November 11, 2011, from http://www.police.vic.gov.au/content.asp?Document_ID=813.

Weatherburn, D., Hua, J., & Moffatt, S. (2009). Rates of participation in burglary and motor vehicle theft. *Crime and Justice Bulletin* (No. 130). Sydney: NSW Bureau of Crime Statistics and Research.

Weatherburn, D., Matka, E., & Lind, B. (1996). Crime Perception and Reality: Public perceptions of the risk of crime victimization in Australia. *Crime and Justice Bulletin* (No. 28). Sydney: NSW Bureau of Crime Statistics and Research.

Kazemian, L., & Farrington, D. P. (2005). Comparing the validity of prospective, retrospective, and official onset for different offending categories. *Journal of Quantitative Criminology, 21*(2), 127-147.

NSW Bureau of Crime Statistics and Research - Level 8, St James Centre, 111 Elizabeth Street, Sydney 2000
bcsr@agd.nsw.gov.au • www.bocsar.nsw.gov.au • Ph: (02) 9231 9190 • Fax: (02) 9231 9187
ISSN 1030 - 1046 • ISBN 978-1-921824-35-7