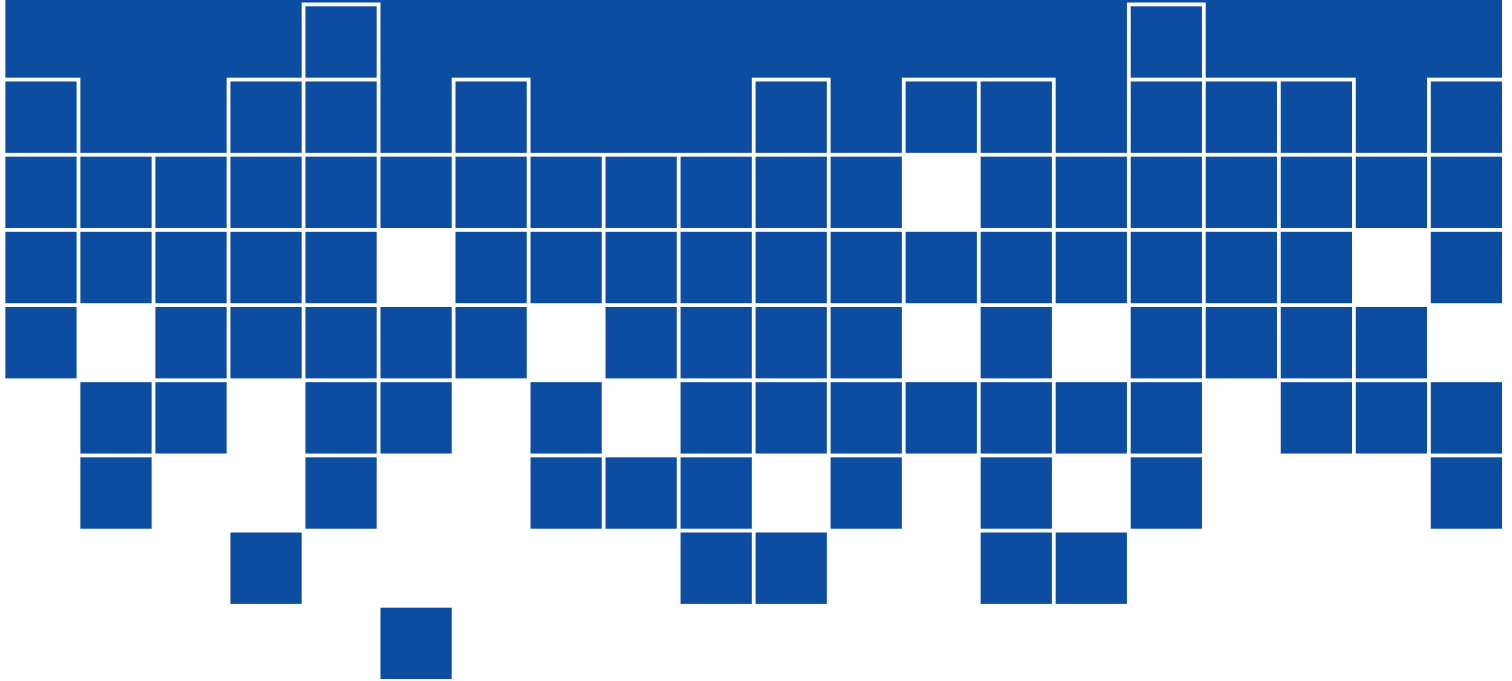




University of
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Cat owners survey 2014

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EXECUTIVE SUMMARY

This report details findings from a cat owners survey undertaken by the Ehrenberg-Bass Institute (the Institute), University of South Australia, on behalf of the Dog and Cat Management Board (the Board). The key objectives of this research was to understand and quantify the:

- Incidence of owned cats in South Australia (and how many cats owners have);
- Demographics of cat owners (where they live in South Australia, gender and age);
- Characteristics of owned cats (gender, age and registration with local council);
- Desexing (desexing incidence, desexing age, reasons not to desex, knowledge around desexing and unplanned litter);
- Microchipped and collar/tag incidence;
- Confinement (how owned cats are kept, reasons for keeping cats indoor, cat enclosures and behaviour of cats kept off property); and
- Cat management (knowledge around hunting wildlife, local council cat management, local council cat by-law and reporting cat issues).

Data was collected between the 24th of February and the 4th of March 2014 from South Australia cat owners, members of an online panel. Using an online panel we could reach the target audience, while having a sample that represents the cat owner population. The panel is widespread geographically allowing us to deliver respondents who are hard to reach. Also, it provides higher response rates, reducing non-response bias and delivers faster results.

In total, 608 respondents, who own at least one cat, completed the survey. The key findings from this research are outlined below.

Incidence of owned cats in South Australia

- To select respondents for the survey, the first question asked was whether the respondent had any cats and if yes, how many. There was an incidence of 43% of cat owners within the sample. 57% of the respondents did not own any cats, hence were screened out. Within cat owners, six in 10 respondents owned one cat, three in 10 owned two cats and one in 10 owned three or more cats. For the respondents who owned more than one cat, all findings relate to the owners' *most recently acquired cat*.

Demographics of cat owners

- The sample consisted of 65% of respondents from metropolitan regions and 35% from regional areas. This is broadly inline with the geographical spread of the population. The most represented councils were Adelaide (14%), Campbelltown (7%), Onkaparinga (6%) and Adelaide Hills (5%) – all metropolitan.
- The sample was slightly skewed to female respondents: there were approximately six in 10 female and four in 10 male respondents. This skew was probably due to the nature of the sample.
- The sample was skewed to younger owners of cats: there were approximately seven in 10 respondents aged from 18 to 44 years old and three in 10 aged 45 years old or over. Again, this skew was probably due to the nature of the sample (more younger people part of the online panel).

Characteristics of owned cats

- There was a relatively even split between owners of male and female cats (55% female cats versus 45% male cats).
- More than half of the cats were adult (aged from one to eight years). Three in 10 cats were kittens (from eight weeks to 12 months of age) and less than two in 10 were senior (over eight years old).
- Approximately half of the cats were registered with their local council. However, we believe respondents misunderstood the question as residents of councils that do not have registration available affirmed that they have registered their cats. This should be reviewed for future surveys.

Desexing

- Eight in 10 cats were desexed. There were fewer kittens and more senior cats desexed – two thirds of the kittens were desexed while more than nine in 10 seniors had undergone the procedure. Also, older respondents were more likely to desex their cats (90% 45+ years old versus 75% 18-44 years old).
- Half of the cats were younger kittens when desexed, being three to six months old.
- The main reason for respondents not to desex their cat was it being too young, as stated out by four in 10 respondents. The cost of desexing procedure and willingness to breed were also commonly mentioned by respondents (25% and 20%, respectively).
- When asked from what age respondents think a cat can have kittens, three in 10 answered 'six months' and a high three in 10 cat owners were unsure about this question. However, the typical age when cats can have kittens is around five months of age (while unusual pregnancy has been reported in cats as young as four months of age). Only 10% of the respondents have chosen this option, hence, 90% have misinformation or do not know.
- Six in 10 respondents did not believe cats should have a litter of kittens before being desexed.
- Two in 10 respondents had experienced their cat having an unplanned litter. Of those who said they believe cats should have a litter of kittens before they are desexed, half of the owners claimed to have had an unplanned litter.

Microchipping and collar/tag

- Six in 10 respondents had their cat microchipped. Older respondents were slightly less likely to microchip their cats (52% of respondents aged 45+ years old microchipped their cats, compared to 52% for the total sample).
- Around six in 10 respondents had their cat wearing a collar/tag. There were more kittens and less senior cats wearing a collar/tag – 76% of kittens and 40% of seniors. Also, older respondents (45+ years old) were less likely to put a collar/tag in their cats while younger respondents (18-44 years old) were more likely to (49% versus 73%, respectively).
- When combining the results, eight in 10 respondents had their cats microchipped or with a collar/tag and approximately half had both.

Desexing and microchipping

- Approximately nine in 10 cats were microchipped or desexed. However only half of the cats were both microchipped and desexed (higher incidence of desexing and slightly lower incidence of microchipping).

Confinement

- 34% of owned cats were kept indoors all the time, 23% indoors at night only, 20% indoors with purpose built cat run/enclosure and 16% outdoors with free access off the property.
- Of the respondents who kept their cat indoors all the time or indoors with purpose built cat run/enclosure, seven in 10 claimed to do so due to the risk of injury/disease and six in 10 to protect wildlife.
- Of the respondents who kept their cat indoors with purpose built cat run/enclosure, six in 10 bought a cat enclosure and four in 10 built their own.
- Of the respondents who kept their cat indoors at night only or kept it outdoors with free access off the property:
 - Six in 10 claimed their cat is off property for one to four hours a day;
 - Seven in 10 believed their cat stays in the street;
 - Nine in 10 said they provide water to their cat when off property, seven in 10 provided shelter and approximately seven in 10 provided food; and
 - Six in 10 respondents claimed their cat catches prey. The most common claimed preys caught were rodents (59%), birds (38%) and lizards (26%).

Cat management

- Seven in 10 respondents agreed that cats hunting wildlife is a problem. The most common forms of cat hunting prevention were: putting a bell on the cat's collar (50%), keeping the cat in at night (42%) and keeping the cat indoors at all times (40%).
- Half of the respondents were aware that their local council is responsible for cat management but the other half were not. This was similar across both metropolitan and regional councils.
- Half of the respondents were unsure whether their local council had a cat by-law. Only about a quarter of the respondents were aware of such by-laws. Campbelltown had a significantly higher incidence of respondents aware of cat by-laws (50%) and Onkaparinga had a lower incidence (0%).
- Eight in 10 respondents had never contacted their council in relation to a cat issue. Only two in 10 cat owners reported issues. Onkaparinga had a lower incidence of owners that reported cat issues (6%).
- The main cat issues reported were cats killing wildlife (34%), nuisance (32%), location of stray cats (31%), neighbourhood cats using the garden as toilet (29%) and damage to property (24%).

Based on these results, we have the following **recommendations**:

- Respondents misunderstood the term 'registration with local council'; hence, need to be better informed on this matter.
- There is also an opportunity for better desexing instruction. Firstly, although many cats are desexed, a relatively high proportion of the kitten population is not. Secondly, the main reason for not desexing a cat was it being too young. Moreover, most of the respondents have misinformation or do not know at what age cats can have kittens. Finally, of the respondents who believe cats can have a litter of kittens before they are desexed, half of the respondents claimed to have had an unplanned litter. As cats can have a litter of kitten in an early age (from five months old), owners need better desexing education.
- There are cats who are not microchipped or don't wear a collar/tag. This is the case mainly for unregistered cats. This presents another opportunity for cat owner instruction.
- There are education opportunities for the Board and council regarding behaviour of cats that are kept off property. There are many cat owners who are unsure of what their cat does while off property.
- Half of the respondents in metropolitan and regional councils were not aware of local council cat management. Also, three-quarter of the respondents were unaware of council cat by-law. Hence, marketing communications could to be improved to reach more cat owners.

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INTRODUCTION

This report details findings from survey undertaken by the Ehrenberg-Bass Institute (the Institute), University of South Australia, on behalf of the Dog and Cat Management Board (the Board). The aim of the research was to investigate voluntary compliance towards microchipping, desexing and confinement of owned cats in South Australia.

The national statistics from the Department of Agriculture, Fisheries and Forestry (DAFF)¹ show that approximately 82 to 94% of the registered owned cat population is desexed. However, this is not required or enforced by many councils around Australia. Only 41% of the owned cat population is registered. Estimates are that only 8% of the unregistered owned cat population is desexed and that only 33% of cats younger than six months old and 70% at six months of age are desexed. Approximately 13% of female cats are thought to have had at least one litter before being desexed. The national statistics data is, unfortunately, poor quality and is extrapolated from cat food purchasing data. Hence, this research project benefits the Board by providing accurate and reliable statistical data of the South Australian cat population. This could assist in informing targeted cat management strategies and providing baseline/benchmark data for future evaluation/measurement.

The key objectives of this study are to understand and quantify the:

- Incidence of owned cats in South Australia (and how many cats owners have);
- Demographics of cat owners (where they live in South Australia, gender and age);
- Characteristics of owned cats (gender, age and registration with local council);
- Desexing (desexing incidence, desexing age, reasons not to desex, knowledge around desexing and unplanned litter);
- Microchipped and collar/tag incidence;
- Confinement (how owned cats are kept, reasons for keeping cats indoor, cat enclosures and behaviour of cats kept off property); and
- Cat management (knowledge around hunting wildlife, local council cat management, local council cat by-law and reporting cat issues).

¹ Throughout the report, all mentions from the Department of Agriculture, Fisheries and Forestry were obtained from http://www.daff.gov.au/animal-plant-health/welfare/aaws/aaws_international_animal_welfare_conference/australia_asks_whos_for_cats/reproductive_capacity_of_the_cat?SQ_DESIGN_NAME=spaced&SQ_ACTION=set_design_name.

Data collection, sample and analysis

Data was collected between the 24th of February and the 4th of March 2014 from South Australia cat owners, members of an online panel. Using an online panel we could reach the target audience, while having a sample that represents the cat owner population. The panel is widespread geographically allowing us to deliver respondents who are hard to reach. Also, it provides higher response rates, reducing non-response bias and delivers faster results.

In total, 608 respondents, who own at least one cat, completed the survey. All respondents lived in South Australia, with 65% from the metropolitan and 35% from regional areas.

The Institute, as an independent research body, designed the questionnaire, analysed the data and drew together this report. The differences highlighted throughout the report are statistically significant at $p < 0.05$ (i.e. using a 95% confidence interval). The symbols “↑” and “↓” are used to indicate higher or lower results for a specific group in comparison to the total sample. Rather than point out all statistically significant differences, we discuss only those that are meaningfully important (clearly impact the results).

INCIDENCE OF OWNED CATS IN SOUTH AUSTRALIA

The survey began asking respondents how many cats they owned. Table 1 shows that there were 1,425 respondents who started the survey but 817 did not own any cats, hence, did not continue with the survey (57% were screened out). This gives an incidence of 43% of cat owners within the sample.

Within cat owners, the majority of cat owners have just one cat: approximately six in 10 respondents owned one cat and three in 10 owned two cats.

The results from this present study are similar to those collected by the Board from cat owners at the Royal Adelaide Show 2013. In this study, 58% of the respondents owned only one cat compared to 53% from the Royal Adelaide Show survey (n=1,088; with results not significantly different at p<0.05).

Table 1: Incidence of owned cats in South Australia

	n	% Out of the whole sample (n=1,025)	% Within cat owners (n=608)*
One	355	25	58
Two	180	13	30
Three	35	2	6
Four or more	38	3	6
I don't own any cats	817	57	-
Total	1,425	100	100
Average number of cats	608	-	1.6

*43% of the total sample.

For those who owned more than one cat, all following findings are related to the owners' *most recently acquired* cat.

DEMOGRAPHICS OF CAT OWNERS

Where respondents live

Respondents were asked where they lived in South Australia. Table 2 shows that 65% of the respondents were from the metropolitan region and 35% from regional areas. This is broadly inline with the geographical spread of the population. Table 3 shows that the most represented councils were Adelaide (14%), Campbelltown (7%), Onkaparinga (6%) and Adelaide Hills (5%) – all metropolitan councils.

Table 2: Where respondents live

	n	% (n=608)
South Australia metropolitan	396	65
South Australia regional	212	35
Total	608	100

Table 3: Council of residence

	n	% (n=608)		n	% (n=608)
Adelaide	87	14	Light Regional	4	1
Campbelltown	44	7	Norwood, Payneham & St Peters	4	1
Onkaparinga	35	6	Port Augusta	4	1
Adelaide Hills	33	5	Wakefield	4	1
Charles Sturt	27	4	Franklin Harbour	3	<1
Tea Tree Gully	25	4	Goyder	3	<1
Salisbury	22	4	Mallala	3	<1
Alexandrina	20	3	Naracoorte Lucindale	3	<1
Barossa	20	3	Roxby Downs	3	<1
Playford	19	3	Walkerville	3	<1
Marion	18	3	Whyalla	3	<1
Port Adelaide Enfield	15	2	Yankalilla	3	<1
Prospect	15	2	Clare and Gilbert	2	<1
Burnside	11	2	Valleys	2	<1
Mount Gambier	11	2	Cleve	2	<1
West Torrens	10	2	Coober Pedy	2	<1
Gawler	9	1	Coorong	2	<1
Grant	9	1	Peterborough	2	<1
Mitcham	9	1	Southern Mallee	2	<1
Mount Barker	9	1	Streaky Bay	2	<1
Murray Bridge	9	1	Tatiara	2	<1
Port Lincoln	9	1	Tumby Bay	2	<1
Flinders Ranges	8	1	Anangu Pitjantjatjara	1	<1
Northern Areas	8	1	Yankunytjatjara	1	<1
Wattle Range	8	1	Elliston	1	<1
Copper Coast	7	1	Kangaroo Island	1	<1
Mid Murray	7	1	Kimba	1	<1
Port Pirie	7	1	Kingston	1	<1
Victor Harbor	7	1	Lower Eyre Peninsula	1	<1
Barunga West	5	1	Renmark Paringa	1	<1
Holdfast Bay	5	1	Wudinna	1	<1
Unley	5	1	Yorke Peninsula	1	<1
Berri Barmera	4	1	Total	608	100
Ceduna	4	1			

Respondents' gender

Respondents were asked their gender. Table 4 shows that the sample was slightly skewed to female respondents: there were approximately six in 10 female and four in 10 male respondents (statistically significant at $p < 0.05$). This skew was probably due to the nature of the online sample.

Table 4: Respondent's gender

	n	% (n=608)
Female	349	57
Male	259	43
Total	608	100

Respondents' age

Table 5 shows that the sample was skewed to younger respondents: there were approximately seven in 10 respondents aged from 18 to 44 years and three in 10 respondents aged 45 years and over (statistically significant at $p < 0.05$). This skew was probably due to the nature of the online sample (more younger people part of the panel).

Table 5: Respondent's age

	n	% (n=608)	
18-24 years old	117	19	} 68%
25-34 years old	187	31	
35-44 years old	110	18	
45-54 years old	71	12	} 32%
55-64 years old	72	12	
65-74 years old	42	7	
75-84 years old	8	1	
85 years old or over	1	<1	
Total	608	100	

CHARACTERISTICS OF OWNED CATS

Cat's gender

Respondents were asked what was the gender of their most recently acquired cat. Table 6 shows that there was a relatively even split between the gender of cats, with a slight skew to female cats.

The results from this study (55% of female cats) are similar to those collected by the Board from cat owners at the Royal Adelaide Show 2013 (54% of female cats; n=1,040; results not significantly different at p<0.05).

Table 6: Cat gender

	n	% (n=608)
Female	332	55
Male	276	45
Total	608	100

Cat's age

Respondents were asked what the age of their most recently acquired cat was. Table 7 shows that more than half of the cats were adults, aged from one to eight years. Three in 10 cats were kittens (aged from eight weeks to 12 months) and approximately two in 10 were senior (aged over eight years old).

The results from this current study (55% of adult cats) are similar to those collected at the Royal Adelaide Show 2013 (55% of adult cats; n=1,057; results not significantly different at p<0.05).

Table 7: Cat age

	n	% (n=608)
Kitten (8 weeks to 12 months)	173	28
Adult (12 months to 8 years)	336	55
Senior (8 years plus)	99	16
Total	608	100

Registration with local council

Respondents were asked whether their most recently acquired cat was registered with their local council. Table 8 shows that approximately half of the cats were registered. Four in 10 owners had not registered their cats and one in 10 were unsure about the registration. However, these results might not be an accurate representation of the population since only four councils have registration available at the moment: Mitcham, Victor Harbour, Kangaroo Island and Roxby Downs. Respondents probably misunderstood the question ‘Is your most recently acquired cat registered with your local Council?’ as residents of councils that do not have registration available affirmed that they have registered their cats.

Table 8: Registration with local council

	n	% (n=608)
Registered	293	48
Not registered	252	41
Not sure	63	10
Total	608	100

DESEXING

Desexing incidence

Respondents were asked whether their most recently acquired cat was desexed. Table 9 shows that eight in 10 cats were desexed.

We can compare this result with benchmark data collected at the Royal Adelaide Show in 2013. The previous study showed a higher desexing incidence – 91% of desexed cats (n=1,089; statistically significant at p<0.05).

Table 9: Desexing incidence

	n	% (n=608)
Desexed	486	80
Not desexed	122	20
Total	608	100

Table 10 shows that when analysing desexing by cat age, there were fewer kittens and more seniors desexed – two thirds of the kittens were desexed while nine in 10 seniors had undergone the procedure (significant at p<0.05).

Table 10: Desexing by cat age (%)

	% Kitten (n=173)	% Adult (n=336)	% Senior (n=99)	% Total sample (n=608)
Desexed	66 ↓	83	94 ↑	80
Not desexed	34 ↑	17	6 ↓	20
Total	100	100	100	100

Table 11 shows that when analysing desexing by respondent age, older respondents (45+ years old) were more likely to desex their cats – nine in 10 respondents desexed their cats compared to eight in 10 from the total sample (statistically significant at p<0.05).

Table 11: Desexing by respondent age (%)

	% 18-44 years old (n=414)	% 45+ years old (n=194)	% Total sample (n=608)
Desexed	75	90 ↑	80
Not desexed	25	10 ↓	20
Total	100	100	100

Desexing age

Respondents who had their most recently acquired cat desexed were asked at what age the cat had undergone the procedure. Table 12 shows that half of the cats were kittens when desexed, being three to six months old.

The result of this current study (47% of cats desexed at the age of three to six months) is lower than that collected by the Board at the Royal Adelaide Show 2013 (66%; n=585; statistically significant at $p < 0.05$).

Table 12: Desexing age

	n	% (n=486)
3-6 months	227	47
7-12 months	151	31
Over 12 months	58	12
Not sure	50	10
Total	486	100

Reasons not to desex

Respondents who did not desex their most recently acquired cat were asked what was the main reason for this. Table 13 shows that four in 10 respondents selected “being too young” as the main reason. Respondents also pointed out the cost of the desexing procedure and willingness to breed (25% and 20%, respectively).

We can compare these results with the findings from the survey collected by the Board from cat owners at the Royal Adelaide Show 2013. The previous study showed that feeling the cat was too young (33%; n=95) and the cost of the desexing procedure (31%; n=95) were also the main reasons not to desex their cat.

Table 13: Reasons not to desex

	n	% (n=122)
Too young	50	41
Cost of desexing procedure	30	25
Want to breed	25	20
Too old	2	2
Other*	15	12
Total	122	100

* Other reasons such as: cruel/unnatural, unsure if the cat has already been desexed, stray cat, too risky for this specific cat.

Knowledge around desexing

Respondent's knowledge of desexing was examined.

First, they were asked from what age they think a cat can have kittens. Table 14 shows that three in 10 respondents answered 'six months' and other three in 10 respondents were unsure about the question. However, the typical age when cats can have kittens is around five months of age (while unusual pregnancy has been reported in cats as young as four months of age). Only 10% of the respondents have chosen this option, hence, 90% have misinformation or do not know.

Table 14: From what age cats can have kittens

	n	% (n=608)
3 months	53	9
4 months	54	9
5 months	63	10
6 months	167	27
1 year	93	15
Not sure	178	29
Total	608	100

Respondents were then asked if they believe that a cat should have a litter of kittens before it is desexed. Table 15 shows that most respondents did not agree with the statement – six in 10 respondents did not believe cats should have kittens before the desexing procedure.

We can compare these results with a cross-sectional telephone survey obtained from cat owner households in the UK in 2011². The UK study showed that 23% of the respondents believed a female cat should have a litter before being desexed (n=682). This is similar to the results found in this survey – 24% of the respondents believed cats should have a litter of kittens before being desexed (results are not significantly different at $p < 0.05$).

Table 15: Should a cat have a litter of kittens before it is desexed?

	n	% (n=608)
No	365	60
Yes	145	24
Not sure	98	16
Total	608	100

² Throughout this report, all mentions to this UK paper were obtained from <http://veterinaryrecord.bmj.com/content/174/5/118.full.html>.

Unplanned litter

The last question in the desexing section was whether the respondent's cat had had an unplanned litter. Table 16 shows that three-quarters of respondents had not experienced their cat having an unplanned litter. However, when considering those who said that they believe cats should have a litter of kittens before they are desexed, half of the respondents claimed to have had an unplanned litter. A reason for this could be that intentions are a reflection of past behaviour.

The DAFF national statistics show that approximately 13% of female cats had at least one litter before being desexed. However, this present survey presented a higher result of 22% (statistically significant at $p < 0.05$).

We can compare these results with a cat owner survey from the UK in 2011. The UK study showed that 13% of the respondents reported an accidental litter of kittens ($n=426$). This is slightly lower than the results found in this current survey where 22% of the respondents claimed an unplanned litter (statistically significant at $p < 0.05$).

Table 16: Unplanned litter

	n	% (n=332)*
No	248	75
Yes	74	22
Not sure	10	3
Total	332	100

* Female cats only.

MICROCHIPPING AND COLLAR/TAG

Respondents were asked whether their most recently acquired cat was microchipped and if it wears a collar/tag. Results are presented in Table 17. Six in 10 respondents had their cat microchipped. Also around six in 10 respondents had a cat wearing a collar/tag. When combining the results, eight in 10 respondents had their cats microchipped or with a collar/tag and approximately half had both.

The microchipping result from this current study (62% of microchipped cats) is slightly lower than the one collected by the Board from cat owners at the Royal Adelaide Show 2013 (67% of microchipped cats; n=1,081; statistically significant different at p<0.05).

Table 17: Microchipping and collar/tag

	n	% (n=608)
Microchipping		
Microchipped	378	62
Not microchipped	230	38
Collar/tag		
Wears a collar/tag	398	65
Does not wear a collar/tag	210	35
Combined results		
Total microchipped OR wears a collar/tag	494	81
Total microchipped AND wears a collar/tag	282	46
Total not microchipped NOR wears a collar/tag	114	19

Table 18 shows microchipping and collar/tag by cat age. There were no significant differences for microchipping (at p<0.05). However, there were more kittens and fewer senior cats that wear a collar/tag – 76% of kittens and 40% of seniors (statistically significant at p<0.05).

Table 18: Microchipping and collar/tag by cat age (%)

	% Kitten (n=173)	% Adult (n=336)	% Senior (n=99)	% Total sample (n=608)
Microchipping				
Microchipped	64	64	53	62
Not microchipped	36	36	47	38
<i>Total</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>
Collar/tag				
Wears a collar/tag	76 ↑	67	40 ↓	65
Does not wear a collar/tag	24 ↓	33	60 ↑	35
<i>Total</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>

Table 19 shows the use of microchipping and collar/tag by the respondent's age. Older respondents (45+ years old) were less likely to microchip their cats – five in 10 respondents microchipped their cats compared to six in 10 from the total sample (statistically significant at $p < 0.05$). Also, older respondents were less likely to put a collar/tag on their cats while younger respondents (18-44 years old) were more likely (49% versus 73%, respectively).

Table 19: Microchipping and collar/tag by respondent age (%)

	% 18-44 years old (n=414)	% 45+ years old (n=194)	% Total sample (n=608)
Microchipping			
Microchipped	67	52 ↓	62
Not microchipped	33	48 ↑	38
<i>Total</i>	<i>100</i>	<i>100</i>	<i>100</i>
Collar/tag			
Wears a collar/tag	73 ↑	49 ↓	65
Does not wear a collar/tag	27 ↓	51 ↑	35
<i>Total</i>	<i>100</i>	<i>100</i>	<i>100</i>

DESEXING AND MICROCHIPPING

Table 20 shows the combined results for desexing and microchipping. Approximately nine in 10 cats were microchipped or desexed. However, only half of the cats were both – microchipped and desexed (higher incidence of desexing and slightly lower incidence of microchipping).

We can compare these results with the findings from survey collected by the Board from cat owners at the Royal Adelaide Show 2013. The previous study showed a higher incidence of cats that were microchipped *and* desexed (65%, n=1,080, versus 54% as pointed out in this present research; statistically significant at $p < 0.05$).

Table 20: Desexing and microchipping

	n	% (n=608)
Total microchipped OR desexed	535	88
Total microchipped AND desexed	329	54
Total not microchipped NOR desexed	73	12

CONFINEMENT

How owned cats are kept

Respondents were asked how they keep their most recently acquired cat. The results are presented in Table 21 and show that three in 10 cats were kept indoors at all times.

Table 21: How owned cats are kept

	n	% (n=608)
Indoors only	204	34
Indoors at night only	137	23
Indoors with purpose built cat run/enclosure	119	20
Outdoors with free access off the property	97	16
Other	51	8
Total	608	100

* Most other reasons were 'both indoor and outdoor' or 'free to come and go'. We suggest including the option 'indoor and outdoor' in future surveys.

Reasons for keeping cats indoors

Respondents who keep their most recently acquired cat indoors only or indoors with a purpose built cat run/enclosure were asked for their reasons for keeping their cat indoors/on property. They were prompted with a list of reasons plus the option other. Table 22 presents the results. Seven in 10 respondents claimed to keep their cat indoors because of risk of injury/disease. The second most popular reason was 'to protect wildlife', with six in 10 respondents choosing this option.

Table 22: Reasons for keeping cats indoor

	n	% (n=323)*
Risk of injury/disease	228	71
Protect wildlife	193	60
To preserve good neighbourhood relations	125	39
Other**	23	7
Total	323	100

* Multiple responses possible.

** Other reasons mentioned were mostly related to protection of the cat.

Cat enclosure

Respondents who claimed to keep their most recently acquired cat indoors with a purpose built cat run/enclosure were asked whether they built or bought the cat run/enclosure. Table 23 shows that six in 10 respondents bought a cat enclosure and four in 10 built their own.

Table 23: Cat enclosure

	n	% (n=119)
Bought a purpose made cat run/enclosure	68	57
Built own cat run/enclosure	48	40
Other*	3	3
Total	119	100

* Other responses were 'had it built' and 'use a chicken coop'.

Behaviour of cats kept off property

Respondents who keep their most recently acquired cat indoors at night only or keep it outdoors with free access off the property were asked how much time they think their cat spends off property. The results from Table 24 show that six in 10 respondents claimed their cat is off property for one to four hours daily (32% from 1-2 hours, 27% from 2-4 hours). There were two in 10 respondents who were unsure about how long their cat is off property for – hence, this points to an education opportunity for the Board and council.

Table 24: Time off property

	n	% (n=234)
1-2 hours	76	32
2-4 hours	63	27
4-6 hours	26	11
6 or more hours	18	8
Not sure	51	22
Total	234	100

Then, respondents were asked how far they think their cat travels from their property. Table 25 shows that seven in 10 cat owners believed their cat stays in the street.

Table 25: How far cat travels

	n	% (n=234)
Stays in the street	76	68
Two or three streets away	63	15
Not sure	51	17
Total	234	100

Respondents were also asked what they provide for their cat when it is outside. Table 26 presents the results. Nine in 10 cat owners said they provide water for their cat. The second most popular provisions were shelter and food, with approximately seven in 10 respondents choosing each of these options.

Table 26: Provisions when cat is outside

	n	% (n=234)*
Water	213	91
Shelter	166	71
Food	151	65
Outdoor toilet area/litter tray	87	37
Toys	78	33
Other**	9	4
Total	234	100

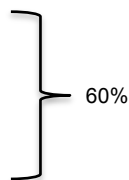
* Multiple responses possible.

** Other reasons mentioned were: nothing, provisions already in the yard and cat can access those things from inside.

Respondents were asked how often their cat catches prey when it is outside. Table 27 shows that six in 10 respondents claimed their cat catches prey. One quarter claimed their cat never catches prey.

Table 27: How often cat catches prey

	n	% (n=234)
Never	58	25
Once or twice a year	33	14
Every few months	25	11
Monthly	33	14
Weekly	29	12
Daily	21	9
Other*	4	2
Not sure	31	13
Total	234	100



To finalise the 'behaviour of cats kept off property' section, respondents who said their most recently acquired cat catches prey were asked what types of prey are caught. Table 28 shows that the most common claimed prey were rodents (59%), birds (38%) and lizards (26%).

Table 28: What cat catches as prey

	n	% (n=176)*
Rodents	104	59
Birds	67	38
Lizards	45	26
Rabbits	14	8
Other**	9	4
Not sure	16	9
Total	176	100

* Multiple responses possible.

** Other preys mentioned were: moths, leaves, guinea pigs.

CAT MANAGEMENT

Cat hunting wildlife

Respondents were asked questions related to their opinion on cat management. Firstly, they were asked if they thought cats hunting wildlife is a problem. Table 29 shows that seven in 10 respondents agreed that this is a problem.

Table 29: Is cats hunting wildlife a problem?

	n	% (n=608)
Yes, I think cats hunting wildlife is a problem	418	69
No, I do not think cats hunting wildlife is a problem	190	31
Total	608	100

Respondents who believe cats hunting wildlife is a problem, were asked how they try to prevent their cat hunting. Table 30 presents the results. The most common form of prevention, used by half of the respondents, was putting a bell on the cat's collar. This was followed by 'keeping the cat in at night' and 'keeping the cat indoors at all times' (four in 10 respondents apiece).

Table 30: Forms to prevent cat hunting wildlife

	n	% (n=418*)
Put a bell on the cats collar	210	50
Cat kept in at night	177	42
Cat kept indoors at all times	166	40
Provided cat with a cat run/enclosure	97	23
I haven't tried to prevent it	22	5
Other**	21	5
Total	418	100

* Multiple responses possible.

** Other forms of prevention were: aversion therapy for bird protection, behaviour training/punishment, keep well fed, high fences/harder to get over, keep watch.

Local council cat management

Respondents were asked if they were aware that their local council is responsible for cat management. Table 31 shows that half of the respondents were aware but the other half were not.

Table 31: Awareness of local council cat management

	n	% (n=608)
Aware	320	53
Not aware	288	47
Total	608	100

Table 32 shows the awareness of local council cat management split by where the respondents live. There was a relatively even split across metropolitan and regional councils (not significantly different at $p < 0.05$). Table 33 shows these figures by council of residence for the top four councils ($n > 30$). There were no statistical differences across councils when compared to the total sample.

Table 32: Awareness of local council cat management by where respondents live (%)

	% SA metropolitan (n=396)	% SA regional (n=212)	% Total sample (n=608)
Aware	53	53	53
Not aware	47	47	47
Total	100	100	100

Table 33: Awareness of local council cat management by council of residence (%)

	% Adelaide (n=87)	% Campbelltown (n=44)	% Onkaparinga (n=35)	% Adelaide Hills (n=33)	% Total sample (n=608)
Aware	60	61	40	61	53
Not aware	40	39	60	39	47
Total	100	100	100	100	100

Local council cat by-law

Respondents were asked if they were aware that their local council has a cat by-law. Table 34 shows that half of the respondents were unsure about it. Only about a quarter of the respondents knew about council cat by-laws.

Table 34: Awareness of local council cat by-law

	n	% (n=608)
Not aware	184	30
Aware	145	24
Not sure	279	46
Total	608	100

Table 35 shows the awareness of local council cat by-law split by where the respondents live. There were no significant differences across metropolitan and regional councils, with both scoring similar to the total sample (at $p < 0.05$). Table 36 shows awareness by council of residence for the top four councils ($n > 30$). Campbelltown had a significantly higher incidence of respondents aware of cat by-law (50% versus 24% from the total sample). On the other hand, Onkaparinga had a significantly lower incidence of respondents aware of cat by-law (0% aware).

Table 35: Awareness of local council cat by-law by where respondents live (%)

	% SA metropolitan (n=396)	% SA regional (n=212)	% Total sample (n=608)
Not aware	32	28	30
Aware	24	24	24
Not sure	45	48	46
Total	100	100	100

Table 36: Awareness of local council cat by-law by council of residence (%)

	% Adelaide (n=87)	% Campbelltown (n=44)	% Onkaparinga (n=35)	% Adelaide Hills (n=33)	% Total sample (n=608)
Not aware	28	23	57 ↑	33	30
Aware	31	50 ↑	0 ↓	30	24
Not sure	41	27 ↓	43	36	46
Total	100	100	100	100	100

Reporting cat issues

Respondents were also asked if they have ever contacted their council in relation to a cat issue. Table 37 shows that eight in 10 respondents had not contacted the council.

Table 37: Reporting cat issues to council

	n	% (n=608)
Haven't reported	494	81
Reported	114	19
Total	608	100

Table 38 and Table 39 show the split of respondents who reported/had not reported cat issues to council by where the respondent lives and by their council of residence for the top four councils (n>30), respectively. There were no significant differences across metropolitan and regional councils (at p<0.05). However, Onkaparinga had a significantly lower incidence of respondents who have reported cat issues (6% versus 19% from the total sample).

Table 38: Reporting cat issues to council by where respondents live (%)

	% SA metropolitan (n=396)	% SA regional (n=212)	% Total sample (n=608)
Haven't reported	84	77	81
Reported	16	23	19
Total	100	100	100

Table 39: Reporting cat issues to council by council of residence (%)

	% Adelaide (n=87)	% Campbelltown (n=44)	% Onkaparinga (n=35)	% Adelaide Hills (n=33)	% Total sample (n=608)
Haven't reported	78	77	94 ↑	79	81
Reported	22	23	6 ↓	21	19
Total	100	100	100	100	100

Respondents who reported cat issues were asked what were their reasons to do so. Table 40 shows that all reasons provided achieved generally similar scores. Between two in 10 and three in 10 respondents reported issues such as cat killing wildlife, nuisance, location of stray cats, neighbourhood cats using garden as toilet and damage to property.

Table 40: Reasons for reporting cat issues to council

	n	% (n=114)*
Killing wildlife	39	34
Nuisance (noise/urine spraying)	37	32
To report the location of stray cats	35	31
Neighbourhood cats using garden as toilet	33	29
Damage to property	27	24
Other	9	8
Total	114	100

* Multiple responses possible.

** Other reasons for reporting cat issues to council: cat killer issues, complaint by neighbour as my cat was going in their yard, registration, starving cat that came onto property.

APPENDIX

Questionnaire

SHOW ALL.

INTRO

Thank you for agreeing to participate in this survey. It will only take approximately 10 minutes to complete. All of your responses are kept confidential.

SECTION 1: SCREENING

SCREENING QUESTION 1. ASK ALL. SC. IF Q1=0 'NONE', TERMINATE.

Q1. How many cats do you have?

PLEASE SELECT ONE RESPONSE ONLY.

- (0) None
- (1) One
- (2) Two
- (3) Three
- (4) Four or more

ASK ALL. SC. SHOW DROP DOWN MENU. TEXT BOX FOR 'OTHER'.
IF Q2=99, TERMINATE.

Q2. Which council are you in?

PLEASE SELECT ONE RESPONSE ONLY.

- | | | | | | |
|----|-----------------------|----|-----------------------|------|-----------------------------------|
| 1 | Adelaide | 25 | Karoonda East Murray | 50 | Prospect |
| 2 | Adelaide Hills | 26 | Kimba | 51 | Renmark Paringa |
| 3 | Alexandrina | 27 | Kingston | 52 | Robe |
| 4 | Anangu Pitjantjatjara | 28 | Light Regional | 53 | Roxby Downs |
| | Yankunytjatjara | 29 | Lower Eyre Peninsula | 54 | Salisbury |
| 5 | Barossa | 30 | Loxton Waikerie | 55 | Southern Mallee |
| 6 | Barunga West | 31 | Mallala | 56 | Streaky Bay |
| 7 | Berri Barmera | 32 | Marion | 57 | Tatiara |
| 8 | Burnside | 33 | Mid Murray | 58 | Tea Tree Gully |
| 9 | Campbelltown | 34 | Mitcham | 59 | Tumby Bay |
| 10 | Ceduna | 35 | Mount Barker | 60 | Unley |
| 11 | Charles Sturt | 36 | Mount Gambier | 61 | Victor Harbor |
| 12 | Clare and Gilbert | 37 | Mount Remarkable | 62 | Wakefield |
| | Valleys | 38 | Murray Bridge | 63 | Walkerville |
| 13 | Cleve | 39 | Naracoorte Lucindale | 64 | Wattle Range |
| 14 | Coober Pedy | 40 | Northern Areas | 65 | West Torrens |
| 15 | Coorong | 41 | Norwood, Payneham | 66 | Whyalla |
| 16 | Copper Coast | | & St Peters | 67 | Wudinna |
| 17 | Elliston | 42 | Onkaparinga | 68 | Yankalilla |
| 18 | Flinders Ranges | 43 | Orroroo Carrieton | 69 | Yorke Peninsula |
| 19 | Franklin Harbour | 44 | Peterborough | (97) | Other SA Council (please specify) |
| 20 | Gawler | 45 | Playford | (99) | I don't live in South Australia |
| 21 | Goyder | 46 | Port Adelaide Enfield | | |
| 22 | Grant | 47 | Port Augusta | | |
| 23 | Holdfast Bay | 48 | Port Lincoln | | |
| 24 | Kangaroo Island | 49 | Port Pirie | | |

SCREENING QUESTION 2. MEET QUOTAS: 66% METRO AND 34% REGIONAL.

Q2HIDDEN Metro/Regional split

METRO CODES FROM Q2 = 1, 2, 8, 9, 11, 20, 23, 32, 34, 41, 42, 45, 46, 50, 54, 58, 60, 63 AND 65.

SHOW ALL.

SECTION 2: YOUR MOST RECENTLY ACQUIRED CAT

We are now going to ask you some questions related to your **MOST RECENTLY ACQUIRED CAT**. Please answer all the following questions thinking of your most recently acquired cat only.

SECTION 2A: ABOUT YOUR CAT

ASK ALL. SC.

Q3. Is your most recently acquired cat?

PLEASE SELECT ONE RESPONSE ONLY.

- (1) Male
- (2) Female

ASK ALL. SC.

Q4. How old is your most recently acquired cat?

PLEASE SELECT ONE RESPONSE ONLY.

- (1) Kitten (8 weeks to 12 months)
- (2) Adult (12 months to 8 years)
- (3) Senior (8 years plus)

ASK ALL. SC.

Q5. Is your most recently acquired cat registered with your local Council?

PLEASE SELECT ONE RESPONSE ONLY.

- (0) No
- (1) Yes
- (98) Not sure

SECTION 2B: DESEXING

ASK ALL. SC. IF Q6=NO, SKIP TO Q8.

Q6. Is your most recently acquired cat desexed?

PLEASE SELECT ONE RESPONSE ONLY.

- (0) No
- (1) Yes

ASK IF Q6=YES. SC.

Q7. At what age was your most recently acquired cat desexed?

PLEASE SELECT ONE RESPONSE ONLY.

- (1) 3-6 months
- (2) 7-12 months
- (3) Over 12 months
- (98) Not sure

ASK IF Q6=NO. SC. TEXT BOX FOR 'OTHER'.

Q8. What was your main reason not to desex your most recently acquired cat?

PLEASE SELECT ONE RESPONSE ONLY.

- (1) Too old
- (2) Too young
- (3) Want to breed
- (4) Cost of desexing procedure
- (97) Other (please specify)

ASK ALL. SC.

Q9. From what age can a cat have kittens?

PLEASE SELECT ONE RESPONSE ONLY.

- (0) 3 months
- (1) 4 months
- (2) 5 months
- (3) 6 months
- (4) 1 year
- (98) Not sure

ASK ALL. SC.

Q10. Do you believe that a cat should have a litter of kittens before it is desexed?

PLEASE SELECT ONE RESPONSE ONLY.

- (0) No
- (1) Yes
- (98) Not sure

ASK ALL. SC.

Q11. Have any of your cats had an unplanned litter?

PLEASE SELECT ONE RESPONSE ONLY.

- (0) No
- (1) Yes
- (98) Not sure

SECTION 2C: MICROCHIPPING

ASK ALL. SC.

Q12. Is your most recently acquired cat microchipped?

PLEASE SELECT ONE RESPONSE ONLY.

- (0) No
- (1) Yes

ASK ALL. SC.

Q13. Does your most recently acquired cat wear a collar/tag?

PLEASE SELECT ONE RESPONSE ONLY.

- (0) No
- (1) Yes

SECTION 2D: CONFINEMENT

ASK ALL. SC. TEXT BOX FOR 'OTHER'.

Q14. How do you keep your most recently acquired cat?

PLEASE SELECT ONE RESPONSE ONLY.

- (1) Indoors only
- (2) Indoors with purpose built cat run/enclosure
- (3) Indoors at night only
- (4) Outdoors with free access off the property
- (97) Other (please specify)

ASK IF Q14=1 OR 2. MC. TEXT BOX FOR 'OTHER'.

Q15. What are your reasons for keeping your most recently acquired cat indoors/on your property?

PLEASE SELECT AS MANY AS APPLY.

- (1) Risk of injury/disease
- (2) Protect wildlife
- (3) To preserve good neighbourhood relations
- (97) Other (please specify)

ASK IF Q14=2. SC. TEXT BOX FOR 'OTHER'.

Q16. You said that your most recently acquired cat has a cat enclosure, did you...?

PLEASE SELECT ONE RESPONSE ONLY.

- (1) Buy a purpose made cat run/enclosure
- (2) Build your own cat run/enclosure
- (97) Other (please specify)

ASK IF Q14=3 OR 4. SC.

Q17. How much time do you think your most recently acquired cat spends off your property?

PLEASE SELECT ONE RESPONSE ONLY.

- (1) 1-2 hours
- (2) 2-4 hours
- (3) 4-6 hours
- (4) 6 or more hours
- (98) Not sure

ASK IF Q14=3 OR 4. SC.

Q18. How far do you think your most recently acquired cat travels from your property?

PLEASE SELECT ONE RESPONSE ONLY.

- (1) Stays in the street
- (2) Two or three streets away
- (98) Not sure

ASK IF Q14=3 OR 4. MC. TEXT BOX FOR 'OTHER'.

Q19. When outside, what do you provide for your most recently acquired cat?

PLEASE SELECT AS MANY AS APPLY.

- (1) Water
- (2) Food
- (3) Shelter
- (4) Toys
- (5) Outdoor toilet area/litter tray
- (97) Other (please specify)

ASK IF Q14=3 OR 4. SC.

Q20. When outside, how often does your cat catch prey?

PLEASE SELECT ONE RESPONSE ONLY.

- (0) Never
- (1) Daily
- (2) Weekly
- (3) Monthly
- (4) Every few months
- (5) Once or twice a year
- (97) Other (please specify)
- (98) Not sure

ASK IF Q20≠0. MC. MAKE 98 'NOT SURE' EXCLUSIVE. TEXT BOX FOR 'OTHER'.

Q21. What does your most recently acquired cat catch as prey?

PLEASE SELECT AS MANY AS APPLY.

- (1) Birds
- (2) Rodents
- (3) Rabbits
- (4) Lizards
- (97) Other (please specify)
- (98) Not sure

SHOW ALL.

SECTION 3: CAT MANAGEMENT

The next questions are related to your opinions on cat management.

ASK ALL. SC. IF Q22=NO, SKIP TO Q24.

Q22. Do you think that cats hunting wildlife is a problem?

PLEASE SELECT ONE RESPONSE ONLY.

- (0) No
- (1) Yes

ASK IF Q22=YES. MC. MAKE 5 EXCLUSIVE. TEXT BOX FOR 'OTHER'.

Q23. How have you tried to prevent your cat hunting wildlife?

PLEASE SELECT AS MANY AS APPLY.

- (1) Put a bell on the cats collar
- (2) Cat kept indoors at all times
- (3) Provided cat with a cat run/enclosure
- (4) Cat kept in at night
- (5) I haven't tried to prevent it
- (97) Other (please specify)

ASK ALL. SC.

Q24. Are you aware that your local Council is responsible for cat management?

PLEASE SELECT ONE RESPONSE ONLY.

- (0) No
- (1) Yes

ASK ALL. SC.

Q25. Do you know if your local Council has a Cat By law?

PLEASE SELECT ONE RESPONSE ONLY.

- (0) No
- (1) Yes
- (98) Not sure

ASK ALL. SC. IF Q26=NO, SKIP TO Q28.

Q26. Have you ever contacted your Council in relation to a cat issue?

PLEASE SELECT ONE RESPONSE ONLY.

- (0) No
- (1) Yes

ASK IF Q26=YES. MC. TEXT BOX FOR 'OTHER'.

Q27. Why have you contacted your Council in relation to a cat issue?

PLEASE SELECT AS MANY AS APPLY.

- (1) Neighbourhood cats using garden as toilet
- (2) Nuisance (noise/urine spraying)
- (3) Damage to property
- (4) Killing wildlife
- (5) To report the location of stray cats
- (97) Other (please specify)

SHOW ALL.

SECTION 4: DEMOGRAPHICS

Finally, these last questions are about you and are for classification purposes only.

ASK ALL. SC.

Q28. Are you...?

PLEASE SELECT ONE RESPONSE ONLY.

- (1) Male
- (2) Female

ASK ALL. SC.

Q29. Please indicate your age group.

PLEASE SELECT ONE RESPONSE ONLY.

- (1) 18-24 years old
- (2) 25-34 years old
- (3) 35-44 years old
- (4) 45-54 years old
- (5) 55-64 years old
- (6) 65-74 years old
- (7) 75-84 years old
- (8) 85 years old or over

SHOW ALL.

Thank you for taking this survey.