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Armed robbery in Australia: 2006 National Armed Robbery Monitoring Program annual report

Lance Smith
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Foreword

The National Armed Robbery Monitoring Program (NARMP) was established to fill an information gap on trends and patterns of armed robbery in Australia, especially in relation to changes over time in the use of specific weapons. The 2006 annual report is the fourth publication since the Australian Institute of Criminology (AIC) began monitoring this offence in 2003. Building on previous analyses, this report provides an overview of the 7,560 victims of armed robbery and the situations, including the locations, which made them vulnerable to victimisation.

Included again in the collection this year was the additional information on incidents of armed robbery which was first included in the 2005 report. This allowed for a more detailed examination of the circumstances and characteristics of the 6,640 armed robbery incidents that were reported to police in Australian states and territories during 2006. Such information is valuable in assisting law enforcement, as it provides a more complete picture of incidents of armed robbery. This includes being able to determine whether there are differences in net gains for offenders based on the type of weapon they use, or the location they target, or whether the offence is committed by one or more offenders.

Equally important is being able to assess whether crime prevention initiatives are having the desired impact. Separate AIC publications are being produced for this purpose, focusing on certain locations vulnerable to armed robbery such as service stations. To further build on this crime prevention focus, a small addition was made to this year's report which introduces the area of crime prevention for armed robbery. This small section raises the importance of crime prevention strategies, including those based on the situational crime prevention perspective, in attempting to lower the incidence of armed robbery in Australia. The issue of displacement as a result of crime prevention strategies is also highlighted.

Many of the AIC's long-term monitoring programs, including the NARMP, are dependent upon the support and cooperation of state and territory police. Despite the infancy of the NARMP, there is beginning to be an accumulation of data which when mined provides further insight into some of the very different armed robbery scenarios, including armed robberies of licensed premises (case study presented in this year's annual report), street armed robbery and armed robbery at residential locations. At present the NARMP program has a greater lag time to publication than is desirable. This results from the complexities surrounding the collation, cleaning and analysis of data from multiple jurisdictions. We continue to improve the national collection with assistance from state and territory police.

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Contents

Figures

Tables

Abbreviations

ABS	Australian Bureau of Statistics
AIC	Australian Institute of Criminology
ASOC	Australian Standard Offence Classification
NARMP	National Armed Robbery Monitoring Program
RCV	Recorded crime: victims, Australia

Executive summary

National Armed Robbery Monitoring Program overview

Data collection for the National Armed Robbery Monitoring Program (NARMP) began in 2003 following a commitment from all police services in all Australian states and territories to provide information that would permit the detailed, national level exploration of the crime of armed robbery. The program was established to:

- monitor trends in armed robbery, specifically trends in weapon use
- identify changes in trends
- provide insight into the factors underpinning these trends.

This report presents the results from analyses of the fourth year of data collected on all armed robberies reported to police between 1 January 2006 and 31 December 2006. Similar to the 2005 report, this report and future publications based on the NARMP will make use of additional information to that employed in the 2004 annual report (Borzycki 2005).

Victims of armed robbery

Analyses of the 2006 victim-based NARMP dataset suggest:

- Since its establishment, the number of victims of armed robbery has fluctuated from year to year, with data indicating a five percent increase in the number of victims compared with 2005.
- Knives made up more than half of the weapons involved in these victimisations (53%) with a smaller 15 percent of armed robberies involving firearms.
- Approximately two in every five victims of armed robbery in 2006 were robbed in some form of retail location (42%).
- For individuals (as opposed to organisations) who were victims, the average age was 30 years, with males being slightly younger on average (29 years) than females (34 years).
- Males aged 18 to 19 years had the highest rates of armed robbery victimisation, higher than all age and gender groupings (149.7 per 100,000 persons).
- Similar to previous reports, organisations or commercial premises that were victims accounted for 27 percent of victims recorded in NARMP.
- In 2006, there were 129 repeat victims of armed robbery. The majority of these victims were organisations (70%).

Incidents of armed robbery

Analyses of the 2006 incident based data highlighted that:

- During 2006, there were 6,640 incidents of armed robbery recorded in Australian states and territories.
- The majority of armed robbery incidents involved a single individual victim (62%).
- Just under a third of all robbery incidents occurred on the street (32%).

- Almost two thirds (65%) of armed robbery incidents in 2006 occurred between the hours of 6 pm and 6 am.
- Similar to previously reported years, there was very little difference between days of the week on which armed robbery incidents occurred. Armed robberies were only slightly more likely to occur on a weekend as opposed to during the week (maximum 3% differential between all days).
- Not all jurisdictions were able to provide information on the type of property stolen. Of those that could, the most common type of property stolen was cash (61%) followed by electrical goods (15%, including mobile phones).
- On average, armed robbery offenders netted $1,152 per incident (when a weapon was identified), although total values were skewed towards the lower end of the range.
- Seventeen percent of armed robbery incidents had a net total value of nil, while 68 percent had a recorded total value of less than $500.
- The highest average gains for offenders were from incidents where the most serious weapon used was a firearm ($3,004). The lowest average was associated with 'other weapon' robberies ($820).
- Unlike previous years, syringe robberies were not the weapon category recording the lowest average gain ($949). However, this was due to an unusual incident at a service station where $21,000 was taken.

Armed robbery offenders

- Data were available for 3,440 armed robbery offenders involved in 2,171 incidents. The average incident involved 1.6 offenders.
- Around nine in every 10 offenders in armed robbery incidents were male (based on available offender data).
- Ninety-four percent of offenders were under 40 years of age, with the average offender age being 23 years old.
- Average age of offenders varied with location, with older offenders targeting banking and financial locations (29 years) and pharmacies (31 years).

Patterns in armed robbery

These findings are indicative of the broad trends in armed robbery, its victims, and those who commit this crime. Despite some changes in the level of detail and in the way some information is analysed, 2006 NARMP findings are consistent with those observed in earlier years. This suggests that the features of Australian armed robberies have not changed markedly over the four years for which the NARMP has been collecting data. Generally, this means that armed robberies can be characterised as either:

- Low-yield, unplanned and essentially opportunistic, especially in terms of weapons (e.g. the majority of street robberies); or
- High-gain and employing weapons which are more difficult to obtain, as seen in specific retail sites.

Data from the current and previous analyses also suggest that some residential armed robberies (home invasions) and a small subset of street robberies may fall into the latter category. There was also the occasional unusual or exceptional incident such as the robbery of a service station involving a syringe as the weapon, which netted a gain of $21,000.

Relative to other armed robberies, this year's case study shows that incidents at licensed premises tend to be committed:

- using a firearm as the weapon. Figures suggest that firearms were three times more likely to be used in a licensed premise when compared with all other locations.
- by lone offenders. Nineteen percent of incidents were committed by a lone offender and only three percent were committed by three or more offenders. This is in contrast to 2005, where 10 percent were committed by groups of four or more. It appears that the 2005 figures represented an abnormally large percentage considering the armed robbery of licensed venues only accounts for five percent of all armed robbery incidents.

These factors in combination suggest that the offenders who committed armed robbery at licensed premises during 2006 were not as organised and

experienced as their previous counterparts. This is reinforced by the few high gains netted from robberies of licensed venues in 2006. However, the intimidation of victims using weapons which are hard to obtain and dangerous, such as firearms, remained consistent. It remains unclear if armed robbery of licensed venues is a stable phenomenon, despite this type of robbery having been analysed by NARMP over three years of data collection. There have been changes in the data for licensed venues (for further details see Technical Appendix) and as a result, further analysis of armed robbery in licensed venues will be possible in the future. The ongoing accumulation of NARMP data will enable the continued monitoring of armed robbery. This will assist law enforcement and those responsible for security in pubs and other licensed venues to base their crime reduction and prevention decisions on research-based evidence.

Introduction

National Armed Robbery Monitoring Program collection

The NARMP aims to identify and monitor trends in armed robbery, with a particular focus on trends in weapon use, as well as providing insight into the factors that may underpin these trends. It reports on national level analyses that can complement other crime information sources. The NARMP was established under the auspices of Australasian police ministers and senior police officers (for more detail about the establishment of the NARMP, see the Australian Institute of Criminology [AIC] NARMP website: http://www.aic.gov.au/research/projects/0003.html). It is sustained by the ongoing support of police services in all Australian states and territories.

The NARMP collection is still a relatively new crime trend monitoring program. It contains information concerning each victim of armed robbery reported to police in Australia since 2003. The information contained in the NARMP was initially modelled on the Recorded Crime: Victims (RCV), Australia collection (e.g. ABS 2007), although consultation with data providers and other key stakeholders has seen refinements to what is collected. For example, victim data from calendar year 2004 onwards have usually been accompanied by an incident identifier. An identifier is a tool that allows victim records to be collapsed into incidents in which individual victims were involved. The ability to analyse data in this manner is important for the accurate description of the elements of a single incident of robbery. For instance, a single armed robbery involving one handgun might have six victims. If data are analysed in a victim-based format, a count of six handguns would result but if the unit of analysis is the incident, only one handgun is counted.

The level of detail about armed robberies in collated information has also increased over time. The initial annual dataset mostly contained information pre-coded into higher level RCV categories. Files received from jurisdictions now contain information in its raw form, which allows more detailed categories to be constructed. The inclusion of more detailed categories means some analyses refer to categories containing only a few cases. However, small numbers can result in large fluctuations over time, affecting the reliability of yearly comparisons. The types of variables collated have also changed over time so that additional information, such as the incident identifier described above, is now collected.

Due to the evolving nature of the NARMP, care should be taken in drawing strict or detailed comparisons between different recorded crime

sources (such as RCV and the NARMP) or even between initial and later NARMP reports. Ongoing refinements to the nature of the material it contains mean that any comparisons drawn with earlier annual reports are observational only and are not accompanied by statistical tests of significance. The relatively short time since the establishment of the NARMP also means that none of the annual comparisons have been subject to any time series analyses yet.

Report format

This report examines all armed robbery victims and the armed robberies they were involved in which were reported to police in all Australian jurisdictions from 1 January to 31 December 2006. Details of methodology and type of information included in the NARMP can be found in the technical appendix to this report, as can a more detailed discussion of the limitations of the NARMP. The technical appendix also details a glossary of terms and definitions found in this report.

The key findings from the 2006 NARMP collection are reported in three sections. The first section contains summaries of victim-based analyses. Using the same unit of analysis as in previous years and other sources has allowed broad comparisons to be drawn with information contained in earlier NARMP annual reports, as well as in other recorded crime sources, such as *Recorded crime: victims, Australia* (ABS 2007; 2006a).

The second section examines characteristics of each armed robbery incident, using the incident as the unit of analysis. Findings can generally be compared with the 2004 and 2005 NARMP analyses (all references throughout this report to 2004 and 2005 NARMP findings relate to the relevant annual report; see Borzycki 2006; Borzycki 2008). As with 2005, data used in the 2006 report are more representative on a national level than earlier NARMP reports. This is because all jurisdictions were able to supply a unique incident identifier. In 2004, not all jurisdictions could supply the incident identifier which meant that the incidents examined did not represent all incidents reported to police.

The third section also uses incident-based analyses to outline characteristics of armed robbery offenders. The report concludes with a case study which examines armed robberies at licensed premises in detail. Robberies in these locations are of interest due to the higher likelihood of firearms being used and because some characteristics suggest that they might be on the rise.

NARMP data suggest that the characteristics of armed robberies have been generally consistent over the four years of the program, although as noted earlier, caution should be exercised when making comparisons with previous years. Previous NARMP annual reports (e.g. see Borzycki, Sakurai & Mouzos 2004) have considered some findings within a routine activity framework. This approach is used to account for why certain armed robbery characteristics tend to co-occur and why robberies are not equally likely to occur across all times and locations. Routine activity theory states that for an offence to occur, a motivated offender, a suitable target and the absence of a capable guardian are necessary. As with previous reports, routine activity theory is once again able to be applied to the 2006 NARMP results. To avoid unnecessary repetition, specific statements about the way current NARMP findings can be located within this framework have not been included. In previous years, these were made with reference to individual analyses.

Key findings

Victims of armed robbery

The 2006 NARMP dataset contains records relating to 7,560 victims of armed robbery reported to police from 1 January to 31 December 2006. This was a five percent increase on the number of victims in the 2005 dataset (n=7,210; see Borzycki 2008). The number of annual victimisations recorded in the NARMP has fluctuated in the four years since it was established in 2003 (n=8,865 victims; see Borzycki, Sakurai & Mouzos 2004). An initial drop in victims in 2004 (n=6,646) was followed by slight increases in numbers each subsequent year.

The number of armed robbery victims recorded in 2006 translates to a rate of victimisation of 36.5 persons per 100,000 (a slight increase from 35.4 in 2005). Both the number and rate of armed robbery victimisations is similar to the 7,596 or 36.7 victims per 100,000 reported in RCV for 2006 (revised; ABS 2007). The relative change in victim numbers in NARMP over time also has generally reflected that seen in RCV.

Approximately seven out of 10 victims (n=5,519; 73%) were flagged as individual persons, with the remainder being organisational victims. The percentage breakdown of victim type was similar to 2005 (71% individual persons).

Weapons used against armed robbery victims

Not all jurisdictions were able to supply information about the use of multiple weapons in incidents where more than one weapon had been used against a victim. Of the 6,381 victim records in which multiple weapon types were able to be listed, the average armed robbery still only involved a single weapon. The median number of weapons used was also one, not surprising given that nine in 10 victims were involved in incidents where only single weapons were listed. Six percent were victims in incidents involving two weapons, and half of one percent of victims were threatened with three weapons. These results were very similar to those reported in 2005.

Knives made up the majority of weapons used to commit armed robbery (53% of 7,724 weapons listed for victims; see Table 1). Fifteen percent of listed weapons were generically classified as firearms, with seven percent of all weapons specified as handguns. One percent of the weapons used were replica firearms. Just over one-quarter of weapons were in the category of other weapons (26%) and syringes accounted for fewer than one in 20 of the weapons involved (3%). The percentage breakdown is similar to that seen in the preceding

Table 1 Weapons used to threaten armed robbery victims[a]

Weapon	Number	Percent armed robberies[b]
Firearms		
Firearm (with no further detail)	181	2
Handgun	548	7
Shotgun	150	2
Rifle, airgun	60	1
Sawn off longarm	9	< 1
Replica firearm	50	1
Other firearm (not classified elsewhere)	126	2
Total firearms	1,124	15
Knives		
Knife (with no further detail)	3,804	49
Dagger	5	< 1
Scissors	38	< 1
Pocket knife	33	< 1
Screwdriver	113	1
Other knife (not classified elsewhere)	118	2
Total knives	4,111	53
Syringes		
Syringe	234	3
Total syringes	234	3
Other weapons		
Other weapon (with no further detail)	429	6
Club, baton or stick	349	5
Rock, brick or stone	37	< 1
Tool (not classified elsewhere)	163	2
Blunt instrument (not classified elsewhere)	121	2
Bottle, broken glass	206	3
Chemical spray	11	< 1
Explosive, bomb	2	< 1
Machete, axe	105	1
Sledgehammer	55	1
Crowbar, metal pipe	206	3
Bow, spear, speargun	3	< 1
Vehicle	1	< 1
Stun gun (Taser)	5	< 1
Sword	9	< 1
Other weapon (not elsewhere classified)	275	4
Total other weapons	1,977	26
Weapon used (with no further detail)	122	2
Unknown	156	2
Total	278	4
(Total)	7,724	100

a: Multiple weapon types were listed for some victim records. Therefore, total number refers to the total number of weapon types listed, not the total number of victim records. Excludes individual and organisational victim records with all weapon variables coded as missing, not applicable or variable not supplied (n=286).

b: Percentages do not necessarily total 100 because of rounding

Source: AIC NARMP 2006 [computer file]

year, although data suggest that firearms made up a slightly smaller percentage of weapons in 2005 (13%) and knives a slightly larger percentage (55%).

Locations in which victims were robbed

Approximately two out of every five victims were robbed in some sort of retail setting (42%; totalling unspecified and specific listed retail locations). Over 40 percent of victims were robbed in an open, public setting (44%; which includes recreational, transport-related, open spaces, and the street and footpath), with the majority of these robbed on the street or footpath (32% of all victims). These figures are virtually unchanged since 2003. The percentage of individual persons relative to organisational victims subject to robbery in each of the location categories was also similar to that observed in the previous year.

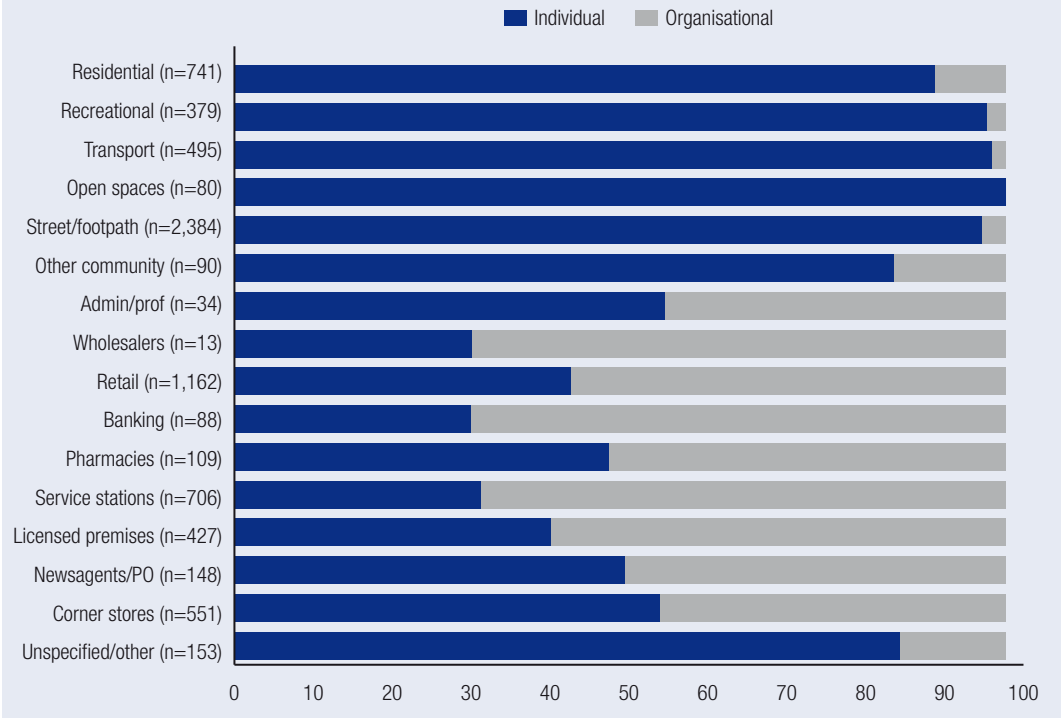
Figure 1 highlights that approximately nine out of 10 victims in locations classified as residential, recreational, transport-related, open spaces, street and footpath, and other community settings were individuals. Organisations made up the majority of victims in all primarily commercial settings. The exceptions were the categories of corner stores (including supermarkets and takeaways), newsagencies/post offices and pharmacies.

Individual victims of armed robbery

The average age of an armed robbery victim, for whom valid age and gender information was recorded, was 30 years old, although male victims were slightly younger (29 years) than female victims (34 years). As shown in Table 2, the majority of victims (61%) were aged under 30 years. Consistent with 2005 findings, 65 percent of males and 48 percent of females were aged under 30 years.

Young men have previously been shown to be subject to high rates of armed robbery victimisation. Table 2 shows that men aged 18 to 19 years experienced the highest rate of victimisation of all

Figure 1 Individual and organisational victims of armed robbery, by location type[a], in 2006 (percent)



a: Excludes individual and organisational victim records with missing location and/or organisational flag

Source: AIC NARMP 2006 [computer file]; n=7,560

Table 2 Victims, by sex and age group, in 2006[a,b]

Age group (years)	Male		Female		All		
	Percent male victims	Rate per 100,000 of this age group and sex	Percent female victims	Rate per 100,000 of this age group and sex	Percent all victims	Rate per 100,000 of this age group	Number
< 15	5	10.3	3	1.6	5	6.1	246
15–17	13	126.3	6	17.4	12	73.4	625
18–19	10	149.7	8	34.9	10	93.7	528
20–24	23	129.7	20	34.6	22	83.0	1,220
25–29	13	79.8	12	20.6	13	50.4	709
30–34	7	39.7	8	13.6	7	26.6	397
35–39	7	36.2	9	14.8	7	25.5	389
40–44	6	33.6	8	12.8	7	23.1	355
45–49	5	25.5	8	13.3	5	19.3	289
50–54	4	25.3	8	13.6	5	19.4	265
55–59	3	20.9	5	9.5	4	15.2	193
60–64	1	12.1	2	6.1	2	9.1	90
> 65 years	2	7.2	3	2.7	2	4.7	127
All ages		40.8		11.8		26.2	

a: Percentages do not necessarily total 100, because of rounding. Excludes individual victim records with missing age and/or gender.

b: Rate of victimisation per 100,000 population (ABS 2006b), based on individual victims with valid age and gender. Excludes organisational victims therefore lower than the rate specified when also considering organisational victims.

Males n=4,201; females n=1,232

Source: AIC NARMP 2006 [computer file]

age and gender groupings (149.7 per 100,000 persons). The highest victimisation rate among women and girls was also found in this age group but the actual rate was substantially lower (93.7 per 100,000), reflecting an overall gender difference regardless of age (males = 40.8, females = 11.8). The ranking of victimisation rates from highest to lowest among males and females of different ages is generally consistent with data from 2005. The slight increase in victim numbers corresponds with a slight increase in rates for some, most notably males in the 15 to 17 years age group category which increased from 106.8 per 100,000 persons in 2005 to 126.3 per 100,000 in 2006. Despite increases for some age categories, this was not standard across all age-gender groups. For example, the rates among males and females in the 30 to 34 years age category are slightly lower than those seen in 2005.

The largest percentage of victims in each age and gender group was robbed on the street or footpath (Table 3), with half of all males under 18 years of age and 18 to 34 years being victimised in this location. Males and females from the under 18 years age category were also two or three times more likely than older age groups to be victimised in a recreational or transport location.

General patterns in victimisation locations are similar to those seen in previous years, although a higher percentage of females over 60 years were robbed in residential locations in 2006 (24%) than in 2005 (14%). Fluctuations since 2003 in the percentage of victims subject to armed robbery in most other locations, and in older age groups, are likely to be the result of the small number of victims in these subcategories.

The most serious weapons used against male and female armed robbery victims of different ages are summarised in Table 4. Knives were used against at least half of victims regardless of age or gender, although some age and gender differences in

Table 3 Locations of victimisation, by sex and age group, in 2006 (percent of that sex and age group)[a]

	Males				Females				(Total
Location	< 18	18–34	35–9	60+	< 18	18–34	35–59	60+	number)
Residential	5	11	16	24	14	12	16	24	658
Recreational	17	6	4	1	11	4	2	3	361
Transport related	14	8	5	5	18	9	7	7	476
Open spaces (excluding street and footpath)	3	1	1	1	3	1	2	0	79
Street and footpath	51	50	33	31	27	40	21	27	2,285
Educational, health, religious, justice and other community	2	1	1	2	3	2	2	0	77
Administrative and professional	0	< 1	< 1	0	0	< 1	1	3	19
Wholesalers, warehouses, manufacturing and agricultural	0	0	< 1	1	0	< 1	0	0	4
Retail	5	5	13	11	18	13	19	17	498
Banking and financial	< 1	0	1	0	1	1	1	1	27
Pharmacies and chemists	0	< 1	1	2	0	3	2	1	53
Service stations	1	6	4	3	1	2	3	3	223
Licensed premises	1	3	5	3	0	4	6	3	172
Newsagents and post offices	0	0	3	5	0	< 1	4	3	74
Corner stores, supermarkets and takeaways	1	5	8	8	3	4	11	4	296
Unspecified and other	2	3	2	3	1	3	3	3	131
(Total number)	767	2,262	1,025	147	104	592	466	70	5,433

a: Percentages do not necessarily total 100 because of rounding. Excludes individual victim records with age, gender, or location missing.

Source: AIC NARMP 2006 [computer file]

patterns of weapon use were found. For example, a slightly higher percentage of females compared with males were subject to robbery with a syringe or firearm. These findings correspond to those of previous years. Reflecting 2005 figures, 2006 data shows men aged 45 years and over are more likely to be victims of firearm robberies than armed robberies with other weapon types compared to younger males. No discernible pattern was seen for female victims of firearm robbery compared with previous years. Women aged 30 to 34 years were more likely to be victims of firearm robbery (28%) than other age groups, closely followed by females aged 40 to 49 years old. As has been noted in earlier reports, the greater likelihood of females being victims of firearm robbery may be a reflection of employment, where women are more likely to work in locations where a higher risk of firearm robbery exists.

Only a minority of jurisdictions were able to supply information regarding victim injury in armed robbery, resulting in injury data for slightly fewer than 10 percent of victims (n=680). The small number of cases should not be interpreted as representative of all armed robbery victims. Although some figures differ to previous NARMP reports, findings are similar insofar as only a small proportion of supplied victim cases recorded serious injury (3%; see Table 5). Fifteen percent of all victims had no report of injury and only 10 percent of victims targeted with a knife reported no injury. Slightly less than one-third of victims received a minor injury (29%). Of the major weapon types, other weapon robberies resulted in the highest percentage of reported minor injuries, which is consistent with previous reports. There were no deaths recorded in the NARMP for 2006.

Table 4 Weapons[a] used in armed robberies in 2006 (percent victims of each sex and age group)[b]

	Males					Females				
Age group	Firearm	Knife	Syringe	Other weapon	Total number	Firearm	Knife	Syringe	Other weapon	Total number
< 15 years	9	61	1	29	206	16	58	6	19	31
15–17	7	59	1	33	518	14	52	3	32	66
18–19	8	59	3	31	397	12	54	4	31	95
20–24	10	57	3	30	915	11	56	5	28	232
25–29	14	59	4	24	522	13	63	4	21	134
30–34	14	60	2	24	270	28	46	5	21	94
35–39	11	55	2	32	257	14	66	2	18	105
40–44	20	51	3	26	239	20	53	6	21	89
45–49	19	52	1	28	166	24	51	8	17	92
50–54	21	53	1	25	158	16	66	5	14	87
55–59	17	56	2	25	127	18	60	4	18	55
60–64	21	57	3	19	58	11	57	7	25	28
> 65	17	60	2	20	81	17	60	9	14	35
(Total %)	12	57	2	28	100	16	57	5	22	100

a: Based on most serious weapon listed in derived weapon combination, assuming order of decreasing seriousness firearm, knife, syringe, other weapon.

b: Percentages do not necessarily total 100, because of rounding. Excludes individual victim records with weapon type unspecified, unknown, not applicable, and those in which victim age or sex is not stated or is missing gender.

Source: AIC NARMP 2006 [computer file]; n=5,057

Table 5 Degree of injury inflicted on individual victims, by weapon type[a], 2006 (percent injuries from that weapon)[b]

	Weapon				
Injury	Firearm	Knife	Syringe	Other weapon	All weapons
No injury	11	10	29	23	15
Minor injury	12	26	8	45	29
Serious injury[c]	1	2	0	6	3
Emotional trauma	76	61	63	26	53
(Total number)	82	379	24	195	680

a: Based on most serious weapon listed in derived weapon combination, assuming order of seriousness of firearm, knife, syringe and other weapon.

b: Percentages do not necessarily total 100 because of rounding. Excludes individual victim records with missing injury information and/or unspecified weapon type, or weapon types of unknown, not applicable or not stated.

c: Serious injury refers to that requiring immediate emergency medical treatment.

Source: AIC NARMP 2006 [computer file]

Organisational victims of armed robbery

Organisations comprised 27 percent of all victims recorded in the NARMP. This figure was similar to 2005 data (29%). The majority of armed robberies of organisations involved a knife, reflecting a similar figure for individual victimisation (56% organisations, 57% individuals), although a higher percentage were subject to firearm robbery (23% versus 13% for

individuals). Only a small percentage of organisations were robbed with other weapons (17%), compared with 27 percent of individuals victims.

Weapons used during armed robberies and the types of locations where victimisation occurred in 2006 were similar to those of 2005. The exception to this trend was unspecified retailers who comprised the majority of organisations robbed with firearms and knives (see Table 6). However, 2006 figures represent a decrease from 2005 figures (26% firearms and 34% knives for 2006; 31% firearms and 38% knives in 2005). Weapons used in service station robberies changed in 2006, with firearms being used in 20 percent of robberies compared to 14 percent in 2005. Licensed premises comprised approximately 12 percent of organisational robbery victims. Of those, 23 percent were subject to robbery involving a firearm. In 2005, 44 percent of organisational robberies involving a syringe occurred in an unspecified retail setting. This figure rose to 60 percent in 2006.

Offenders involved in the armed robbery of individual and organisational victims

The NARMP contains information about both alleged and convicted offenders linked to armed robberies reported in the reference period. It does not contain demographic information about individuals

Table 6 Organisational victims of armed robbery in 2006, by weapon type[a] and location (percent robberies using that weapon type)[b]

	Weapon				
Location	Firearm	Knife	Syringe	Other weapon	(Total number)
Residential	4	3	2	4	61
Recreational	< 1	< 1	0	< 1	8
Transport related	< 1	< 1	0	1	7
Open spaces (excluding street and footpath)	0	0	0	0	0
Street and footpath	2	4	0	7	69
Educational, health, religious, justice and other community	1	< 1	0	1	10
Administrative and professional	1	1	0	1	15
Wholesalers, warehouses, manufacturing and agricultural	1	< 1	0	< 1	9
Retail	26	34	60	32	614
Banking and financial	8	2	2	2	58
Pharmacies and chemists	2	3	0	4	50
Service stations	20	26	11	23	438
Licensed premises	23	9	3	11	239
Newsagents and post offices	4	4	2	2	71
Corner stores, supermarkets and takeaways	8	13	20	12	222
Unspecified and other	1	1	2	1	16
(Total number)	439	1,054	65	329	1,887

a: Based on most serious weapon listed in derived weapon combination, assuming order of decreasing seriousness firearm, knife, syringe, other weapon.

b: Percentages do not necessarily total 100, because of rounding. Excludes organisational victim records with location missing or weapon type unspecified, unknown, not applicable, or not stated.

Source: AIC NARMP 2006 [computer file]

suspected of robbery, or reported offender descriptions where individuals had not been apprehended by the time data were extracted. There is the capacity to capture information for up to five offenders involved in an armed robbery, although not all jurisdictions could supply this and if more than five offenders were involved, information about sixth and subsequent offenders has not been collated. Finally, there is redundancy in victim-based offender information because armed robberies involving multiple victims have duplicated offender data for each involved victim. Because of these dataset features, the following describes only a subset of *all* offenders involved in reported armed robberies in Australia in 2006, and some information is repeated in that subset.

In 2006, 67 percent of victim records did not contain associated offender data. Of the 2,476 victims with offender information supplied, demographic details were available for 3,992 offenders. Table 7 shows that slightly more than one in three organisational victims had at least one linked offender, compared with slightly less than one in three individuals being robbed. On average, individuals were victimised by marginally larger offender groups (1.7 offenders) than organisations (1.5 offenders). Previous NARMP reports suggest similar findings, but as noted in previous reports, these apparent differences may be a function of offender data limitations.

Where data on relationship between victim and offender was available, offenders were unknown to individual victims in approximately 80 percent of cases (see Table 8). This supports the belief that robbery tends to be an anonymous crime. However, the percentage of unknown offenders has fluctuated dramatically since 2004. This is because only a minority of jurisdictions have been able to supply relationship data (causing smaller sample sizes more vulnerable to large percentage fluctuations) and the form of this information has not been consistent over time.

Slightly more than one-quarter of victim records were noted as not being finalised at the time of data extraction, regardless of the victim type (overall percentage 26%). Table 9 shows that for two out of every five individual victims with valid data, the matter was finalised without an offender being proceeded against (42%). The equivalent percentage for organisational victims was 40 percent (overall percentage for all victims, 42%). The summary statistics should be considered with the caveat that the investigative status variable is problematic for a range of reasons. These findings (which can refer to outcome at data extraction or at 180 days) should not be compared with earlier NARMP annual reports (see technical appendix), nor with RCV information, which only reports on status at 30 days following report.

Table 7 Number of offenders involved in each armed robbery in 2006, by type of victim (individual or organisational) (percent)[a]

	Victim type		
Offender count	Individuals	Organisations	(Total number)
Nil/unsolved[b]	69	62	5,084
One	18	26	1,511
Two	8	8	617
Three	3	2	202
Four	1	1	89
Five or more[c]	1	< 1	57
(Total number)	5,519	2,041	7,560

a: Percentages do not necessarily total 100, because of rounding

b: Includes individual and organisational victim records that were unsolved or had an outcome of no offender proceeded against, and those in which offender information could not be supplied or was missing

c: Data set contains a maximum of five offenders, therefore victimisations involving more than five offenders are included in the count of five

Source: AIC NARMP 2006 [computer file]

Repeat victimisation

A small number of victims (identified with victim reference numbers) appeared in the 2006 dataset on multiple occasions. Although not a completely valid indicator of repeat victimisation (see the discussion of data limitations in the technical appendix), there were 129 victim records where details strongly suggest repeat victimisation during 2006. Eleven of these victims (individuals and organisations) were subject to armed robbery on at least three occasions and another three on at least four occasions. There was an average of 78 days between the dates on which the first and second armed robberies occurred, although 312 days elapsed for one victim. For 45 percent of repeat victims, the same weapon was used in the first and second reported robberies.

The majority (n=90; 70%) of repeat victims were organisations. Of these, 28 percent were service stations, 22 percent were licensed premises and 21 percent were unspecified retail. Fifty-one organisations with valid weapon data were robbed with a knife on the first occasion, and of these, 30 were robbed with a knife on the second occasion. The majority of cases had no offender details recorded (71%).

Table 8 Relationships between individual victim and offender[a], 2006

Relationship	Number	Percent victim–offender relationships[b]
Offender(s) known to victim	273	14
Offender(s) unknown to victim	1,550	77
No offender identified, relationship unknown	199	10
(Total)[b]	2,022	100

a: Percentages do not necessarily total 100, because of rounding

b: Multiple relationships were listed for some victim records in which multiple offenders were identified. Therefore, Number refers to the total number of relationships listed, not the number of individual victim records. Excludes victim records with relationship codes of 'missing', 'not applicable', or 'variable not supplied' and records flagged as organisational victims.

Source: AIC NARMP 2006 [computer file]

Table 9 Status of investigation[a] of armed robbery occurring in 2006, by victim type (percent)[b]

Status	Individuals	Organisations
Investigation not finalised	27	22
Investigation finalised, no offender proceeded against	42	40
Investigation finalised, offender proceeded against	31	38
Other outcome	< 1	0
(Total number)	5,475	2,035

a: Refers to outcome at data extraction or, for jurisdictions unable to supply outcome at data extraction, at 180 days. Therefore time elapsed between incident and outcome is not equivalent for all victim records.

b: Excludes individual and organisational victim records with status of investigation missing or not supplied. Percentages do not necessarily total 100, because of rounding.

Source: AIC NARMP 2006 [computer file]; n=7,510

Reporting by armed robbery victims

Most jurisdictions were able to provide data on reporting times, with the majority of armed robbery victims (87%) reporting the event to police on the same day as its occurrence. Among 905 victims who reported the incident some time after the occurrence date, the average delay was one week. Ninety-five percent of victims who were recorded as organisations reported on the same day, compared with 83 percent for individual persons. Of those individual victims who did not report on the same day, the average length of the delay was seven days. For organisational victims, the average delay was three days.

Armed robbery incidents

A total of 6,640 unique armed robbery incidents were identified and created from the victim file. The 2006 data yielded similar results to 2005. Despite an increase in the number of incidents reported, many of the findings remain relatively stable. For example, Table 10 shows that 62 percent of armed robberies involved only a single individual victim and 28 percent a single organisation (2005 figures were 60% and 30% respectively). Whilst 2005 data showed an increase from 2004 in incidents involving both an organisation and an individual person (184 incidents

in 2005, compared with 21 in 2004), 2006 data showed a decline in this type of combined victim incident (158 incidents) and an increase in individual victimisation (4,123 incidents) compared with 2005 (3,783 incidents).

Locations where armed robberies occurred

Because the vast majority of armed robbery incidents involved only single victims (90%), findings are consistent with those observed in victim based analyses. Thirty-two percent of all armed robberies took place in the street, and 16 percent occurred at the premises of unspecified retailers. Similar percentages were found in the 2005 annual report (30% and 19% respectively). Robberies involving individuals were more likely to take place in open public spaces, whereas most organisational victimisations (whether robbed in conjunction with

Table 10 Numbers of victims involved in armed robbery incidents in 2006, by victim type

Victim type	Number	Percent incidents[a]
One individual	4,123	62
One organisation	1,829	28
Multiple individuals	483	7
Multiple organisations	10	< 1
One organisation and lone individual	158	2
One organisation and multiple individuals	36	< 1
One individual and multiple organisations	1	< 1
(Total)	6,640	100

a: Percentages do not necessarily total 100, because of rounding. Excludes incident records with missing victim type.

Source: AIC NARMP 2006 [computer file]

Table 11 Locations of armed robberies in 2006 (percent of each victim type)[a]

	Victim type							
Location	Single individual	Single organisation	> 1 individual	> 1 organisation	1 organisation & 1 individual	1 organisation & > 1 individual	1 individual & > 1 organisation	(Total number)
Residential	12	3	15	10	2	3	0	614
Recreational	7	< 1	8	0	1	0	0	321
Transport related	10	< 1	7	10	1	0	0	454
Open spaces (excluding street and footpath)	1	0	2	0	0	0	0	64
Street and footpath	45	3	41	0	5	3	100	2,110
Educational, health, religious, justice and other community	1	1	2	0	1	0	0	79
Administrative and professional	< 1	1	< 1	0	1	0	0	32
Wholesalers, warehouses, manufacturing and agricultural	< 1	< 1	< 1	0	0	0	0	12
Retail	9	32	7	20	34	14	0	1,043
Banking and financial	<1	3	0	20	1	6	0	76
Pharmacies and chemists	1	3	2	0	4	8	0	87
Service stations	4	25	2	30	12	3	0	672
Licensed premises	2	12	5	10	11	28	0	346
Newsagents and post offices	1	3	2	0	8	8	0	119
Corner stores, supermarkets and takeaways	5	11	5	0	18	28	0	475
Unspecified and other	2	1	2	0	3	0	0	136

a: Percentages do not necessarily total 100 because of rounding. Excludes incident records with victim type or location missing.

Source: AIC NARMP 2006 [computer file]; n=6,640

individual victims or not) occurred in commercial settings (see Table 11). Unspecified retail locations were the most common site of incidents involving both an organisation and individual victims (34%).

Temporal aspects of armed robbery

In 2006, four out of 10 armed robberies (41%) occurred between 6 pm and midnight, and almost two-thirds (65%) took place in the hours between 6 pm and 6 am. Findings are generally consistent with NARMP data from previous years, as well as international research (see Smith 2003). For example:

- Sixty percent of 2004 NARMP incidents and 65 percent of 2005 incidents occurred between 6 pm and 6 am.
- Fifty-one percent of a sample of armed and unarmed robberies of individual victims in England and Wales in 2001–02 occurred between 6 pm and 2 am (Smith 2003).

Table 12 summarises incident time and location and shows that some settings were disproportionately subject to armed robberies at certain times. Locations which keep standard business hours experienced a majority of armed robberies during those hours (e.g. 80% banking and financial settings, 62% pharmacies and chemists, 78% administrative and professional offices). However, over all locations, only 30 percent of armed robberies occurred during business hours. In contrast, 89 percent of service station and 73 percent of licensed premises robberies took place between 6 pm and 6 am. Newsagencies and

Table 12 Time of day when robberies occurred in various locations in 2006 (percent robberies of that location type)[a]

Location	Time category							
	Midnight to 2.59 am	3.00 am to 5.59 am	6.00 am to 8.59 am	9.00 am to 11.59 am	Noon to 2.59 pm	3.00 pm to 5.59 pm	6.00 pm to 8.59 pm	9.00 pm to 11.59 pm
Residential	16	9	6	8	8	13	19	21
Recreational	15	4	5	5	8	17	25	21
Transport related	11	7	4	7	13	16	19	23
Open spaces (excluding street and footpath)	13	5	11	3	17	17	14	20
Street and footpath	20	10	4	5	7	12	17	25
Educational, health, religious, justice and other community	5	8	8	13	15	27	10	15
Administrative and professional	0	3	3	28	31	19	13	3
Wholesalers, warehouses, manufacturing and agricultural	17	0	0	0	17	17	42	8
Retail	6	4	5	11	14	19	20	21
Banking and financial	1	1	11	33	24	24	1	5
Pharmacies and chemists	0	0	5	13	20	30	29	5
Service stations	29	14	4	2	2	3	19	28
Licensed premises	16	6	4	11	5	7	18	34
Newsagents and post offices	3	15	20	18	19	22	3	0
Corner stores, supermarkets and takeaways	11	11	7	6	8	12	29	17
Unspecified and other	21	4	4	8	13	10	17	23
(Total number)	1,035	558	342	494	611	876	1,239	1,485

a: Percentages do not necessarily total 100, because of rounding. Excludes incident records with location missing.

Source: AIC NARMP 2006 [computer file]; n=6,640

post offices were targeted more than any other location in the early morning hours (3 am – 9 am), with 35 percent of armed robberies at these locations occurring during these hours. These patterns are similar to those seen in previous years.

Armed robberies were reported as occurring slightly more commonly around the weekend (Friday 15%, Saturday and Sunday 16% each) than on the other days of the week (Monday to Wednesday 13% each, Thursday 14%). Mention needs to be made regarding the interpretation of these figures, as although 1 am on Sunday is technically recorded as Sunday, some people may still consider this to be a Saturday night robbery. Date and time data in combination shows that armed robberies were more frequent on certain days and times during the week (see Table 13). Approximately one-third of all robberies occurred between the hours of 6 pm and 6 am on Fridays, Saturdays and Sundays.

Weapons used in armed robbery

Given the high proportion of single victim incidents, patterns of weapon use to emerge from the incident-based analysis closely mirror those reported using victim-based data (see Table 14). A majority of incidents involved a knife (53%). Only three percent of incidents involved a syringe, while 14 percent involved a firearm and 23 percent involved other weapons. In 2006, as seen in previous years, most firearm robberies involved threats with a single firearm (12% of all incidents; 10% in 2005; 13% in 2004). In most knife robberies, a single knife was used (51% of incidents in 2006; 53% in 2005; 52% in 2004). The most commonly reported combination of weapons used in a single incident was that of a firearm with a knife (in 55 incidents). This is a variation from 2005, where the most common combination of weapons (occurring in 89 incidents) was a knife and a weapon from the category of *other*. However, the NARMP does not always collate information on all of the weapons used in an armed robbery, therefore weapon combination findings are not necessarily descriptive of all armed robberies.

Table 15 describes the most serious weapon used in armed robberies in different locations. As was the case with previous years, firearms were used in a high percentage of robberies in banking and financial settings (47% in 2006; 41% in 2005; 44% in 2004) and in licensed premises (38% in 2006; 35% in 2005; 44% in 2004), relative to other locations. Previous years saw a high percentage of pharmacy robberies involving syringes (13% in 2005). However, in 2006, no incidents of armed robbery at pharmacies involved the use of a syringe as the weapon. Knives were the most common weapon used in the majority of locations (e.g. open spaces 69%; post offices and newsagents 61%; corner stores, supermarkets and takeaways 58%).

Table 13 Time, on each day of the week, of armed robberies in 2006 (percent robberies on that day of the week)[a]

	Day of the week						
Time category	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Midnight to 2.59 am	22	12	11	15	13	15	20
3.00 am to 5.59 am	11	7	8	7	7	8	11
6.00 am to 8.59 am	5	6	6	5	5	6	4
9.00 am to 11.59 am	5	8	10	7	9	8	7
Noon to 2.59 pm	8	10	10	9	11	10	7
3.00 pm to 5.59 pm	12	15	15	14	14	13	10
6.00 pm to 8.59 pm	18	19	20	21	19	16	19
9.00 pm to 11.59 pm	19	24	22	23	24	24	22
(Total number)	1,072	883	871	889	903	969	1,053

a: Percentages do not necessarily total 100, because of rounding

Source: AIC NARMP 2006 [computer file]; n=6,640

Table 14 Weapon combinations[a] used in armed robberies in 2006 (percent robberies of that victim type)[b]

Weapon combinations	Victim type							Total	
	Single individual	Single organisation	> 1 individual	> 1 organisation	1 organisation & 1 individual	1 organisation & > 1 individual	1 individual & > organisation	Number	Percent
Firearms									
Single firearm	8	19	15	30	18	14	0	792	12
Multiple firearms	< 1	< 1	< 1	0	0	0	0	10	< 1
Firearm, knife	1	1	2	0	3	6	0	55	1
Firearm, other weapon	1	1	1	0	0	3	0	54	1
Firearm, unspecified weapon	< 1	0	< 1	0	1	0	0	4	< 1
Total firearm combinations (n)	390	391	88	3	35	8	0	915	
Knives									
Single knife	52	50	49	40	48	50	100	3,380	51
Multiple knives	< 1	< 1	1	0	1	0	0	22	< 1
Knife, syringe	< 1	0	0	0	0	0	0	11	< 1
Knife, other weapon	1	< 1	1	0	1	0	0	53	1
Knife, unspecified weapon	< 1	1	1	0	1	6	0	47	1
Knife, other weapon, unspecified weapon	< 1	< 1	0	0	0	3	0	4	< 1
Knife, syringe, unspecified weapon	0	0	0	0	0	3	0	1	< 1
Total knife combinations (n)	2,213	945	253	4	80	22	1	3,518	
Syringes									
Single syringe	3	4	1	0	1	0	0	205	3
Syringe, other weapon	< 1	0	0	0	0	0	0	2	< 1
Syringe, unspecified weapon	< 1	0	0	0	0	0	0	1	< 1
Total syringe combinations (n)	138	64	5	0	1	0	0	208	
Other weapons									
Single other weapon	25	15	24	30	19	8	0	1,476	22
Multiple other weapons	1	< 1	1	0	1	0	0	37	1
Other weapon, unspecified weapon	< 1	0	0	0	0	0	0	3	< 1
Total other weapon combinations (n)	1,070	290	119	3	31	3	0	1,516	
No specific weapon types / missing	8	8	4	0	7	9	0	483	7
Total unspecified/missing (n)	312	139	18	0	11	3	0	483	
(Total number)	4,123	1,829	483	10	158	36	1	6,640	

a: Weapon combinations derived from up to three listed weapon types. Excludes incident records with victim type missing.

b: Percentages do not necessarily total 100, because of rounding

Source: AIC NARMP 2006 [computer file]

Table 15 Most serious weapon[a] used in various locations in 2006 (percent armed robberies in that location)[b]

Location	Weapon					(Total number)
	Firearm	Knife	Syringe	Other weapon	Non-specific or missing	
Residential	18	45	1	28	8	614
Recreational	10	45	2	38	5	321
Transport related	8	57	4	23	7	454
Open spaces (excluding street and footpath)	5	69	0	22	5	64
Street and footpath	7	55	3	28	6	2,110
Educational, health, religious, justice and other community	10	47	3	28	13	79
Administrative and professional	25	59	0	9	6	32
Wholesalers, warehouses, manufacturing and agricultural	50	33	0	8	8	12
Retail	17	53	6	18	7	1,043
Banking and financial	47	34	1	12	5	76
Pharmacies and chemists	15	57	0	17	10	87
Service stations	16	57	2	15	9	672
Licensed premises	38	39	1	17	4	346
Newsagents and post offices	19	61	3	13	3	119
Corner stores, supermarkets and takeaways	13	58	4	12	12	475
Unspecified and other	13	49	2	26	10	136
All locations	14	53	3	23	7	

a: Based on most serious weapon listed in derived weapon combination, assuming order of decreasing seriousness firearm, knife, syringe, other weapon

b: Percentages do not necessarily total 100, because of rounding. Excludes incident records with missing location.

Source: AIC NARMP 2006 [computer file]; n=6,640

Property taken in armed robbery incidents

Some jurisdictions were able to supply information on up to five types of property stolen in an incident (n=3,329). As there are issues around the reliability and representativeness of property data, the results should be interpreted with caution. Most (n=2,027; 61%) incidents involved the theft of only a single item, although on average 1.7 different types of property was stolen in those incidents with supplied property information.

The most commonly reported stolen property item was cash (in 2,164 incidents), appearing as stolen in six out of every 10 incidents where property information was available. The item listed as being stolen least frequently was weaponry (n=31). Electrical equipment, including mobile phones, was listed 1,409 times. Research from England and Wales reflects the same trend, with cash being the most frequently stolen item in personal robbery, with mobile phones stolen or demanded in 43 percent of incidents (Smith 2003). There were 448 armed robberies in the current dataset in which both electrical equipment and cash were stolen. Forty-nine percent of these occurred on the street or footpath, with persons (either alone or in groups) the victims in 87 percent of all 448 incidents.

Given the many possible different property combinations that could arise from an armed robbery, information has been collapsed into hierarchical categories. The first category captures all incidents in which cash was stolen, regardless of what other property may have been taken. The second captures armed robberies in which negotiable documents, such as an ATM or credit card, but not cash (and potentially, other items) were taken. The third includes incidents where identity documents either with or without other property, but not cash or negotiable documents, were stolen, and so on.

In Table 16, it can be seen that cash was the item stolen in 56 percent of robberies where only one type of property was taken. If more than one type of property was taken, it was likely that one of those property items would be cash (e.g. cash was taken in 87% of incidents with five property types stolen). The locations in which robberies occurred impacted the percentage of incidents where cash was stolen.

For example, approximately half of the armed robberies which occurred in residences, recreational locations, transport-related settings, and in the street, involved the theft of cash. This is compared to over 80 percent in service stations, newsagents, banking and financial settings, and corner stores (see Table 17). The 2004 and 2005 annual reports noted similar findings and remarked that these latter locations tend to be sites for high cash turnover businesses. Therefore, it is not surprising that cash was the item stolen most frequently. Previous reports have noted the theft of alcohol and other drugs during robberies was highest when pharmacies were targeted. These findings were replicated in 2006 (18%).

For a subset of incidents (n=2,072), information was included on the value of stolen items. This variable should be treated as no more than indicative of the nature of the financial loss associated with armed robbery. In Australian jurisdictions, property value is not usually a mandatory reporting field, and if it

Table 16 Percentage of count of items of highest-ranking property taken in armed robbery incidents in 2006[a] (percent robberies of that count of that property type)[b]

Property type	Count of items of highest-ranking property stolen					All armed robberies
	1	2	3	4	5	
Cash	56	69	64	81	87	61
Negotiable documents	2	6	16	9	6	5
Identity documents	2	7	8	3	4	4
Luggage	6	8	9	6	4	6
Electrical equipment	21	8	4	< 1	0	15
Jewellery	2	< 1	0	0	0	1
Alcohol and other drugs	4	1	0	0	0	3
Weapons	< 1	< 1	0	0	0	< 1
Personal items not classified elsewhere	1	1	0	0	0	1
Conveyances and accessories	2	< 1	0	0	0	1
Other property not classified elsewhere	3	0	0	0	0	2
No property stolen	0	0	0	0	0	0
(Total number)[c]	2,027	590	407	240	53	3,329

a: Derived from first listed victim of incident, because property information is usually not linked to individual victims but to the incident itself. Property type categories are hierarchical—the first category captures all property combinations in which cash was listed, the second captures all combinations including negotiable documents but excluding cash, and so on. Electrical equipment includes mobile phones and accessories. Property count describes the number of different types of property listed in an incident record, excluding duplicated property types.

b: Percentages do not necessarily total 100, because of rounding

c: Total number includes incident records annotated as *No property stolen* but excludes incident records with property information missing or not supplied

Source: AIC NARMP 2006 [computer file]

is recorded at all, it is often only an estimate. Typically, it is not validated at a later date.

Based on the available data, regardless of the weapon used, armed robbery offenders netted an average of $1,114 per incident, although total values were skewed towards the lower end of the range:

- The median value was $216.
- Seventeen percent of incidents had a total recorded value of nil.
- Sixty-eight percent of incidents had a recorded total value of less than $500.

The highest average gains for offenders were from incidents where the most serious weapon used was a firearm ($3,004; Table 18). In contrast to previous reports, the lowest average was not associated with syringe robberies in 2006 ($949), but with the category of other weapons ($820). Robberies with knives only netted slightly higher gains with an average of $853. Other findings included that:

Table 17 Highest-ranking property taken[a], in armed robberies of various location types in 2006 (percent armed robberies of that location type)[b]

	Property type											
Location	Cash	Negotiable documents	Identity documents	Luggage	Electrical equipment	Jewellery	Alcohol and other drugs	Weapons	Personal items[d]	Conveyances	Other[d]	(Total number)
Residential	57	4	2	6	19	2	2	0	2	2	2	286
Recreational	52	6	3	9	24	2	1	0	0	4	1	198
Transport related	53	3	5	9	23	1	2	0	2	1	< 1	253
Open spaces (excluding street and footpath)	41	3	3	18	24	0	0	0	0	9	3	34
Street and footpath	50	8	6	9	21	2	1	< 1	1	2	1	1,170
Educational, health, religious, justice and other community	43	4	4	15	21	0	2	2	4	2	2	47
Administrative and professional	67	8	0	8	17	0	0	0	0	0	0	12
Wholesalers, warehouses, manufacturing and agricultural	100	0	0	0	0	0	0	0	0	0	0	4
Retail	77	1	1	3	6	1	4	< 1	1	< 1	5	521
Banking and financial	84	8	4	0	4	0	0	0	0	0	0	25
Pharmacies and chemists	71	6	0	0	3	0	18	0	3	0	0	34
Service stations	83	2	1	1	3	< 1	5	0	1	1	3	290
Licensed premises	72	5	3	2	7	1	7	0	0	1	2	162
Newsagents and post offices	85	4	2	2	2	0	0	0	0	0	4	47
Corner stores, supermarkets and takeaways	79	3	1	1	5	0	5	1	0	0	4	170
Unspecified and other	53	2	8	9	23	0	0	0	2	2	2	64
(Total number)[c]	2,044	161	118	213	499	42	85	6	31	49	69	3,317

a: Derived from first listed victim of incident, because in the majority of victim records property information is linked not to individual victims but to the incident itself. Property types are hierarchical: the first category captures all property combinations, the second captures all combinations except cash, and so on. Electrical equipment includes mobile phones and accessories.

b: Percentages do not necessarily total 100, because of rounding

c: Total number excludes incident records annotated as *No property stolen* and incident records with property and/or location missing or not supplied

d: nce = not classified elsewhere

Source: AIC NARMP 2006 [computer file]

Table 18 Average total value of property stolen in armed robberies in 2006, by weapon type and location type[a] ($)

Location	Weapon used				
	Firearm	Knife	Syringe	Other weapon	All weapon types
Residential	6,353	2,446	233	1,001	2,604
(number of incidents)	36	79	3	72	190
Recreational	3,666	1,209	5,500	633	1,139
(number of incidents)	11	53	1	71	136
Transport related	3,772	671	812	181	810
(number of incidents)	13	78	5	44	140
Open spaces (excluding street and footpath)	150	169	–	866	373
(number of incidents)	1	11	0	5	17
Street and footpath	1,663	553	766	572	633
(number of incidents)	35	315	22	227	599
Educational, health, religious, justice and other community	1,900	114	–	191	225
(number of incidents)	1	13	0	7	21
Administrative and professional	0	5,928	–	278	3,466
(number of incidents)	1	4	0	2	7
Wholesalers, warehouses, manufacturing and agricultural	500	–	–	–	500
(number of incidents)	1	0	0	0	1
Retail	1,611	690	573	563	825
(number of incidents)	72	216	20	86	394
Banking and financial	6,966	3,808	–	20,719	8,185
(number of incidents)	16	7	0	4	27
Pharmacies and chemists	486	1,660	–	731	1,201
(number of incidents)	7	15	0	4	26
Service stations	447	321	7,083	1,196	643
(number of incidents)	35	111	3	42	191
Licensed premises	4,271	843	1	2,748	2,489
(number of incidents)	20	19	3	12	54
Newsagents and post offices	3,212	2,229	–	891	2,285
(number of incidents)	11	8	0	7	26
Corner stores, supermarkets and takeaways	3,653	1,306	254	523	1,259
(number of incidents)	6	32	7	12	57
Unspecified and other	6,452	676	68	609	1,822
(number of incidents)	9	20	1	14	44
All locations	3,004	853	949	820	1,152
(Total number of incidents)	275	981	65	609	1,930

a: Based on most serious weapon listed in derived weapon combination, assuming order of decreasing seriousness firearm, knife, syringe, other weapon. Excludes incident from which total property value or location was missing or not supplied or weapon was missing or unspecified.

Source: AIC NARMP 2006 [computer file]

- The highest average value gains (calculated from weapon-location categories containing more than one incident record) were syringe robberies from service stations ($7,083). Although this is in contrast to previous reports, this robbery location and weapon type only had three incidents recorded, with one incident involving a gain of $21,000 skewing the average figure. The value of robberies involving a firearm at a banking and financial location was on average only slightly less ($6,966).
- Regardless of weapon used, the highest average gains (again in categories with more than one record) were from financial settings ($8,185). These figures were slightly skewed by one case involving 'other weapons' which netted $60,000 (see Table 18).

Armed robbery offenders

Offender data were available for 2,171 incidents, although as noted in the technical appendix, NARMP offender data are only very broadly representative of all armed robbery offenders. Due to the possibility of multiple offenders being associated with a single incident, some or all variables had been supplied for a total of 3,440 offenders. The average incident for which offender information was available involved 1.6 offenders.

Table 19 summarises the type of victims involved in incidents cross-tabulated with the number of offenders associated with that incident. Just under two-thirds of incidents where offender information was available (62%) involved only a single offender, although this varied with victim types. For instance, 51 percent of incidents with multiple individual victims involved lone offenders compared with 70 percent of incidents involving lone organisational victims.

Lone offenders might target certain types of organisations rather than individuals because the individuals representing that organisation may be less likely to resist for a range of reasons (e.g. retail staff may be advised to comply with offenders, or they may be alone at the location in question). For example, an examination of the 500 locations where lone offenders robbed lone organisations shows that 37 percent were in unspecified retailers, and 26 percent occurred in service stations. Further, even though these robberies predominantly occurred in retail locations which could be assumed to operate during conventional business hours, 63 percent of armed robberies of lone organisations occurred after 6 pm but before 9 am; times when minimal staff and customers would be expected in most retail settings.

As with 2005 analyses, 2006 data also suggest multiple individual victims are more likely to be targeted by multiple offenders. Forty-nine percent of incidents with multiple individual victims involved more than one offender. This may be because the more offenders involved in a robbery, the greater control of the situation they are afforded. Multiple offender participation in a robbery may increase the element of intimidation and decrease the likelihood of victim resistance. Research from the United Kingdom into the methods and motivations of street robbers indicates that increased numbers also act as type of insurance policy where some offenders chose to operate in groups because the costs (such as having to split financial takings) are offset by the benefit of guaranteed back-up should victims resist (Deakin et al. 2007).

Armed robbers acting alone may believe they are less able to effectively intimidate victims, especially multiple victims. As such, they may also be expected to arm themselves with highly threatening weapons, such as firearms. However, 2006 and earlier NARMP analyses suggest the opposite to be true. Offenders acting alone or in groups of two or three used knives in the majority of armed robberies in which they were involved (Table 20). Firearm usage was higher in robberies involving five offenders, compared with groups of four or fewer offenders. However, the use of knives was more common than the use of firearms regardless of offender numbers.

Offender demographics

Armed robbery research consistently shows that most offenders are young males (e.g. see Willis 2006). Data summarised in Table 21 highlights that approximately nine out of every 10 offenders was male and 94 percent were under 40 years of age. More than half (56%) of all offenders were males aged 18 to 39 years.

Table 19 Proportion of armed robberies involving specified numbers of offenders[a], 2006 (percent robberies of each victim type[b])

	Number of offenders					
Victim type	1	2	3	4	5	(Total number)
One individual	60	26	9	4	2	1,226
One organisation	70	21	6	3	1	718
Multiple individuals	51	28	10	6	5	176
Multiple organisations	67	33	0	0	0	6
One organisation and one individual	47	34	13	3	3	38
One organisation and multiple individuals	83	17	0	0	0	6
One individual, multiple organisations	100	0	0	0	0	1
All	62	24	8	3	2	2,171

a: Based on offender information from first listed victim in incident. Excludes incident records in which offender information was not supplied.

b: Percentages do not necessarily total 100, because of rounding

Source: AIC NARMP 2006 [computer file]

Table 20 Most serious weapon[a] used in armed robberies in 2006, by number of offenders[b] (percent robberies of that offender count)[c]

	Number of offenders					
Weapon	1	2	3	4	5	All incidents
Firearm	16	14	15	14	23	15
Knife	51	52	53	42	25	50
Syringe	4	3	1	1	2	3
Other weapon	21	23	25	36	45	23
Non specific or missing	9	8	6	7	5	8
(Total number)	1,353	529	171	74	44	2,171

a: Based on most serious weapon listed in derived weapon combination, assuming order of decreasing seriousness firearm, knife, syringe, other weapon

b: Based on offender information for first listed victim in incident. Excludes incident records in which offender information was not included

c: Percentages do not necessarily total 100, because of rounding

Source: AIC NARMP 2006 [computer file]

Co-offenders in armed robberies tend to be of similar ages. Of the 813 incidents involving multiple offenders, 70 percent comprised co-offenders who belonged to the same broad age-gender grouping. Given that most armed robbers are young men, it is not surprising that the similarly aged co-offenders who are involved in the largest number of incidents (n=235; 29%) are males aged 18 to 34 years.

The types of weapons used by male and female offenders and co-offenders across age groups are summarised in Table 22. Results suggest there was little variation in the patterns of weapon use as a function of the various age and gender groupings. More than half of armed robberies committed by offenders across all age groups involved knives. The results from NARMP Annual Report 2005 suggested there was a slight gender differentiation, although the categories in question contain only a very small numbers of cases. For example, in 2005 incidents involving females less than 18 years of age had the highest percentage of knife robberies (83%). However, 2006 data suggests that there is no gender or age differentiation for knife robberies. Mixed gender offenders in the 18–34 years category used knives more frequently than most groups (66%)

Table 21 Proportion of armed robbery offenders[a] in each age group in 2006 (percent offenders of that sex)[b]

	Sex		
Age group	Male	Female	Both sexes
< 15 years	7	13	8
15–17	25	27	25
18–19	15	12	15
20–24	20	14	19
25–29	13	12	12
30–34	8	12	9
35–39	6	5	6
40–44	5	4	4
45–49	1	1	1
50–54	< 1	0	< 1
55–59	< 1	0	< 1
60–64	0	< 1	< 1
> 65 years	0	0	0
(Total number)	3,044	358	3,402

a: Based on up to five listed offenders, for first listed victim in incident. Excludes offenders with age and/or gender missing or not supplied. Excludes incident records for which offender information was not included.

b: Percentages do not necessarily total 100 because of rounding

Source: AIC NARMP 2006 [computer file]

and at similar levels to girls less than 18 years (67%). However, the data suggests that females, regardless of age, are more likely to use syringes in robberies than are males or mixed gender groups. Firearm robberies made up fewer than 20 percent of incidents for most age-gender groups, although firearm robberies constituted 36 percent of robberies committed by men aged over 50 years, and 32 percent of robberies committed by males aged 35 to 49 years.

The average age of offenders was 23 years, which is a year younger than the average age observed for armed robbery offenders in 2004 and 2005. Average age did vary according to location of offence and number of offenders involved in the robbery, however patterns of variation were similar to those observed in 2005. For example, lone offenders tended to be older on average than those who offended as part of a group. The average age of lone offenders was 26 years, versus 18 years for groups of five (27 years and 17 years respectively in 2005). In 2005 and 2006, data showed the oldest offenders committed robberies in banking and financial settings (29 years in 2006, 31 years in 2005) and pharmacies and chemists (31 years in 2006, 32 years in 2005). Although small numbers contributed to the averages for both locations, it is possible that these two locations are targeted by two different types of older offenders. First are those who may act more opportunistically, alone or in pairs and target less secure premises (like pharmacies), but are prepared to accept smaller takings. Second are those who act in groups and target more lucrative but higher risk settings, such as banks and other financial settings.

Table 18 shows that pharmacy robberies result in lower average offender cash gains than armed robberies in financial settings. They are also subject to a lower percentage of firearm robberies than banks and other financial settings (Table 15). A larger percentage of pharmacy robberies result in the theft of alcohol and other drugs rather than cash (Table 17). A breakdown of weapon use data also reflects this, where 63 percent of the 30 pharmacy robberies by lone offenders involved a knife. In contrast, 70 percent of robberies in financial settings where there were multiple offenders involved firearms.

Conclusion

Despite changes over time in the level of detail and the way some information is analysed, 2006 NARMP findings are consistent with those observed in previous years. This suggests that the features of Australian armed robberies have not changed markedly over the four years in which the NARMP has been collecting data and reporting on analyses.

A previously developed typology of armed robbery in Australia suggests there are at least three types of incidents, spanning a continuum from opportunistic to professional. These can be differentiated by the degree of offender planning including incident features like location, weapon or victim type (see Borzycki, Sakurai & Mouzos 2004). Current findings are also consistent with the suggestion of this typology involving these three types of incidents. However, as noted in the Introduction, armed

Table 22 Most serious weapon[a] used in incidents in 2006, by offender[b] sex and age group (percent offenders of that sex and age group)[c]

Sex and age (years)	Weapon				(Number of offenders)
	Firearm	Knife	Syringe	Other weapon	
Males offender(s)					
< 18	11	58	1	30	385
18–34	17	56	4	23	950
35–49	32	48	5	16	200
> 50	36	36	0	27	11
Multiple age categories	24	43	1	32	162
All males	18	54	3	25	1,708
Female offender(s)					
< 18	2	67	4	27	48
18–34	6	55	24	15	66
35–49	33	42	8	17	12
> 50	0	0	0	0	0
Multiple age categories	0	75	0	25	4
All females	7	58	15	20	130
All offender(s)					
< 18	7	47	0	47	15
18–34	4	66	2	29	56
35–49	17	50	0	33	6
> 50	0	0	0	0	0
Multiple age categories	12	58	2	28	60
All offenders	8	60	1	31	137

a: Percentages do not necessarily total 100, because of rounding

b: Based on most serious weapon listed in derived weapon combination, assuming order of seriousness of firearm, knife, syringe and other weapon. Excludes incident records missing or unspecified weapons.

c: Based on up to five listed offenders, for first listed victim in incident. Records with information concerning only one offender are included in the relevant gender/age category. Excludes offenders with age and/or gender missing or not supplied. Excludes incident records for which offender information was not included.

Source: AIC NARMP 2006 [computer file]; n=1,975

robberies of residential premises may represent a qualitatively different type of incident, characterised by the presence of some sort of pre-existing victim-offender relationship. The case study from the 2005 report examined this in detail.

A routine activity theory approach shifts the focus away from why individuals may be motivated to commit certain offences, to why certain situations are more vulnerable to the occurrence of certain crime. The typologies used to consider Australian armed robberies do not consider why offenders choose to commit armed robbery, but do nonetheless assume certain factors within the offender may motivate them to engage in varying degrees of planning and preparation before offending. While a detailed discussion of offender motivation is beyond the scope of this report and not discernible from the data currently compiled in the NARMP, the issue of offender motivation is directly relevant to any research into armed robbery.

Table 23 Average offender age[a] in armed robberies[b] in 2006, by location type and number of offenders involved (years)

	Number of offenders					All	
Location	1	2	3	4	5	All	(Number)
Residential	28	28	25	23	22	27	264
Recreational	18	19	20	16	15	18	88
Transport related	21	19	16	17	13	19	139
Open spaces (excluding street and footpath)	21	14	18	19	16	17	16
Street and footpath	22	22	18	19	17	20	493
Educational, health, religious, justice and other community	23	20	16	–	20	21	28
Administrative and professional	33	–	26	–	–	29	8
Wholesalers, warehouses, manufacturing and agricultural	23	20	–	–	–	21	3
Retail	28	24	23	19	20	25	425
Banking and financial	33	24	40	–	–	29	28
Pharmacies and chemists	29	33	40	–	–	31	43
Service stations	25	22	19	18	19	23	280
Licensed premises	28	25	27	31	28	28	95
Newsagents and post offices	32	22	26	–	–	27	49
Corner stores, supermarkets and takeaways	26	22	23	20	18	24	175
Unspecified and other	26	22	21	–	16	23	36
All locations	26	23	21	20	18	23	2,170

a: Average derived from information from first listed victim in incident, concerning up to five listed offenders. Excludes offenders with age missing. Excludes incident records in which offender information was not included or not supplied and/or location is missing.

b: One case was not included as no age was recorded

– = no records in subcategory

Source: AIC NARMP 2006 [computer file]

Case study: armed robbery of licensed venues

Armed robbery has always been regarded as a particularly serious crime by the criminal justice system in Australia. However, the media have changed their depictions of armed robbers over time. In the 1960s, armed robbers were often portrayed as 'Robin Hood' type characters and celebrated (Darbyshire & Hillard 1993; Gill 2000). In more recent times, the media has varied this depiction of armed robbers, now portraying them as serious violent criminals. This has occurred against a backdrop of an increase in more serious armed robbery incidents, such as residential home invasions, licensed premises and cash in transit armed robberies. Despite the number of annual armed robbery incidents (6,640 in 2006), the variety of potential targets for armed robbery complicates attempts to generate a typology of armed robbery offenders.

Since NARMP data has been collected, licensed venues have experienced a slight increase in the number of armed robbery incidents. There are many reasons that could potentially explain this rise, including a displacement effect from locations such as banks who continue to improve their armed robbery security. The purpose of this case study is to use the NARMP's 2006 data set to report on the incidence of armed robberies in licensed venues and to explore some findings which might help explain why licensed venues are victimised, the temporal nature of the attacks, the weaponry used and the takings such offences yield.

Generally, there are three known types of armed robbery offenders. These are amateurs, intermediates and professionals. The categories denote the risk/yield of the armed robbery, the criminal history of the offender and the amount of planning that goes into the robbery. Amateurs tend to be opportunistic offenders, with short sighted intentions and very little understanding of what to expect from the experience or the amount of money they are likely to receive (Mathews 2002). Intermediate armed robbers are categorised as being more organised and experienced than amateurs but not as dedicated to armed robbery as professionals (Mathews 2002). They tend to be in a transitional phase where they are likely to engage in a reasonable amount of planning and are prepared to use their weapons if necessary. Research suggests that intermediates are likely to become more serious long term perpetrators. Professional armed robbers have a higher level of motivation, are involved in rigorous planning and are more likely to persistently commit armed robberies as a means of making a living (Katz 1988). Licensed venues are most likely to be targeted by the intermediate or professional offender.

A total of 346 armed robbery incidents were recorded in licensed venues according to the 2006 NARMP data set. This represents five percent of all armed robbery incidents. There are aspects of armed robberies at licensed premises which *appear* to differ to the general picture of armed robbery. This is particularly the case with the type of weapon involved in the robbery, with firearms being three times as likely to be used at a licensed premises location compared with armed robbery at all other locations (see Figure 3).

Figure 3 shows that aside from a surge in the use of firearms at licensed venues, figures remain consistent with all other locations where knives are used far more regularly as the most serious weapon (54%).

The average age of a lone offender targeting a licensed venue is 28 years. However, the data shows that in the event of two offenders targeting a licensed venue, the average age decreases to 25 years. This is the youngest of the co-offender cohorts and four offenders represented the oldest average age group of 31 years.

Table 24 shows that 66 percent of all armed robberies that occur in licensed venues are committed by those aged between 18 and 34 years. The 18 to 34 year age group is also the most likely to commit an armed robbery at all other locations, with 55 percent being committed by this cohort. However, the data indicates that only three percent of offenders aged less than 18 years will target a licensed venue, whereas 23 percent of the under 18 years cohort will target all other locations.

Not surprisingly, 2006 data shows that cash is the most likely type of property to be stolen from a licensed venue, with its theft occurring in 72 percent of incidents. This was followed by electrical equipment which was stolen in seven percent of incidents (see Table 25).

At the time this data was provided, many armed robbers included in NARMP had not yet been apprehended by the authorities. The data shows that in 73 percent of armed robbery incidents taking place at licensed venues, the offender(s) were not located by the police. In all other locations, the offenders were not identified 67 percent of the time (Figure 2).

Although more experienced offenders tend to target licensed venues, the data shows that 25 percent of armed robberies from the 2006 data set yielded no monetary reward, compared to all other locations where the figure was 17 percent. In 13 percent of incidents, offenders only managed to steal $50 or less. In another 13 percent of incidents, offenders acquired $1,000–1,999, whilst in 18 percent of incidents, offenders yielded $500–999. In only four percent of incidents did offenders managed to steal a substantial amount of between $20,000 and $49,000 (see Table 26).

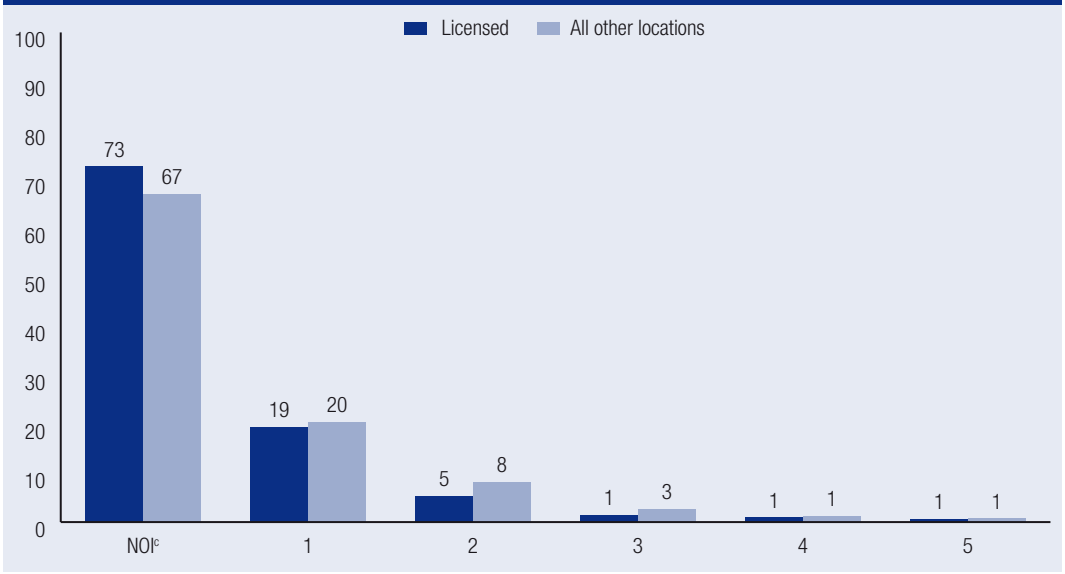
Armed robberies tend to occur at licensed venues when they are most vulnerable, as with all location types. These vulnerabilities include:

- Late trading hours (with a large number now operating until the early hours of the morning).
- Fewer operators on site in the later hours of the evening and early hours of morning.
- Staff being required to complete duties which take them away from the counter.
- An increase in the amount of cash on site due to extended hours of operation.

The data shows that 34 percent of armed robberies at licensed venues occur between the hours of 9.00 pm and 11.59 pm, with 16 percent occurring between midnight and 2.59 am (see Table 12).

One of the difficulties with assessing armed robbery is the propensity for the offence to be placed in the two different categories of violent crime and property crime (Gill 2000; Mathews 2002). However, in recent times, it has been agreed that armed robbery falls into the violent crime category, largely due to the involvement of deadly weapons. This case study indicates that the armed robbery of licensed venues may not be as profitable as originally thought, nor committed by as experienced armed offenders as the literature suggests. However, as highlighted earlier in the brief discussion of crime prevention strategies, the nature of the NARMP 2006 data set makes it impossible to address the important issue of offender motivations and decision making that in turn could indicate the experience and professionalism of the offender. These motivations and decision making processes could be effectively examined by using a more descriptive qualitative research technique.

Figure 2 Incidence of various offender numbers in armed robberies in 2006, by two location types[a, b] (percent incidents at that location type)



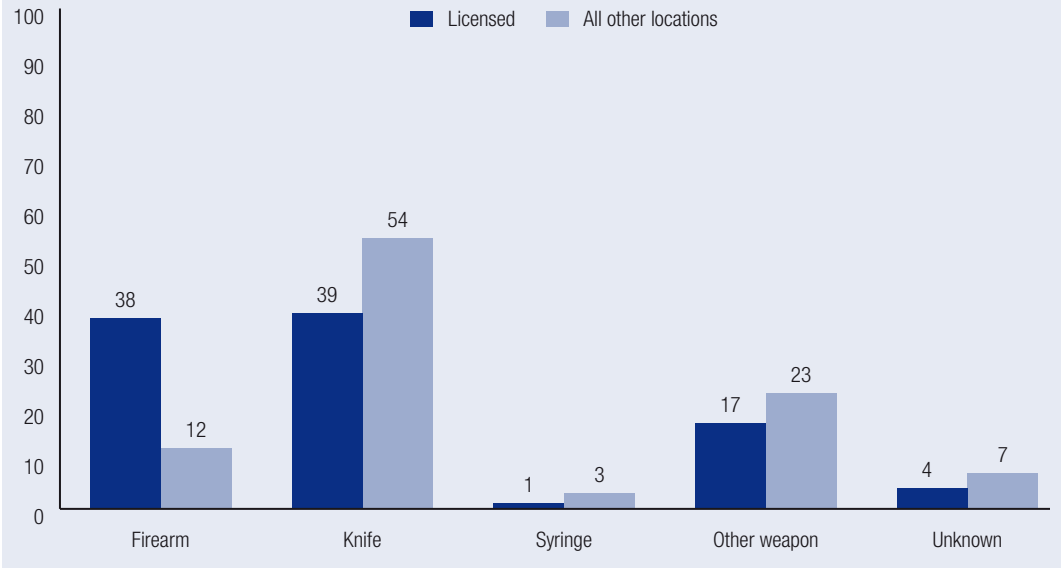
a: Based on offender information from first listed victim in incident. Excludes incident records about which offender or location information was not included.

b: Percentages do not necessarily total 100 because of rounding

c: NOI represents cases where 'no offender was identified'

Source: AIC NARMP 2006 [computer file]

Figure 3 Incidence of most serious weapon type[a] used in armed robberies in 2006, by two location types[b] (percent incidents at that location type)



a: Based on most serious weapon listed in derived weapon combination, assuming order of seriousness of firearm, knife, syringe and other weapon. Excludes incident records where property information was not supplied.

b: Percentages do not necessarily total 100 because of rounding

Source: AIC NARMP 2006 [computer file]

Table 24 Co-offenders' ages in robberies in 2006, by two location types[a] (percent incidents of that location type)

Co-offenders' ages	Licensed venues	All other locations
< 18	3	23
18–34	66	55
35–49	16	12
> 50	1	1
Mixed	14	10
(Total number)	90	2,023

a: Based on offender information from incident's first listed victim. Excludes incident records about which offender or location information was not included. Percentages do not necessarily total 100, because of rounding.

Source: AIC NARMP 2006 [computer file]

Table 25 Most serious type of property taken[a], in armed robberies of two location types in 2006 (percent armed robberies of that location type)[b]

Stolen in incident	Licensed venues	All other locations
Cash	72	61
Negotiable documents	5	5
Identification documents	3	4
Bags	3	7
Electrical	7	15
Jewellery	1	1
AOD	7	2
Weapons	0	< 1
Personal items	0	1
Cars/accessories	1	2
Other items	2	2
(Total number)	162	3,155

a: Derived from first listed victim for incident because in the majority of victim records property information is not linked to individual victims but to the incident itself. Property type categories are hierarchical—the first category captures all property combinations, the second captures all combinations excluding cash, and so on. Electrical equipment includes mobile phones and accessories.

b: Percentages do not necessarily total 100 because of rounding

Source: AIC NARMP 2006 [computer file]; n=3,317

Table 26 Proportion of armed robberies in 2006 in each category of total dollar value of property stolen[a], by two location types (percent robberies of that location type)[b]

Property value ($)	Licensed venue	All other locations
nil	25	17
< 50	13	13
50 to 99	7	7
100 to 199	2	9
200 to 499	4	22
500 to 999	18	15
1,000 to 1,999	13	7
2,000 to 4,999	5	6
5,000 to 9,999	5	2
10,000 to 19,999	4	1
20,000 to 49,999	4	1
50,000 to 99,999	0	< 1
> 100,000	0	< 1
(Total number)	55	2,017

a: Derived from first listed victim of incident, because in the majority of victim records property information is not linked to individual victims but to the incident itself. Excludes incident records with total value or location missing.

b: Percentages do not necessarily total 100, because of rounding

Source: AIC NARMP 2006 [computer file]; n=2,072

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Appendix 1: Crime prevention strategies and armed robbery

There have been a range of crime prevention strategies employed to combat armed robbery over the past decade. These strategies focus on securing commercial premises to deter armed robbery attempts and to reduce the possible rewards from armed robbery. The literature on armed robbery suggests that there has not been an overall prevention strategy implemented. Instead, there has been a combination of methods employed that have worked towards reducing the incidence of armed robbery (Matthews 2002). Despite the success of many crime prevention strategies, there is still the view that more attention needs to be given to the decision making processes of the offender to improve the application of appropriate measures (Gill 2000).

Situational crime prevention

Situational crime prevention is a theory or perspective that differs from mainstream criminological theory by focusing on the opportunity for crime to occur and the settings for crime, rather than the offenders. It also differs from popular theory as it is more concerned with preventing the occurrence of crime than the detection and punishment of offenders. Gill (2000) briefly describes the perspective by stating that it hypothesises that an offence is committed because offenders make a decision (or rational choice) at the scene of the crime and that this decision, to a greater or lesser extent, is based on a consideration of the relative advantages and disadvantages of the act. When applying the theory to armed robbery, there are a range of effective situational crime prevention measures available. These include simple techniques such as high customer visibility inside premises, regular staff training in money handling procedures and limiting the amount of money kept on premises. These are some techniques that have been employed by commercial locations in attempts to reduce armed robbery. Unfortunately, these and other crime prevention techniques may result in displacement, where offenders may choose alternative targets when hardening of the initial target becomes too effective.

Displacement effects

When one specific location or one type of commercial industry target hardens their business to the point that offenders alter their behaviour to counter the crime prevention measures

implemented, a displacement effect occurs (see Gill 2000: 37). As Felson and Clarke (1998) highlight, there are five main ways in which displacement can occur:

- Crime can be moved from one location to another (geographical displacement).
- Crime can be moved from one time to another (temporal displacement).
- Crime can be directed away from one target to another (target displacement).
- One method of committing crime can be substituted for another (tactical displacement).
- One type of crime can be substituted for another (crime type displacement).

Since 2003, figures from NARMP indicate that there have not been any obvious decreases in the incidence of armed robbery in Australia. Displacement may be one reason behind this. Ultimately, displacement remains one of the key challenges facing the prevention and reduction of armed robbery in Australia.

Appendix 2: Technical appendix

National Armed Robbery Monitoring Program glossary

Armed robbery: the ABS delineates between armed robbery (involving a weapon) and unarmed robbery (no weapon used). Only armed robbery is of relevance to the NARMP. Also see *robbery* below.

Actual offences which can be classified as armed robbery differ between Australian jurisdictions because of differing criminal codes. The coding scheme employed by the ABS, the *Australian standard offence classification* (or ASOC: ABS 2008), allows varying offences to be grouped into categories. Those categories of relevance to the NARMP are aggravated robbery, non-aggravated robbery, and robbery not further defined.

Weapon use is central to establishing which offences are included in the NARMP. For the purposes of the NARMP, a weapon is broadly defined in accordance with the ABS (see *weapon* below).

Incident: the ABS defines a criminal incident as:

> …one or more offences (and their related victims and offenders) which are grouped into the same unique occurrence if they are committed by the same person or group of persons and if:
>
> – they are part of actions committed simultaneously or in sequence over a short period of time at the same place
> – they are part of interrelated actions; that is, where one action leads to the other or where one is the consequence of the other(s)
> – they involve the same action(s) repeated over a long period of time against the same victim(s) and come to the attention of the police at one point in time. (ABS 2006: 40)

The same broad definition of an incident is used for compilation of the NARMP but with the following exclusions:

- incidents where different victims (sometimes threatened with different weapons or in different locations) are robbed by the same offender(s) within a short period of time or
- repeat victimisations of the same individual(s) or organisation(s) by the same offender(s), with long periods intervening between the armed robberies.

Location: 'The initial site where an offence occurred, determined on the basis of its use or function' (ABS 2007: 51). For the purposes of the NARMP, broad location categories include:

- residential: private and commercial residences, includes yards and external structures

- recreational: includes sporting facilities but excludes premises explicitly flagged as retail or licensed
- transport related: includes terminals, conveyances in transit, and car parks
- open spaces: excludes street and footpath
- street and footpath
- educational, health, religious, justice and other community locations
- administrative and professional
- wholesalers, warehouses, manufacturing and agricultural
- retail: excludes all retail premises included in the following categories
- banking and financial: includes automatic teller machines not attached to banking and financial premises
- pharmacies and chemists
- service stations
- licensed premises: includes licensed clubs, pubs, taverns nightclubs and bottle shops
- newsagents and post offices
- corner stores, supermarkets and takeaways
- unspecified and other.

Offender: the terms *offender(s)* and *armed robber(s)* are used interchangeably to refer to alleged perpetrators of armed robbery offences, even if those individuals have not been convicted of those offences.

Robbery: consistent with the ABS, robbery involves:

> …the unlawful taking of property, with intent to permanently deprive the owner of the property, from the immediate possession of a person, or an organisation, or control, custody or care of a person, accompanied by the use, and/or threatened use of immediate force or violence. (ABS 2007: 52)

Victim: also consistent with the ABS, a robbery victim:

> …may be either an individual person or an organisation. Where the robbery involves an organisation or business, the element of property ownership is the key to determining the number and type of robbery victims. If the robbery only involves property belonging to an organisation, then one victim (i.e. the organisation) is counted regardless of the number of employees from which the property is taken. However, if robbery of an organisation also involves personal property in an employee's custody, then both the organisation and employee(s) are counted as victims. (ABS 2007; 53)

A person traumatised by or witness to a robbery whose property is not targeted, although a victim in the broader, common sense use of the term, is not a victim for the purposes of the NARMP. In addition, the term victim is used throughout this report to refer to the person(s) or organisation(s) victimised in an alleged armed robbery, regardless of whether related offences were later proven.

Generally, victim records are included in the NARMP if actual offences were subsumed by any of those ASOC categories listed for *armed robbery* (see above) and some form of weapon use was also recorded, although there are some exceptions. Victim records are excluded if offences:

- are classified as aggravated robbery but weapon information shows no weapon use or not applicable (the use of a weapon in the commission of a robbery is considered one, although not the only, aggravating circumstance, hence all offences involving weapons could technically be considered aggravated)
- are classified as robbery not further defined or non-aggravated robbery, recorded with no weapon use, or where weapon information has not been supplied or is annotated as missing. A minority of victim records classified as non-aggravated robbery or robbery not further defined also recorded use of a weapon, and these are retained.

Finally, also consistent with the ABS:

> Where a victim is subjected to multiple offences of the same type within a distinct criminal incident, e.g. in the case of robbery this may be due to attacks by several offenders, the victim is counted only once. (ABS 2006: 33)

Weapon: as per the ABS, a weapon is:

> …any object used to cause injury or fear of injury. It also includes imitation weapons and implied weapons (e.g. where a weapon is not seen by the victim but the offender claims to possess one). Parts of the body such as fists or feet are not included. (ABS 2007: 53)

The broad categories of weapon considered in the NARMP generally tally with ABS categories, namely:

- firearm, including imitation firearms
- knife
- syringe
- other weapon, which subsumes the recently introduced ABS categories (see ABS 2007) of:
  - bottle/glass
  - bat/bar/club
  - chemical.

There are minor differences between broad NARMP and ABS weapon categories. For example, the NARMP categorises a screwdriver as a knife (the ABS classify it other weapon).

National Armed Robbery Monitoring Program method

Police services in all Australian jurisdictions extract from police administrative information systems, unit record data relating to victims of armed robberies reported during the reference period. Electronic data files from each of the jurisdictions are forwarded to the AIC, where they are reformatted and recoded as necessary to achieve, as far as is possible, a uniform national victim dataset. The final victim dataset is contained and analysed within STATA, a statistical software package.

Jurisdictions cannot extract identical variables in all instances, nor can they always extract equivalent levels of detail or equivalent values for those variables that are produced in common. Raw data undergo considerable recoding and reformatting, and the creation of new variables from supplied raw data where necessary, before being submitted to analyses. Table A1 details the core variables, the number of valid records for each and, where relevant, the categories within each variable employed in the victim analyses conducted for this report.

The incident-based data file is created from victim records: victim records are combined into a single, incident record using the shared incident identifier supplied by jurisdictions. Incident information such as location, weapon use, and incident time and date did not agree among all the victims associated with an incident in a small minority of cases. When victim information differed on only a single variable, the relevant variable in victim records was amended to show consistent information (for example, incident time amended to show the earliest incident time).

A small number of victim records could be grouped into single incidents by police incident identifiers but were disaggregated into separate incidents for the purposes of the NARMP. This occurred when:

- different victims were robbed by the same offender(s) and so grouped as a single incident but detailed examination showed that they were threatened with different weapons or in different locations, or at different times
- the same individual(s) or organisation(s) were repeatedly victimised (sometimes by the same offenders) and so grouped together, but detail showed there were long periods intervening between the armed robberies.

After processing, there were 6,640 incident records in the incident-based file examined for this report.

Table A1 Number of valid cases using particular variables, and values of variables, in the 2006 NARMP victim data set

Variable description	Valid records[a]	Values[b]
Offence code	6,793	Aggravated robbery Non-aggravated robbery Robbery not further defined
Organisational identifier flag	7,560	Individual victim Organisational victim
Victim age at incident	5,458	
Victim date of birth	4,868	
Victim gender	5,519	
Relationship of first listed offender to victim	2,020	Known to victim Unknown to victim No offender identified
Relationship of second listed offender to victim	206	Known to victim Unknown to victim No offender identified
Relationship of third listed offender to victim	92	Known to victim Unknown to victim No offender identified
Relationship of fourth listed offender to victim	47	Known to victim Unknown to victim No offender identified
Relationship of fifth listed offender to victim	23	Known to victim Unknown to victim No offender identified
Injury to victim	1,322	No injury noted Injury not further defined Minor injury Major injury Death Emotional trauma
Unique incident reference number	7,560	
Date incident reported	6,793	
Date incident occurred / started	7,560	
Month incident occurred	7,557	
Year incident occurred	7,560	
Day of week on which incident occurred	7,560	
Time of day when incident occurred / started	7,560	
Date incident ended	5,277	
Time incident ended	5,277	

Table A1 (continued)

Variable description	Valid records[a]	Values[b]
Location where armed robbery occurred	7,560	Residential settings Recreational settings (excluding licensed premises) Transport related settings Open spaces (excluding street and footpath) Street and footpath Educational, health, religious, justice and other community settings Administrative and professional settings Wholesalers, warehouses, manufacturing and agricultural settings Retail (including not further defined and not elsewhere classified) Banking and financial Pharmacies and chemists Service stations Licensed premises Newsagents and post offices Corner stores, supermarkets and takeaways Unspecified and other locations not classified elsewhere
Licensed premises flag	6,760	Licensed premises Premises not licensed
First listed weapon used in incident	7,274	Firearm Knife Syringe Other weapon
Second listed weapon used in incident	412	Firearm Knife Syringe Other weapon
Third listed weapon used in incident	44	Firearm Knife Syringe Other weapon
Date of incident clearance	3,128	
Investigation outcome / clearance status at data extraction / at 180 days	7,510	Not finalised Finalised, no offender proceeded against Finalised, offender proceeded against Other outcome

Table A1 (continued)

Variable description	Valid records[a]	Values[b]
Property taken incident, first type listed	3,823	No property stolen Cash Negotiable documents Identity documents Luggage Personal electrical equipment (including mobile phones) Jewellery Alcohol and other drugs Weapons Personal items not classified elsewhere Conveyances and accessories Other property not classified elsewhere
Property taken incident, second type listed	1,650	Cash Negotiable documents Identity documents Luggage Personal electrical equipment (including mobile phones) Jewellery Alcohol and other drugs Weapons Personal items not classified elsewhere Conveyances and accessories Other property not classified elsewhere
Property taken incident, third type listed	1,085	Cash Negotiable documents Identity documents Luggage Personal electrical equipment (including mobile phones) Jewellery Alcohol and other drugs Weapons Personal items not classified elsewhere Conveyances and accessories Other property not classified elsewhere

Table A1 (continued)

Variable description	Valid records[a]	Values[b]
Property taken incident, fourth type listed	752	Cash Negotiable documents Identity documents Luggage Personal electrical equipment (including mobile phones) Jewellery Alcohol and other drugs Weapons Personal items not classified elsewhere Conveyances and accessories Other property not classified elsewhere
Property taken incident, fifth type listed	532	Cash Negotiable documents Identity documents Luggage Personal electrical equipment (including mobile phones) Jewellery Alcohol and other drugs Weapons Personal items not classified elsewhere Conveyances and accessories Other property not classified elsewhere
Value of property taken in incident, first property type listed	1,699	
Value of property taken in incident, second property type listed	554	
Value of property taken in incident, third property type listed	379	
Value of property taken in incident, fourth property type listed	291	
Value of property taken in incident, fifth property type listed	204	
Total value of property stolen incident	6,121	
Unique reference number for first listed offender	2,416	
Unique reference number for second listed offender	954	
Unique reference number for third listed offender	356	
Unique reference number for fourth listed offender	154	
Unique reference number for fifth listed offender	65	

Table A1 (continued)

Variable description	Valid records[a]	Values[b]
Age of first listed offender at time of incident	2,474	
Age of second listed offender at time of incident	965	
Age of third listed offender at time of incident	348	
Age of fourth listed offender at time of incident	146	
Age of fifth listed offender at time of incident	57	
Date of birth, first listed offender	2,471	
Date of birth, second listed offender	963	
Date of birth, third listed offender	346	
Date of birth, fourth listed offender	146	
Date of birth, fifth listed offender	57	
Gender, first listed offender	2,464	
Gender, second listed offender	958	
Gender, third listed offender	348	
Gender, fourth listed offender	146	
Gender, fifth listed offender	57	

a: Number refers to the number of valid, non-missing victim records for which data were supplied or able to be derived from supplied variables.

b: Listed values for categorical variables are those appropriate for the level of detail available in all victim records for which data were supplied or able to be derived from supplied variables. Some jurisdictions were able to supply greater detail for certain variables (for example, weapon or location types) but these more detailed variables were generally not employed in national level analyses.

Source: AIC NARMP 2006 [computer file]; n=7,560

National Armed Robbery Monitoring Program data limitations

Jurisdictional consistency

What constitutes a single reported crime victim is not uniform across jurisdictions. With respect to the ABS RCV, it has been noted that:

> Some jurisdictions almost always record a reported criminal incident on their crime recording system, whereas other jurisdictions apply a threshold test prior to a record being made (e.g. whether the victim wishes to proceed against the offender, or the seriousness of the incident). These thresholds vary across jurisdictions and are not currently guided by national standards. (ABS 2006: 31)

Given that NARMP data are extracted by police services using similar protocols to those employed for the RCV (ABS 2006), issues raised concerning the RCV (ABS 2006) are directly relevant to the compilation of the NARMP.

The overarching ASOC (ABS 2008) scheme allows the grouping of disparate offences across Australian jurisdictions. Nonetheless, offences are not defined identically in all states and territories. Other variables are also inconsistently defined (for example, raw values relating to relationships between victims and offenders) and so although they can be collapsed into higher-level categories such as those as employed in the RCV, these categories do not necessarily convey all the information available.

Given all factors, jurisdictional comparisons are not made in this report but jurisdictional information is available to relevant police staff within jurisdictions via a secure internet website.

Representativeness of victim and offender records in the NARMP

Not all crime events that take place are reported to or detected by police. This means the NARMP cannot describe armed robberies and armed robbery victims that do not come to police attention. Not all armed robberies will result in the apprehension of offenders and logically, police data can only include information regarding offenders who have been apprehended and will exclude those who have, for whatever reason, avoided detection. Systematic factors may influence a victim's decision not to report crime; recorded crime as reported to police generally underestimates the level of victimisation compared with that reported in victim surveys (although this is thought to be less pronounced with armed robbery relative to other types of offences). Systematic factors may also influence whether offenders avoid apprehension, or if apprehended, are not proceeded against. These systematic factors are important in our understanding of armed robbery but are well beyond the scope of the NARMP.

Victim counts do not precisely tally with those provided in RCV (ABS 2006), although in 2006 there was minimal difference. Discrepancies between the data sources indicate that slightly different selection criteria were applied when police services extracted victim records for the two datasets.

For the purposes of the NARMP and RCV, robbery victims are those persons or organisations whose property was the target of an attack. By definition, organisations can only be involved in a robbery through property ownership. A person traumatised by or witness to a robbery whose property is not targeted, although a victim in the broader, common sense use of the term, is not a victim for recorded crime purposes. It appears that some individual persons who were witness to and/or traumatised (but not actually the owners of targeted property) in the robberies of organisations may have been incorporated in the dataset. To overcome this, all individual victims reported as additionally involved in an incident in which an organisation was robbed of property in this jurisdiction and who were flagged as having only traumatic (as opposed to a financial) involvement in the incident were excluded from the 2006 dataset for the purposes of this report. A number of these exclusions may be valid victims who did have property removed but as no means were available to distinguish this, the conservative rule described above was applied.

Some jurisdictions were able to supply information about whether included victims were subject to completed or to attempted armed robberies. As these data were not available for all records, this variable was not examined for this report. Some aspects of robbery, victim or offender may differentiate completed from attempted robberies, but these are not explored in this report.

The investigative status (or outcome) variable initially contained information very similar to that reported in the RCV (that is, outcome at 30, 90 or 180 days). In order to achieve greater precision, some jurisdictions are able now to supply information about investigative outcomes at the time of data extraction, plus the dates those outcomes were achieved. These cannot be supplied by all states and territories however, which means the precise time taken to achieve the various possible outcomes has not been calculated. Consequently, the outcomes reported were not necessarily achieved within the same timeframe for each record (that is, the time between incident report and outcome achieved varies between records). In a related fashion, the number of jurisdictions able to supply this information and the form it is provided in (ABS coding versus raw, local codes) has changed since the establishment of the NARMP. Summary findings making use of this variable should therefore be interpreted with caution and treated as only the most general indicator of outcome.

Data extraction protocols employed in some jurisdictions can result in the duplication of victim records (that is, victim records are supplied multiple times with few or even no differences between those records). All detected duplicate records were removed from the victim dataset but in some instances it was not possible to definitively confirm all apparent duplications (for instance, when the victim was an organisation robbed in a retail setting). As a result it is possible that the dataset contains duplicate victim records.

Finally, this report provides some information on repeat victimisation during the reference period. However, it is likely that this is an underestimate

of actual repeat victimisations reported to police in Australia. The non-name victim identifiers provided to the AIC by some jurisdictions are not unique and universal to all states and territories. That is, they identify a victim in a particular incident but if that same individual or organisation is victim to another incident, a new identifier will be allocated. If a victim is subject to second or subsequent armed robbery in a different jurisdiction to that in which the first occurred, they cannot be identified as a repeat victim.

Because of the above, the analyses presented should therefore be considered at best, as only broadly indicative of all attempted and completed armed robberies, all armed robbery offenders, and all armed robbery victims.

Weapons, property, offenders and relationships described in the NARMP

Where possible and relevant, jurisdictions supply information concerning up to three weapons used against victims, up to five involved offenders, up to five relationships between victim and offenders, and up to five stolen property types and values. These do add to our knowledge of armed robbery by providing greater detail about the crime but should not be seen as definitive regarding every reported instance of armed robbery. Some jurisdictions cannot supply information concerning more than one of each of these elements, and records which may involve more than the maximum number of each of these elements are not flagged as such in the national dataset. This means that the true total reported number of weapons employed, offenders involved, or types of property stolen cannot be established.

Variables relating to the type and dollar value of stolen items could not be supplied by all jurisdictions. These variables are not mandatory fields for police officers when recording offence reports. Further, their accuracy is not necessarily later validated by police. Data do not, therefore, accurately describe the types and value of all property taken in all examined incidents. This caveat is especially important when considering certain subcategories of robbery, for which only single or a very small number of records were examined.

Changes to the NARMP over time

As noted in the introduction to this report, as the NARMP has evolved, the nature of NARMP information has also changed, making fine-grained comparisons with earlier NARMP reports inappropriate. Some changes have arisen directly from stakeholder feedback, and others are the result of changes in the ways states and territories compile information. Changes include:

- the inclusion of more detailed information in raw data forwarded to the AIC (for example, weapon type or location)
- the inclusion of additional variables to those initially specified (for example, a flag variable indicating whether or not a location was a licensed premise)
- the supply of information that previously could not be supplied, by more or all jurisdictions (for example, unique offence identifier)
- changes in the way some variables are derived. For example, analyses of weapon type in combination with other variables in 2003 and 2004 annual reports were usually based on the first-listed weapon. Analyses from the 2005 and this report employ the most serious weapon listed for that victim (or the first-listed victim in an incident).

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