

Appendix A2: the present study

Classification of legal problems

Appendix Table A2.1 details the legal problem groups and subgroups used in the LAW Survey. It also lists the survey question numbers used to construct each group and subgroup. See Appendix A1 for each question in full.

Table A2.1: Classification of legal problems

<i>Question no.</i>	<i>Problem group</i> <i>Problem subgroup</i> <i>Specific type of problem</i>
Accidents	
P21.2	Motor vehicle accident — no injury
Consumer	
Goods	
P22	Buying faulty goods
P22 ^a	Other trade/sales issue
Services	
P23.1	Services — lawyer
P23.1 ^a	Services — Legal Aid
P23.1 ^a	Services — eligibility for Legal Aid
P23.2	Services — other professional or tradesperson
P23.2 ^a	Services — other provider
P24.1	Services — bank, etc.
P24.2	Services/contracts — water, electricity or gas
P24.3	Services/contracts — telephone, internet or TV
P24.3 ^a	Services/contracts — other membership
P38	Insurance
Credit/debt	
P16.1	Guarantor or paying a loan (not mortgage)
P16.2	Creditor's threats or actions
P16.4	Credit rating or refusal
P16.5	Repayment of money owed to you
P17	Actual/possible bankruptcy
Crime	
Crime offender	
P35	Domestic violence allegation
P35 ^a	Domestic/family violence order
P35 ^a	Other interpersonal violence order
P36	Charge/arrest/questioning by police
P36 ^a	Charge/arrest/questioning by other authority
P36 ^a	Charge/arrest/questioning — parent

Table A2.1: Classification of legal problems (cont.)

	Crime victim
P33.1	Robbery
P33.2	Theft/burglary
P33.3	Property damage/vandalism
P33.4	Domestic assault or sexual assault
P33.4 ^a	Domestic assault or sexual assault — parent
P33.5	Non-domestic assault or sexual assault
P33.5 ^a	Non-domestic assault or sexual assault — parent
P33.6	Other crime
P33.6 ^a	Other crime — parent
P33.6 ^a	Other crime — relative/friend
	Employment
P1.1	Sacked or redundant
P1.2/P1.3	Employment conditions
P1.2 ^a	Employment conditions — parent
P1.2 ^a	Review of work performance/conduct
P1.4/P1.5	Discrimination at work or getting work
P1.6	Harassment or victimisation at work
	Family
	Children
P26	Fostering, adoption or guardianship
P27.1	Child — support payments
P27.2	Child — care protection
P27.3	Child — custody/contact
P27.3 ^a	Child — other parenting/care issue
P27 ^a	Parentage
P28	Grandchild — custody/contact/support/care
	Relationships
P29	Divorce/separation
P30.1	Division of assets — break-up in last 12 months
P30.1 ^a	Division of assets — break-up 12+ months ago
P30.2	Spouse/partner maintenance
	Government
	Fines
P37.1	Fines leading to further penalty
P37 ^b	Other fines (no further penalty)
	Government payments
P12	Government payments/concessions
P12 ^a	Government payments/concessions — foreign
P12 ^a	Government payments/concessions — carer
	Local government
P4.2	Home owner — building works
P15.2	Investment property — building works
P32	Local government — services/amenities/works
P32 ^a	Local government — other issue

Table A2.1: Classification of legal problems (cont.)

	State/federal government
P31.1	Tax assessment/debt
P31.2	Freedom of information request
P31.3	Citizenship, residency or immigration
P31 ^a	State/federal government — other issue
	Health
	Clinical negligence
P20	Treatment by doctor or health professional
	Health services
P10	Nursing or group home — care
P19.1	Disability or care services
P19.1 ^c	Disability or care services — carer
P19.2	Disability aids, equipment or facilities
P19.2 ^c	Disability aids, equipment or facilities — carer
P19 ^a	Access to health services
P19 ^a	Health care costs or entitlements
	Mental health
P18.1	Mental health treatment or care
P18.2	Hospitalised/detained for mental health
P18.2 ^a	Mental health order
	Housing
	Neighbours
P5	Neighbours
	Owned housing
P4.1	Home owner — mortgage payments
P4.1 ^a	Home owner — other mortgage issue
P4.3	Home owner — other issue
P4.3 ^a	Land ownership/use
P8a-01	Strata title — owner
P9a-01	Retirement village — owner
	Rented housing
P6	Renting public housing
P7	Renting privately
P7 ^a	Renting holiday accommodation
P8a-02	Strata title — tenant
P9a-02	Retirement village — tenant
P11	Nursing or group home — tenant
	Other housing
P8	Strata title — nfs
	Money
	Business/investment
P13	Landlord
P14.1	Business owner — payments
P14.2	Business owner — other issue
P14.2 ^a	Business owner — 12+ months ago
P15.1	Investment property — mortgage

Table A2.1: Classification of legal problems (cont.)

P15.3	Investment property — other issue
P16.3	Investment income (super, shares, trusts, etc.)
P16.3 ^a	Investment — return of principal investment
	Wills/estates
P25.1	Will or deceased estate
P25.2	Power of attorney
P25 ^a	Management of your affairs/estate
	Personal injury
P21.1	Motor vehicle injury — self or someone else
P21.3	Work-related injury — self
P21.4	Injury/illness from faulty product — self
P21.5	Other negligence injury — someone else
P21.6	Other negligence injury — self
	Rights
	Discrimination (outside work)
P2a-01	Discrimination — marital status
P2a-02	Discrimination — age
P2a-03	Discrimination — gender or sex
P2a-04	Discrimination — sexual orientation
P2a-05	Discrimination — religion
P2a-06	Discrimination — ethnicity or race
P2a-07	Discrimination — disability
P2a-08	Discrimination — parental/carer
P2a-97	Discrimination — other type or nfs
P2a	Discrimination — multiple types
	Education
P3.1a-01	Unfair exclusion from education — self
P3.1a-02	Unfair exclusion from education — parent
P3.2a-01	Student fees or loans — self
P3.2a-02	Student fees or loans — parent
P3.3a-01	Student bullying or harassment — self
P3.3a-02	Student bullying or harassment — parent
P3 ^a	Student results or teaching quality
	Unfair treatment by police
P34	Unfair treatment by police
	Other civil
P40 ^a	Privacy/confidentiality
P40 ^a	Intellectual property
P40 ^a	Civil action
P40 ^a	Court process/cost
P40 ^a	Complaint against independent body
P40 ^a	Other civil legal problem

Table A2.1: Classification of legal problems (cont.)

<i>Unclassified</i>	
P40 ^a	Legal problem — nfs
a	These problems were not specifically asked about in the survey but were captured as open-ended responses to question P40 (which asked about 'any other legal problems or disputes' in the previous 12 months). The question number in the table next to each open-ended response indicates the closed-ended question (e.g. P27.3) or group of questions (e.g. P27) which captured problems that were most similar to the open-ended response. In a small number of cases, open-ended responses from question P40 appeared to describe problems that were identical to those captured by closed-ended questions. The frequencies for these cases are included together with the frequencies for these closed-ended questions.
b	'Other fines (no further penalty)' were derived by removing 'fines leading to further penalty' from P37.
c	Problems as a long-term carer of an ill, disabled or elderly person were explored in the first 2116 interviews conducted across Australia by questions P39.1 and P39.2. These carer questions were subsequently removed to shorten the survey. Similarly to questions P19.1 and P19.2, the carer questions asked about problems accessing disability services, aids, equipment or facilities. However, whereas questions P19.1 and P19.2 asked whether respondents had experienced these problems in relation to their own disability, the carer questions asked carers whether they had experienced problems due to a person in their care having difficulty accessing disability services, aids, equipment or facilities. Note also that after the carer questions were dropped, some of the problems captured as open-ended responses to question P40 were identical to the problems captured by the carer questions.

Note: 'nfs' denotes 'not further specified'.

Sampling

Random digit dialling

Random digit dialling (RDD) involves randomly generating a list of potential household telephone numbers, including both listed and unlisted numbers, from all active telephone exchanges across the country. In order to generate potential household telephone numbers, a list of exchanges or prefixes (as indicated by the first three or four digits in a telephone number) is first obtained. The remaining digits for the potential telephone numbers are then randomly generated and attached to the prefix.

Fieldwork

Call procedures

Up to five telephone calls to each randomly generated number were made to try to establish contact. These calls were made during weekdays and weekends at various times of the day. Calls to the same household were spaced out over seven days and included:

- calls on weekdays and weekends
- calls on evenings prior to 8 pm
- no more than two calls to the same number prior to 6 pm on any given weekday
- no more than two calls, spaced a minimum of one hour apart, to the same number on any given evening between 6 pm and 8 pm
- calls to the same number on weekends spaced a minimum of two hours apart.

Once contact was established with a household, up to five call backs were made to achieve interviews at each qualifying number, including call backs to keep previously arranged appointments. Where contact was made and qualifying respondents were not available, mobile, workplace and other telephone numbers were sought for follow-up. Consent to interview respondents who were under 18 years was obtained from the respondent's parent or guardian.

Interviewer training and auditing

Interviewers were trained on the unique requirements of the survey. Interviewer handbooks included a glossary (see Appendix A1), tips on how to encourage participation and deal with sensitive information, and details of services to which respondents could be referred (e.g. Lifeline for counselling, Legal Aid for free legal information). The LJF website provided additional information on the survey and RMR operated a telephone helpline. The interviewer handbook also included a number of information cards to assist interviewers with coding responses for particular questions. For example, to assist with coding the advisers used by respondents, Card E listed available legal services in each state/territory (see Appendix Table A2.2) and Card F listed available government and complaint-handling services (see Appendix Table A2.3).

Table A2.2: Card E — legal services, NSW

01	Legal Aid or Legal Aid service	
	Children's Legal Service	Prisoners' Legal Service
	Child Support Advice Service	Veterans Advocacy Service
	Duty Lawyer	Women's Domestic Violence Court Assistance Program
	Mental Health Advocacy Service	Youth Hotline
02	Aboriginal or Indigenous legal service	
	Aboriginal Legal Services Hotline	Thiyama-li Family Violence Service
	Aboriginal Women's Legal Service	Wiradjuri Aboriginal Legal Service
	Family Violence Protection Unit	Wurringa Baiya Aboriginal Womens Legal Centre
	Indigenous Women's Legal Contact Line	
03	Community legal centres (CLCs) or community legal services	
	Aged-Care Rights Service (TARS)	Intellectual Disability Rights Service
	Arts Law Centre of Australia	Lesbian and Gay Rights Legal Service
	Ask!	National Childrens & Youth Law Centre
	Consumer Credit Legal Centre	National Pro Bono Resource Centre
	Court Support Scheme	Older Persons Tenants Service (OPTS)
	Criminal Justice Support Network	Public Interest Advocacy Centre
	Disability Discrimination Legal Centre	Public Interest Law Clearing House
	Domestic Violence Advocacy	Refugee Advice and Casework Service
	Environmental Defender's Office	Shopfront Youth Legal Centre
	HIV/AIDS Legal Centre	Tenants Union
	Homeless Persons Legal Service	Tenants Services
	Immigration Advice and Rights Centre	
04	LawAccess NSW	
05	Court services	
	Court Staff	Drug Court
	Chamber Magistrate	Family Court
	Local Magistrate	Federal Court
	Magistrate Registrar	High Court
	Children's Court	Land and Environment Court
	Compensation Court	Local Court
	Coroner's Court	Supreme Court
	District Court	
06	Private solicitor or barrister	
07	Other legal services [SPECIFY]	

Table A2.3: Card F — government and complaint-handling bodies, NSW**Questionnaire codes**

08	Australian Taxation Office (ATO)/Tax Dept
09	Centrelink
10	Child welfare authority or Dept of Child Safety/Children/Community/Families/Human Services
11	Commission(er)
12	Community Justice Centre
13	Dept of Education
14	Local council/local government
15	Member of parliament
16	Ombudsman
17	Police
18	Tribunal
19	Other complaint-handling body
20	Other government dept/agency

Additional codes

11	Commission(er) — E.g.
11	Australian Consumer and Competition Commission
11	Australian Industrial Relations Commission
11	Children and Young People's Commissioner
11	Community Relations Commission
11	Complaints Commissioner
11	Fair Pay Commission
11	Health Care Complaints Commission
11	Human Rights and Equal Opportunity Commission
11	Legal Services Commissioner
11	Police Integrity Commission
11	Privacy Commissioner
19	Other complaint-handling body — E.g.
19	Aged and Community Care Complaints Unit
19	Australian Commercial Disputes Centre
19	Credit Union Dispute Resolution Centre
19	Disability Complaints Service
19	Family Relationships Services
19	Financial Industry Complaints Service
19	General Insurance Claims Review Panel
19	General Insurance Enquiries and Complaints Scheme
19	Health Conciliation Registry
19	Insurance Brokers Dispute Facility
19	Mortgage Industry Association
19	National Furnishing Industry Association
19	Rural Assistance Authority
19	State Rail Customer Complaints
19	Workers Compensation Resolution Service
20	Other government dept/agency — E.g.
10	Dept of Community Services (DOCS)
20	Dept of Corrective Services
20	Dept of Education

Table A2.3: Card F — government and complaint-handling bodies, NSW (cont.)

20	Dept of Employment
20	Dept of Fair Trading
10	Dept for Families and Community Services (FACSIA)
20	Dept of Health
20	Dept of Housing
20	Dept of Immigration
20	Dept of Industrial Relations
20	Dept of Juvenile Justice
20	Dept of Premier and Cabinet
20	Dept of Social Security

To promote interviewing quality, at least 10 per cent of all interviews were audited by RMR throughout the fieldwork period. In addition, in-depth auditing of interviewing was conducted by the LJF in the early stages of the fieldwork, and the feedback from this in-depth auditing was used to form the basis of additional interviewer training.

Data quality checks during fieldwork

At several stages during the fieldwork, quality checks were performed by the LJF on preliminary data, such as checks on valid ranges, filtering and interview completeness. Feedback was provided to RMR in order to rectify the problems identified and to recontact respondents as appropriate to confirm details or complete interviews.

Data preparation for analysis

The final data were provided by RMR in de-identified form in two IBM SPSS Statistics (formerly PASW Statistics) data files, one file with a separate record for each respondent and the other with a separate record for each problem. In addition to being provided on the IBM SPSS Statistics files, verbatim responses to open-ended questions were also provided in Microsoft Excel. The LJF reviewed the verbatim responses and converted them into coded form to allow quantitative analysis. This was a particularly time-consuming task that involved (i) reviewing thousands of verbatim responses, (ii) identifying the verbatim responses that fitted pre-coded answer options and reassigning these accordingly, (iii) developing and applying new coding schemes for verbatim responses that did not fit pre-coded options, and (iv) cleaning the data on other questions to accommodate the flow-on effects from coding verbatim responses.

Weighting

Weighting targets

Survey weighting adjusts a sample so it reflects the population on key variables. This involves statistically increasing or decreasing the number of respondents with particular characteristics so that the proportion in the sample aligns with independent estimates of the population. These population estimates are referred to as ‘weighting targets’. The weighting targets for the sample were derived from a number of benchmark surveys conducted by the ABS. These included the 2006 Census of Population and Housing (ABS 2007a) with resident population estimates for people aged 15 years or over based on the Labour Force Survey, June 2008 (ABS 2008e). In addition, Indigenous targets in the Northern Territory were adjusted to take into account telephone availability using the National Aboriginal and Torres Strait Islander Social Survey, 2002 (ABS 2004d).

Australia was divided into 10 strata for weighting purposes. Age, sex and Indigenous status were weighted within each stratum. NSW was divided into two strata, the first consisting of the six oversampled LGAs,¹ and the second consisting of the rest of the state. Victoria was also divided into two strata: a remote and outer regional stratum and the rest of the state. The remaining states/territories each formed a separate stratum. Within each of the 10 strata, cell weighting was used to adjust age by sex proportions. Within the Tasmanian and the Northern Territory strata, cell weighting was also used to adjust Indigenous proportions. Due to insufficient Indigenous numbers, rim weighting rather than cell weighting was used to adjust Indigenous proportions within each of the remaining strata.

The above process resulted in a final weight set for each jurisdiction apart from Australia, NSW and Victoria. In producing the final weight set for Australia, the scaling of the weights within each stratum was maintained, but adjustments were made so that each stratum was in proportion to its population share within Australia. A similar procedure was used to combine the two NSW strata for the NSW weight set and to combine the two Victorian strata for the Victorian weight set. In each jurisdiction, the final weight for each respondent was applied to both the respondent and problem data files.

Reporting weighted data

Two versions of the weight set were used in the report for each jurisdiction. The first version summed to the jurisdiction's raw sample size and allowed for reporting respondent numbers that were similar to the sampled numbers while still allowing the rescaling that weighting provides. This version of the weight set was used throughout the report for each jurisdiction, with the exception noted below.

The second version of the weight set for each jurisdiction summed to population numbers and enabled population estimates. For example, it allowed estimates of the number of people within each jurisdiction's general population who were likely to experience legal problems within a one-year period.

Response rate

AAPOR (2009) provides a comprehensive system for calculating response rates based on the final outcome of telephone calls to randomly generated numbers. The AAPOR scheme divides these final call outcomes into four main groups:

- complete interviews (I)
- non-eligible cases (NE)
- cases of unknown eligibility (UH and UO)
- non-response cases — that is, eligible cases that refused to participate (R).

A summary of the call outcomes for the present survey is presented in Appendix Table A2.4, and full details are presented in Appendix Table A2.5. There were 20716 completed interviews (I) across Australia. Interviews were defined as complete if they were missing answers on no more than two demographic questions, no more than two legal problem questions and no more than six action and outcome questions.²

¹ See Chapter 2, 'Method: Quotas' section.

² Attempts were made to recontact and re-interview 264 respondents who had too many missing answers to try to convert incomplete interviews into complete interviews. Of these, 142 were converted into complete interviews using this process.

Table A2.4: Summary — outcome of attempted telephone contact, Australia

<i>Outcome</i>	<i>AAPOR final outcome code</i>	<i>N</i>
Complete interviews	I	20 716
Not eligible (e.g. fax/business number, physical barrier)	NE	182 673
Not eligible (surplus to quota)	NE	135 192
Unknown eligibility — unknown if household (e.g. no contact)	UH	113 238
Unknown eligibility — unknown other (e.g. refusal before screening)	UO	74 802
Non-response (i.e. eligible but refused)	R	1 467

Table A2.5: Details — outcome of attempted telephone contact, Australia

<i>Final outcome of calls</i>	<i>APPOR final disposition codes</i>			<i>N</i>
Complete interview	1.10	I	Complete	20 716
Not eligible				182 673
Fax/modem	4.20	NE	Fax/data line	15 611
Fax machine	4.20	NE	Fax/data line	10 689
Modem number	4.20	NE	Fax/data line	13 233
Business number	4.51	NE	Business, government, etc.	30 376
No-one fits introduction criteria	4.70	NE	No eligible respondent	97 905
Language problem	4.70	NE	No eligible respondent	7 109
Hearing difficulty/elderly/inebriated	4.70	NE	No eligible respondent	7 750
Not eligible — surplus to quota				135 192
Appointments (direct or general)	4.80	NE	Quota filled	4 069
Appointments (non-English interview)	4.80	NE	Quota filled	4
Appointments (TTY — teletype telephone)	4.80	NE	Quota filled	80
Quota full	4.80	NE	Quota filled	123 486
Age by sex quota full	4.80	NE	Quota filled	7 079
SLA quota full	4.80	NE	Quota filled	474
Unknown eligibility — unknown if household				113 238
10+ calls, contact on calls 1–5	3.10	UH	Unknown if housing unit	17 481
No contact — 6+ calls, call 5 answer machine	3.14	UH	Telephone answering device	805
No contact — 5+ calls	3.13	UH	No answer	66 738
No contact — engaged	3.12	UH	Always busy	518
No contact — no reply	3.13	UH	No answer	20 098
No contact — answer machine	3.14	UH	Telephone answering device	7 548
TCI faults	3.16	UH	Technical telephone problem	50
Unknown eligibility — unknown other				74 802
Refused — categorically won't do it	3.21	UO	No screener completed	4 530
Refused — too busy (appointment rejected)	3.21	UO	No screener completed	6 849
Refused — concerned re study legitimacy	3.21	UO	No screener completed	105
Refused — new marketing laws	3.21	UO	No screener completed	166
Refused — not interested in the research	3.21	UO	No screener completed	7 254
Refused — interviewed too often	3.21	UO	No screener completed	166
Refused — doesn't want to tie up telephone line	3.21	UO	No screener completed	48
Refused — doesn't do market research	3.21	UO	No screener completed	1 093
Refused — concerned re confidentiality	3.21	UO	No screener completed	94
Refused — no legal issues	3.21	UO	No screener completed	101
Refused — to be recorded	3.21	UO	No screener completed	241

Table A2.5: Details — outcome of attempted telephone contact, Australia (cont.)

Refused — no-one else aged 15 years or over	3.21	UO	No screener completed	31
Refused — interview in alternative language	3.21	UO	No screener completed	47
Refused — to substitute respondent	3.21	UO	No screener completed	126
Refused — hung up during introduction	3.21	UO	No screener completed	22 253
Refused — to call qualifying person to telephone	3.21	UO	No screener completed	516
Refused — soft refusal recontact	3.21	UO	No screener completed	29 792
Refused — other	3.21	UO	No screener completed	211
Termination — other [SPECIFY]	3.90	UO	Other	1 179
Non-response (i.e. eligible but refused)				1 467
Termination — didn't wish to continue	2.10	R	Refusal and break-off	1 433
Termination — completed interview deleted	2.10	R	Refusal and break-off	34
Total				528 088

Non-eligible cases (NE) included non-household numbers such as fax lines, business numbers and dead numbers, and cases where the respondent was physically unable to participate due to language problems, hearing impairment or other difficulties (e.g. aged/infirm). A Teletype (TTY)³ service and interviews in non-English languages were used to boost the inclusion of such respondents. Non-eligible cases also resulted from cases surplus to quota requirements — that is, when cases were eligible only for subgroups where the quota had been filled, but not for any 'open' subgroup.

Cases of unknown eligibility included situations where it was unknown if a household existed at the dialled telephone number (UH) because, for example, no contact was made after five call attempts (e.g. no answer, engaged, answering machine, voicemail). Other cases of unknown eligibility (UO) included 'outright' refusals — that is, refusals that occurred before eligibility details could be collected, such as during the introduction or before completion of the screening questions. The present survey, like many voluntary telephone surveys, resulted in many cases of unknown eligibility due to outright refusals (see UO in Appendix Table A2.4).

Non-response cases according to the AAPOR scheme are refusals where it is clear that the person was eligible for interview (R). That is, a refusal is classified as a non-response only if it is known or can be inferred that the respondent is eligible for an 'open' quota subgroup. Given the high numbers of outright refusals, there were few established cases of non-response where eligibility details for refusals were able to be collected (see R in Appendix Table A2.4). The non-response cases consisted of cases where a person began an interview but did not complete it and cases where a person finished an interview but subsequently asked for it to be deleted (see R in Appendix Table A2.5).

For surveys where there are no cases of unknown eligibility, the response rate is defined as the number of complete interviews divided by the number of eligible cases — that is, $I/(I+R)$. However, calculation of the response rate is more complicated when there are many cases of unknown eligibility. Some, but not all, of these cases are likely to be eligible. Assuming all these cases are eligible can grossly underestimate the response rate, while assuming they are all ineligible can grossly overestimate it. Thus, it is appropriate to estimate the proportion of these cases that are eligible and to adjust the calculation of the response rate accordingly (AAPOR 2009; Smith 2009). This estimated proportion, 'e', can be calculated by a variety of methods. The CASRO method for calculating 'e' was used for the present survey, as provided by AAPOR's online response rate

³ Telephones enabled with TTY are used within the deaf community. RMR was able to distinguish TTY enabled telephones and therefore attempt an interview for those telephones where the announcer message was activated.

calculator (AAPOR 2009; Smith 2009).⁴ This method assumes that the proportion of eligible cases among the cases of unknown eligibility is the same as that among the cases of known eligibility — that is, $e=(I+R)/(I+R+NE)$. The response rate is then given by the formula $I/(I+R+e(UH+UO))$. Using this method, the response rate for the LAW Survey across Australia as a whole was 60.1 per cent. The advantage of the CASRO method is its ease of use and conservative leaning. Thus, it is unlikely to overestimate the response rate (Smith 2009).

Comparison of sample and population profile

The demographic profile of the sample was compared to that of the population to gauge the representativeness of the sample.

Gender, age and Indigenous status

Weighting was used to correct for the departures from the quotas set for gender, age and Indigenous status. Appendix Tables A2.6 and A2.7 compare the gender, age and Indigenous proportions in the NSW sample *before weighting was applied* to those in the NSW population. It can be seen that the sample profile was similar to the population profile on these key demographics prior to weighting. Hence, only minimal weighting corrections on these demographics were needed.

Appendix Table A2.6 presents the gender and age breakdown for the NSW sample and also for the population. The percentages of males (48.5%) and females (51.5%) for the NSW LAW Survey sample were similar to those in the population (49.3% and 50.7%, respectively). The LAW Survey also produced percentages in each age group that were similar to those in the population.

Appendix Table A2.7 shows that 1.6 per cent of NSW LAW Survey respondents reported that they were of Aboriginal or Torres Strait Islander origin (see Appendix A1, question S5).⁵ The population percentage for Indigenous people aged 15 years or over was equivalent (1.6%).

It is important to note that the survey is likely to underestimate the level of Indigenous disadvantage, because it could not cover the considerable proportion of disadvantaged Indigenous people across Australia who live without home landline telephone access, particularly in remote areas. Nationally, it is estimated that 29.1 per cent of Indigenous households in non-remote areas, and 60.5 per cent in remote areas, do not have a landline (ABS & Australian Institute of Health and Welfare (AIHW) 2010).

⁴ AAPOR's online calculator is at <www.aapor.org/uploads/Response_Rate_Calculator.xls>.

⁵ Where respondents did not report Indigenous status, they were assigned to the 'non-Indigenous' group.

Table A2.6: Gender and age within sample and population, NSW

Gender	Age															
	15-17		18-24		25-34		35-44		45-54		55-64		65+		15-65+	
Sample	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Males	108	2.6	242	5.9	329	8.0	359	8.7	355	8.6	281	6.8	319	7.8	1 993	48.5
Females	97	2.4	234	5.7	362	8.8	384	9.3	371	9.0	287	7.0	385	9.4	2 120	51.5
Total	205	5.0	476	11.6	691	16.8	743	18.1	726	17.7	568	13.8	704	17.1	4 113	100.0
Population^a																
Males	144 160	2.6	336 848	6.0	481 084	8.5	494 409	8.8	478 103	8.5	397 309	7.0	448 635	8.0	2 780 548	49.3
Females	136 629	2.4	325 328	5.8	478 551	8.5	499 013	8.8	482 047	8.5	398 338	7.1	541 460	9.6	2 861 366	50.7
Total	280 789	5.0	662 176	11.7	959 635	17.0	993 422	17.6	960 150	17.0	795 647	14.1	990 095	17.5	5 641 914	100.0

a These figures are based on the 2006 Census of Population and Housing (ABS 2007a) with resident population estimates for people aged 15 years or over based on the Labour Force Survey, June 2008 (ABS 2008e).
Note: N=4113 respondents.

Table A2.7: Indigenous status within sample and population, NSW

Indigenous status	Sample		Population ^a	
	N	%	N	%
Indigenous	65	1.6	91 687	1.6
Non-Indigenous	4 048	98.4	5 550 227	98.4
Total	4 113	100.0	5 641 914	100.0

a These figures are based on the 2006 Census of Population and Housing (ABS 2007a) with resident population estimates for people aged 15 years or over based on the Labour Force Survey, June 2008 (ABS 2008e).

Note: N=4113 respondents.

Other demographics

Apart from age, gender and Indigenous status, weighting was not applied to any of the other demographic characteristics or indicators of disadvantage used in the present study. To gauge whether the sample was representative of the population on these indicators of disadvantage, the demographic profile of the sample was also compared to that of the population on these indicators. The sample percentages are based on the data after weighting had been applied for gender, age and Indigenous status.

Disability status

The proportion of the NSW sample with a disability was compared to that from the Survey of Disability, Ageing and Carers (SDAC) conducted in 2003 (ABS 2004b). The SDAC is the largest Australian survey of disability and provides a national benchmark for measuring the incidence of disability in the community.⁶ The SDAC defines disability as any limitation, restriction or impairment which has lasted, or is likely to last, for at least six months and restricts everyday activities. The SDAC sample comprised over 40 000 people across Australia, including both people living in private dwellings and people living in ‘care accommodation’, such as hospitals and nursing homes. Disability status and the level of limitation of core activity were determined in face-to-face interviews using a large module of questions.

The present survey used only a single question to establish disability status. This question asked whether, during the previous 12 months, respondents had experienced any long-term illness or disability that had lasted, or was expected to last, at least six months (see Appendix A1, question D10). Two further questions were used to determine the type of disability (see Appendix A1, question D11) and the restriction on daily activities (see Appendix A1, question D12). In the NSW sample, 20.2 per cent of respondents reported having a disability. An equivalent percentage of 20.2 for people aged 15 years or over was obtained in the SDAC.

Although the definitions used in the SDAC and in the LAW Survey were not identical, the equivalent percentages indicate that the present sample is likely to be broadly representative of people in the population who have a disability. However, the LAW Survey included only people living in private households who could be interviewed by telephone or via TTY. Thus, it is likely that the survey was unable to reach some people who are severely restricted by their disabilities, such as people in care accommodation and people not able to undertake a telephone interview.

Education

The LAW Survey asked respondents about the highest level of education they had completed (see Appendix A1, question D26). In NSW, 52.7 per cent had obtained post-school qualifications, 18.3 per cent had completed Year 12 or an equivalent level and 29.0 per cent had completed below Year 12. The Education and Work Survey, May 2009 (ABS 2009b) was used as the benchmark survey for comparison on education. This survey of 30 440 respondents considered the educational experience of people aged 15–74 years who were in the labour force. It reported that, in NSW, 50.5 per cent had obtained post-school qualifications, 20.3 per cent had completed Year 12 and 29.1 per cent had completed Year 11 or below.⁷ These percentages are similar to those for the present survey and suggest that the present survey obtained a good representation of respondents in terms of educational attainment.

⁶ While a number of later surveys report measures of disability, the ABS (2010a, p. 13) noted that ‘the SDAC produces the most conceptually accurate measure of disability’. State breakdowns from the 2009 SDAC were not available in time to be included in the present study.

⁷ Percentages do not sum to 100, because, for example, the ABS had to provide estimates for some categories due to small population numbers.

Employment status

In the present study, 11.1 per cent of the NSW sample reported that they had been unemployed and looking for work at some time during the previous 12 months (see Appendix A1, question D14.6). Similar to the present survey, the definition of unemployment used in the Labour Force Survey (ABS 2008e) required that the respondent was actively looking for work. However, unlike the present survey, the Labour Force Survey measured unemployment during a 'reference week' rather than during the previous 12 months. The Labour Force Survey for June 2008 reported that 4.5 per cent of the NSW labour force aged 15 years or over were unemployed during the reference week. Although the unemployment rate obtained in the present study is higher than that in the Labour Force Survey, this finding is expected, due to the different reference periods. The ABS reference period was not adopted in the LAW Survey, because it was of interest to examine whether unemployment was associated with the experience of legal problems at any time during the previous 12 months.

Family status

The LAW Survey compared single parents to other respondents on their experience of legal problems. Respondents were categorised as 'single parents' if they did not live with a partner (see Appendix A1, question D1) and had biological, adopted, foster or step children under 18 years, regardless of whether these children lived with the respondent (see Appendix A1, question D4). In the NSW sample, 7.2 per cent of respondents were single parents.

Single-parent status in the present survey was compared to that in the Family Characteristics and Transitions Survey, 2007 (ABS 2008d). This survey collected information on all household members of randomly selected households, a total of 31 300 people in all. It reported that 6.5 per cent of NSW households consisted of a single-parent family with children less than 18 years living within the household. This percentage was similar to that for the present survey. While the definitions of single parents used in the two surveys were not identical, the similar percentages suggest that the present sample provides a good representation of single parents.

Housing type

The LAW Survey defined 'disadvantaged housing' as living in any of the following housing situations at any time during the previous 12 months:

- being homeless (see Appendix A1, question D8.6)
- living in emergency or basic accommodation (e.g. refuge, shelter, boarding house, caravan park, tent, motor vehicle, shed, barn; see Appendix A1, questions D8.6 and D8.7)
- living with relatives or friends due to having nowhere else to live (see Appendix A1, question D8.6)
- living in public housing (see Appendix A1, question D7.1).

In NSW, 6.1 per cent of LAW Survey respondents reported living in at least one of these disadvantaged housing options during the previous 12 months. According to the 2006 Census of Population and Housing (ABS 2007a), 5.0 per cent of the NSW population lived in rented public housing and about 0.4 per cent were homeless on the night of the census. Although the ABS definition of disadvantaged housing is based on current status rather than status over a one-year period, the definitions are otherwise relatively similar. They both include primary homelessness (e.g. living on the street), secondary homelessness (e.g. moving between temporary shelters) and tertiary homelessness (e.g. living in boarding houses on a medium- to long-term basis). The comparison suggests that the present survey achieved a reasonable representation of people living in disadvantaged housing.

However, note that the LAW Survey is likely to have underrepresented homeless people and other people living in disadvantaged housing who do not have access to a landline telephone.

Main income

LAW Survey respondents were asked if they had received any government pensions, payments or concessions in the previous 12 months (see Appendix A1, question D16). Respondents whose main source of income was government payments at some point during the previous 12 months were compared to other respondents. Government payments were categorised as the main source of income if they were received on a fortnightly basis and were means-tested payments that were not payable above a certain low-income level. Over a quarter (26.9%) of the NSW sample had received a government payment as their main source of income at some time during the previous 12 months.

The Household Income and Income Distribution Survey, 2007–08 (ABS 2009c) was used for comparison purposes. This survey collected detailed information about the income of people aged 15 years or over from a sample of approximately 9345 households over the period from August 2007 to June 2008. This survey reported that government payments and allowances had been the principal source of household income for 24.0 per cent of NSW households during the previous 12 months. Despite some definitional differences, the comparison between surveys suggests that the present survey is broadly representative of people in the NSW population who receive government payments as their main source of income.

Main language

The present survey asked respondents about all of the languages they speak at home with family and relatives (see Appendix A1, question S6) and the main language they speak at home (see Appendix A1, question S7). Overall, 9.0 per cent of NSW respondents reported that they speak a language other than English as their main language.

On a comparative measure from the 2006 Census of Population and Housing (ABS 2007a), the ABS reported that 9.6 per cent of the NSW population aged 15 years or over speak a language other than English and do not speak English ‘very well’. Thus, the present survey appears to have achieved a reasonable representation of non-English speakers. As already noted, quotas were set to achieve a reasonable representation of people who speak English well but have a non-English language, and also to achieve a reasonable representation of people who have poor English via interviews in the six most commonly used non-English languages. In NSW, 122 interviews were conducted in these six languages. However, the survey is likely to somewhat underestimate people with poor English, because it did not include people with poor English who did not speak one of the six most common non-English languages.

Remoteness

The 2006 Census of Population and Housing (ABS 2007a) used the Accessibility and Remoteness Index of Australia (ARIA) to measure the remoteness of residential areas. The ARIA is based on the physical road distance to the nearest urban centre. According to the census, 0.6 per cent of the NSW population lived in remote areas, 26.8 per cent lived in regional areas and 72.5 per cent lived in major cities.⁸ Respondents in the present survey were allocated an ARIA code based on their residential postcode (see Appendix A1, question S4). Overall, 0.5 per cent of NSW LAW Survey respondents lived in remote areas, 28.2 per cent lived in regional areas and 71.3 per cent lived in major cities, a similar distribution to that of the census.

⁸ Percentages do not sum to 100, because a very small percentage of people did not have a usual address at the time of the census.

Data analysis

Bivariate analyses

Chi-square tests

The chi-square test is a non-parametric test that is appropriate for examining whether there is a significant relationship between nominal categorical variables. The test is based on the cross-tabulation of the relevant variables and compares the observed frequencies in each cell of the cross-tabulation to the frequencies expected if there were no relationship between the variables (e.g. Siegel & Castellan 1988). An adjusted version of the standard chi-square test was used throughout the present report, which applied a second-order Rao-Scott (Rao & Scott 1984) correction to accommodate weighting and, where appropriate, clustering of the data. This correction produces an adjusted F statistic, from which a p value is calculated. The statistical significance of each chi-square test was examined at the 0.05 level, and Bonferroni corrections were applied to this p value where multiple comparisons were conducted. Throughout the present report, the following information is provided for each chi-square test in the notes to the relevant table or figure: the chi-square statistic, the F statistic, the p value for the F statistic and, where appropriate, the Bonferroni correction. When the chi-square test showed a significant relationship between the two variables examined, adjusted standard residuals with an absolute value of at least 2.0 were used to indicate which cells in the cross-tabulation contributed to the obtained significance. ‘Significant’ differences between categories of the variables that are highlighted in the text are based on these residuals. The adjusted chi-square analyses were run using the Complex Samples module of IBM SPSS Statistics.

Somers’ d tests

The Somers’ d test is also a non-parametric test that is based on the cross-tabulation of variables. Somers’ d is appropriate for examining the trend effect between ordinal categorical variables as it takes the ordering of the categories into account. In addition, Somers’ d is an asymmetric measure of association. That is, it measures the effect of one variable on the other variable. Hence, one variable must be selected as an outcome variable and the other variable as a predictor variable. The Somers’ d test then provides a measure of the effect of the predictor variable on the outcome variable (Somers 1962). The statistical significance of each Somers’ d test was examined at the 0.05 level. Somers’ d tests were run using STATA (StataCorp 2011), adjusting for weighted and clustered data as appropriate.

Bivariate regressions

Bivariate regression models are used to examine whether one variable (the predictor variable) can explain or predict the value of a second variable (the outcome variable). The specific model used in a regression analysis ideally depends on the nature of the outcome variable. In the present study, two bivariate models were conducted in each jurisdiction. Both models were Poisson models, because the outcome variable was a count of events. One of these models was an ‘ordinary’ Poisson regression that examined whether problem group predicted the number of action types used in response to legal problems (see Table 5.3). The second model was a zero-truncated Poisson model that examined whether problem group predicted the number of advisers consulted for legal problems (see Table 6.1). A zero-truncated model was appropriate in this instance, because only problems involving advisers were included (i.e. there were no zero counts on the outcome variable of number of advisers). The bivariate Poisson regressions were run using STATA (StataCorp 2011) on weighted and clustered data, and significance was examined at the 0.05 level.

Multivariate analyses

Multivariate regressions

Multivariate regression models are used to examine whether a relationship exists between an outcome variable and a suite of other variables. They determine whether the value of the outcome variable can be explained or predicted by the other variables (the predictor variables). Furthermore, these analyses consider the independent contribution of each predictor variable to the outcome variable. That is, they consider the association of each predictor variable to the outcome variable when the effects of the other predictor variables are taken into account (e.g. Agresti 1996; Hosmer & Lemeshow 2000; Menard 2002).

In each jurisdiction, a multivariate regression model was fitted for each of the following outcome variables:

1. the prevalence of legal problems overall
2. the prevalence of substantial legal problems
3. the prevalence of multiple legal problems
4. the prevalence of each of the 12 legal problem groups
5. the strategy used in response to legal problems — taking action
6. the strategy used in response to legal problems — seeking advice
7. the finalisation status of legal problems
8. the favourability of the outcome of legal problems.

The various demographic and problem characteristics examined as potential predictor variables for each outcome variable are detailed in Appendix Table A2.8. Appendix Table A2.9 provides a summary of all of the multivariate regression models used in each jurisdiction, including the type of model, the predictors in each model and the statistical package used. In each model, all the predictors were treated as categorical variables and were entered simultaneously as main effects only. All multivariate regression analyses were run on weighted data.

Table A2.8: Predictor variables and their categories

<i>Variable</i>	<i>Category</i>	<i>Description</i>	<i>Question no.^c</i>
PROBLEM CHARACTERISTICS			
Problem recency	7+ months	Legal problems that began seven or more months before the date of interview.	A3
	≤6 months	Legal problems that began less than seven months before the date of interview.	
Problem group	Accidents	See Appendix Table A2.1 for details	
	Consumer		
	Credit/debt		
	Crime		
	Employment		
	Family		
	Government		
	Health		
	Housing		
	Money		
	Personal injury		
Rights			
Strategy	Sought advice	Legal problems for which the respondent sought advice from formal or professional advisers, regardless of whether any other action was taken.	A5 A7–A16 A29 A31
	Handled without advice	Legal problems for which the respondent did not seek advice from formal or professional advisers, but used at least one of: websites or self-help guides, court or tribunal proceedings, formal dispute resolution sessions, communicating with the other side, consulting relatives or friends informally.	
	Took no action	Legal problems for which the respondent took no action.	
Problem severity	Substantial	Legal problems that had a moderate or severe impact on the respondent's everyday life.	P1_S– P40_S
	Minor	Legal problems that had no impact or a slight impact on the respondent's everyday life.	
DEMOGRAPHIC VARIABLES			
Gender	Female		S3
	Male		
Age	15–17		S1 S1.1
	18–24		
	25–34		
	35–44		
	45–54		
	55–64		
65+			
Indigenous status	Indigenous	Respondents who self-identified as being of Aboriginal or Torres Strait Islander origin.	S5
	Other	All other respondents.	

Table A2.8: Predictor variables and their categories (cont.)

Disability status	Disability	Respondents who reported having a long-term illness or disability during the previous 12 months that lasted, or was likely to last, at least six months.	D10 D11
	No disability	All other respondents.	
Education	<Year 12	Respondents whose highest level of education at the time of interview was less than Year 12. Respondents may still have been continuing education at this time.	
	Year 12	Respondents whose highest level of education at the time of interview was Year 12. Respondents may still have been continuing education at this time.	D26
	Post-school	Respondents who had completed further educational qualifications after graduating from high school.	
Employment status	Unemployed	Respondents who were unemployed (and looking for work) at any time within the previous 12 months.	D14.6
	Other	All other respondents.	
Family status	Single parent	Respondents who, at the time of interview, were not living with a partner and had one or more children under 18 years, regardless of whether these children were living with them.	D1 D4
	Other	All other respondents.	
Housing type	Disadvantaged	Respondents who, at any time during the previous 12 months, were homeless; lived in emergency or basic accommodation (e.g. boarding house, caravan park, refuge, shelter, tent, motor vehicle, shed, barn); lived with relatives or friends because they had nowhere else to live; or lived in public housing.	D7.1 D8.6 D8.7
	Other	All other respondents.	
Main income	Government payment	Respondents who received means-tested government payments as their likely main source of income for any period within the previous 12 months.	D18
	Other	All other respondents.	
Main language^a	Non-English	Respondents who specified they speak a language other than English as their main language at home.	S6 S7
	English	All other respondents.	
Remoteness^b	Remote	Respondents who lived in very remote or remote areas at the time of interview based on the ARIA (ABS 2001).	
	Regional	Respondents who lived in inner or outer regional areas at the time of interview based on the ARIA (ABS 2001).	S4
	Major city	Respondents who lived in major cities at the time of interview based on the ARIA (ABS 2001).	

a Respondents with an Indigenous language as their main language were included in the non-English main language group. However, many Indigenous respondents specified English as their main language and were included in the English main language group.

b Given that the ACT almost exclusively comprises major city areas, remoteness of residential area was not examined in the ACT.

c See Appendix A1 for each question in full. Questions A1–A37 were asked for each of the problems followed up in depth — that is, for up to three problems per respondent. These questions were labelled ‘A1–A37’ when asked for the first of these problems, but ‘B1–B37’ when asked for the second of these problems and ‘C1–C37’ when asked for the third of these problems.

Note: Not all of the predictor variables listed here were used in all regression models. In addition, in some models for some jurisdictions, the categories of the predictors varied from those shown here. Details of the variations are provided in the relevant results tables and figures.

Table A2.9: Summary — multivariate regression analyses conducted, each jurisdiction

Model no.	Outcome variable	Potential predictor variables	Type of regression	Data used	Levels/	Data analysis package	Table in each state/territory report	Table in Australian report
PREVALENCE								
1a	Prevalence of legal problems overall 1+ versus none	Demographics ^a	Binary logistic	Each state/territory Australia	1-R 2-RS	SPSS ^g MLwiN ^h	3.5, 9.2, A3.1 9.2	9.2 3.5, 9.2, A3.1
1b	Prevalence of legal problems overall 1+ versus none	Demographics ^a State/territory ^b	Binary logistic	Australia	1-R	MLwiN ^h	A9.2	A9.2
2	Prevalence of substantial legal problems 1+ versus none	Demographics ^a	Binary logistic	Each state/territory Australia	1-R 2-RS	SPSS ^g MLwiN ^h	3.7, 9.3, A3.2 9.3	3.7, 9.3, A3.2 9.3
3	Prevalence of multiple legal problems Number of legal problems	Demographics ^a	Zero-truncated Poisson	Each state/territory Australia	1-R 2-RS	STATA ⁱ STATA ⁱ	3.8, 9.4, A3.3 9.4	9.4 3.8, 9.4, A3.3
4a	Prevalence of accidents problems 1+ versus none	Demographics ^a	Binary logistic	Each state/territory Australia	1-R 2-RS	SPSS ^g MLwiN ^h	3.9, A3.4	3.9, A3.4
4b-4l	Comparable to model 4a for each problem group 1+ versus none	Demographics ^a	Binary logistic	Each state/territory Australia	1-R 2-RS	SPSS ^g MLwiN ^h	3.9, A3.5-A3.15	3.9, A3.5-A3.15
STRATEGY								
5a	Strategy in response to legal problems — taking action Took action versus took no action	Problem recency ^c Problem group ^d Demographics ^a	Binary logistic	Each state/territory Australia	2-PR 3-PRS	MLwiN ^h MLwiN ^h	5.7, 9.5, A5.2 9.5	9.5 5.7, 9.5, A5.2
5b	Strategy in response to legal problems — taking action Took action versus took no action	Problem recency ^c Problem group ^d Demographics ^a State/territory ^b	Binary logistic	Australia	2-PR	MLwiN ^h	A9.3	A9.3
6a	Strategy in response to legal problems — seeking advice Sought advice versus handled without advice	Problem recency ^c Problem group ^d Demographics ^a	Binary logistic	Each state/territory Australia	2-PR 3-PRS	MLwiN ^h MLwiN ^h	5.7, 9.5, A5.3 9.5	9.5 5.7, 9.5, A5.3
6b	Strategy in response to legal problems — seeking advice Sought advice versus handled without advice	Problem recency ^c Problem group ^d Demographics ^a State/territory ^b	Binary logistic	Australia	2-PR	MLwiN ^h	A9.4	A9.4

Table A2.9: Summary — multivariate regression analyses conducted, each jurisdiction (cont.)

FINALISATION STATUS								
7a	Finalisation status of legal problems	Problem recency ^c	Binary logistic	Each state/territory	2-PR	MLwin ^h	7.7, 9.6, A7.1	9.6
	Finalised versus ongoing	Problem group ^d		Australia	3-PRS	MLwin ^h	9.6	7.7, 9.6, A7.1
		Strategy ^e						
		Demographics ^a						
7b	Finalisation status of legal problems	Problem recency ^c	Binary logistic	Australia	2-PR	MLwin ^h	A9.5	A9.5
	Finalised versus ongoing	Problem group ^d						
		Strategy ^e						
		Demographics ^a						
		State/territory ^b						
FAVOURABILITY OF OUTCOME								
8a	Favourability of outcome of legal problems	Problem group ^d	Binary logistic	Each state/territory	2-PR	MLwin ^h	8.5, 9.7, A8.1	9.7
	Favourable versus unfavourable	Strategy ^e		Australia	3-PRS	MLwin ^h	9.7	8.5, 9.7, A8.1
		Demographics ^a						
8b	Favourability of outcome of legal problems	Problem group ^d	Binary logistic	Australia	2-PR	MLwin ^h	A9.6	A9.6
	Favourable versus unfavourable	Strategy ^e						
		Demographics ^a						
		State/territory ^b						

a 'Demographics' refers to the following potential predictor variables, generally with the following categories: gender (female, male); age (15-17, 18-24, 25-34, 35-44, 45-54, 55-64, 65+); Indigenous status (Indigenous, other); disability status (disability, no disability); education (<Year 12, Year 12, post-school); employment status (unemployed, other); family status (single parent, other); housing type (disadvantaged, other); main income (government payment, other); main language (non-English, English); remoteness (remote, regional, major city) were used in Queensland, South Australia Western Australia and Australia; remoteness was not examined in the ACT). The reference category for each potential predictor variable is italicised. The employment status variable was not used in the regression for prevalence of employment problems.

b State/territory had eight categories: NSW, Victoria, Queensland, South Australia, Western Australia, Tasmania, the Northern Territory and the ACT. The reference category was the average of all states/territories.

c Problem recency had two categories: 7+ months ago and ≤6 months. The reference category was ≤6 months.

d Problem group had 12 categories: accidents, consumer, credit/debt, crime, employment, family, government, health, housing, money, personal injury, rights. The reference category was the average of all 12 problem groups.

e Strategy had three categories: sought advice, handled without advice and took no action. The reference category was took no action.

f Number and type of levels where S=state/territory, R=respondent and P=problem. E.g. '2-RS' denotes a two-level model where the first level is respondent and the second level is state/territory.

g 'SPSS' refers to IBM SPSS Statistics.

h Rasbash et al. (2009); Browne (2009).

i StataCorp (2011).

Types of multivariate regression models

As noted earlier, the specific model used in a regression analysis ideally depends on the nature of the outcome variable. Binary logistic regression is appropriate when the outcome variable is binary, whereas Poisson regression is appropriate when the outcome variable is a count of events. Furthermore, when this count of events excludes zero values, zero-truncated Poisson models are more suitable.⁹ Both multivariate binary logistic regression and multivariate Poisson regression were used to analyse LAW Survey data. In each jurisdiction, binary logistic regression was appropriate for all multivariate regression analyses, except one. A zero-truncated Poisson regression was used for the model on the prevalence of multiple legal problems in each jurisdiction (see point 3 above). This was a suitable model, because the outcome variable involved a count of the number of legal problems experienced by respondents who had problems. Thus, there were no zero counts on the outcome variable, because respondents without problems were excluded from this analysis.

The appropriate regression model also depends on whether or not the observations are independent. Single-level models are appropriate when the observations are independent, whereas multilevel models are appropriate when the observations may be correlated, for example, due to clustering or the hierarchical structure of the data (Goldstein 2003; Hedeker 1999, 2003). Both single-level and multilevel regression models were used. Further details about the multivariate regression models are provided below and in Appendix Table A2.9.

Regressions on prevalence

The multivariate regressions on prevalence (see points 1–4 above) were based on respondents as the unit of analysis. These regressions on prevalence were always run as single-level models when state/territory data were used, because there was only one observation per respondent and, thus, the observations were independent. For example, the respondent either experienced a legal problem or did not. Thus, the state/territory regressions on prevalence had one level: respondent.

When the regressions on prevalence were run on the national data, however, it was possible that observations were clustered by state/territory and thus were not independent. The possible variation by state/territory was considered in one of two ways in these national models. In some of these models, state/territory was introduced as a second level or ‘random effect’ so the model had two levels rather than one level: state/territory and respondent. In others of these models, the single-level model was retained (i.e. respondent), but state/territory was included as an additional predictor variable or ‘fixed effect’ to examine its effect on prevalence once the other predictor variables were taken into account (see Appendix Table A2.9).

Regressions on strategy, finalisation status and favourability of outcome

The multivariate regressions on strategy, finalisation status and favourability of outcome (see points 5–8 above) were based on legal problems as the unit of analysis. These regressions were all run as multilevel models, because the observations were potentially correlated as a result of some respondents having multiple legal problems. For example, a respondent may tend to use the same strategy for all their legal problems. When run on state/territory data, these regressions always had two levels: respondent and problem.

When these regressions on strategy, finalisation status and favourability of outcome were run on the national data, it was additionally possible that observations were clustered by state/territory. For example, some strategies may be more likely in some states/territories due to differences in

⁹ If the outcome variable has an excess number of zeros, a zero-inflated Poisson model may be necessary. Zero-inflated Poisson models were not necessary for any of the analyses conducted on LAW Survey data.

demographics or services. The possible variation by state/territory was considered in one of two ways in these national regressions. In some of these models, state/territory was introduced as a third level or ‘random effect’ so the model had three rather than two levels: state/territory, respondent and problem. In others of these models, a two-level model was retained (i.e. respondent and problem), but state/territory was included as an additional predictor variable or ‘fixed effect’ to examine its effect on the outcome variable (e.g. finalisation status) once the other predictor variables were taken into account (see Appendix Table A2.9).

Significance and strength of predictors

A predictor variable was considered to be significant if one or more comparisons between categories of that variable were significant at the 0.05 level ($p < 0.05$). With the exception of legal problem group and state/territory, comparisons were made between one chosen category of each predictor (the reference category) and each other category of that predictor.

Basing comparisons on a single reference category is appropriate for predictors that have only a few categories and for predictors that have ordered categories (e.g. age, education). However, this method limits the interpretation of nominal (non-ordered categorical) predictors that have numerous categories, because many of these categories are not directly compared. Problem group and state/territory were the only nominal predictors with numerous categories in the present study. If the comparisons for problem group had been based on a single reference category (i.e. a particular problem group), there would have been no comparisons between any of the remaining 11 problem groups. As a result, comparisons of each problem group were made against the mean or average effect of all the problem groups rather than against one specific problem group (e.g. Menard 2002). Basing comparisons on the average effect allowed conclusions to be drawn about whether each problem group was more or less likely than average to result in certain outcomes (e.g. seeking advice). Comparisons against the average were also made for the state/territory variable where it was used as a predictor variable (fixed effect) in some national models.

The odds ratio for each comparison in the logistic regressions was calculated. The odds ratio is a ratio of two sets of odds. Take the example of the relationship between gender and the prevalence of legal problems overall where males are used as the reference category. The odds ratio compares the odds for females reporting legal problems to the odds for males (the reference category).¹⁰ When the odds ratio is not significantly different from one (1.0), there is no difference between these two sets of odds — that is, no difference in the prevalence of legal problems overall for females and males. An odds ratio that is significantly greater than 1.0 indicates that the odds for females are higher than the odds for the reference category (males). Conversely, an odds ratio that is significantly less than 1.0 suggests that the odds for females are lower than the odds for males.

The size of the odds ratio indicates the strength of the relationship. For odds ratios greater than 1.0, the strength of the association increases as the odds ratio increases. For example, an odds ratio of 2.0 suggests that the odds for females are twice as high as the odds for males (the reference category), while an odds ratio of 5.0 suggests that the odds for females are five times as high.

For odds ratios less than 1.0, the strength of the relationship increases as the odds ratio decreases. For example, an odds ratio of 0.5 suggests that the odds for females are half those for males (the reference category), while an odds ratio of 0.2 suggests that the odds for females are one-fifth those for males. For convenience, these relationships can be stated in the opposite direction, by

¹⁰ The value for the odds of reporting legal problems is calculated by dividing the probability of reporting legal problems by the probability of not reporting legal problems.

using females rather than males as the reference category and inverting the odds ratios (i.e. $1/\text{odds ratio}$). For instance, the odds ratio of 0.5 discussed above where males are the reference category is equivalent to an odds ratio of 2.0 (i.e. $1/0.5=2.0$) where females are the reference category. Thus, this relationship can be stated as the odds for females being half the odds for males, or as the odds for males being twice the odds for females. Similarly, the odds ratio above of 0.2 where males are the reference category means that the odds for females are one-fifth those for males, or that the odds for males are five times those for females ($1/0.2=5.0$).

As already noted, for the predictor variables of problem group and state/territory, the average or mean of all categories was used as the reference category. Thus, for the problem group predictor, the odds ratio for each problem group compared the odds for that problem group to the average (or mean) odds for all problem groups. Similarly, the odds for each state/territory were compared to the average odds for all states/territories.

The incident rate ratio was calculated for each comparison in the Poisson regressions. For example, for the association between the number of legal problems and gender, an incident rate ratio that is not significantly different from the value of one (1.0) suggests that there is no real difference between females and males with respect to the number of legal problems reported. An incident rate ratio that is significantly greater than 1.0 suggests that the first incident rate is higher than the incident rate for the reference category. For example, an incident rate ratio of 2.0 for females compared to males where males are the reference category suggests that the rate of legal problems experienced by females is twice the rate of legal problems experienced by males. Incident rate ratios, like odds ratios, can be stated in the opposite direction by inverting the ratio (i.e. $1/\text{incident rate ratio}$). Thus, an incident rate ratio of 0.5 for females compared to males means that the rate for females is half that experienced by males, or, in other words, that the rate for males is twice that for females (i.e. $=1/0.5=2$).

The 95 per cent confidence interval associated with each odds ratio or incident rate ratio was also calculated and provides, with 95 per cent certainty, the range of values that the odds ratio or incident rate ratio could take.

Cluster analysis

Cluster analysis is an exploratory data analysis tool that groups observations according to their degree of relatedness (e.g. Aldenderfer & Blashfield 1984; Bartholomew, Steele, Moustaki & Galbraith 2008; Everitt, Landau & Leese 2001). Observations within a cluster are more closely related to one another than they are to observations in other clusters. A hierarchical cluster analysis was conducted in each jurisdiction to examine the co-occurrence of legal problem groups. Hierarchical cluster analysis starts with each observation (i.e. legal problem group) in a separate cluster (i.e. 12 clusters in the present case). It then proceeds in a series of successive steps, with each step joining together the two clusters that are most similar into one cluster. In this way, problem groups were combined into an increasingly smaller number of coherent clusters, until all problem groups had been combined into one cluster.

The results of the cluster analysis for each jurisdiction were summarised in a hierarchical tree diagram, or dendrogram. The branches of the dendrogram illustrate which problem groups were joined together at each step of the analysis. The length of the branches joining problem groups (as measured by the 'distance' shown on the x-axis of the dendrogram) indicates the degree of similarity between those problem groups. Shorter branches indicate greater similarity (or co-occurrence) and earlier combination of problem groups into one cluster in the analysis.

Jaccard scores were used to measure the amount of similarity between legal problem groups, and complete linkage was used as the clustering method.¹¹ The number of clusters formed by a particular stage in the analysis is evident by ‘cutting’ (i.e. drawing a line through) the dendrogram at the distance corresponding to that stage, and noting which clusters were formed below that distance. There is no single established method for deciding the best cut of the dendrogram — that is, for deciding the optimal number of clusters that best describes the relationships between observations. The formal tests available for this purpose often provide different results and, consequently, heuristic approaches are commonly used (Aldenderfer & Blashfield 1984; Everitt et al. 2001). The most basic heuristic approach is to cut the dendrogram according to the subjective inspection of the different levels of the tree. A common method used to assist in determining the best cut involves examining the distance between the fusion coefficients at each stage, and cutting the dendrogram at a relatively large jump in this distance (Aldenderfer & Blashfield 1984; Everitt et al. 2001). In the present case, the optimal number of clusters was determined using a combination of subjective inspection and the change in the fusion coefficient. The cluster analysis in each jurisdiction was run on unweighted data, because it is not possible to run cluster analyses on weighted data. The base module of IBM SPSS Statistics was used.

¹¹ Jaccard scores take into account instances where an individual has experienced problems from both legal problem groups of interest and ignores instances where individuals have experienced neither (Everitt et al. 2001). Jaccard scores were considered appropriate in the present analysis, because, while individuals who have experienced problems from the same pair of legal problem groups are likely to have something in common, there is no reason to expect that individuals who have not experienced problems from either of these problem groups have something in common (e.g. Pleasence et al. 2004b). Single, average and complete linkage methods can all be used with Jaccard scores, with the choice of method depending on whichever provides the clearest clustering pattern (Bartholomew et al. 2008; Everitt et al. 2001).