
Preliminary analysis of post-adoption outcomes for kittens and adult cats rehomed through a New Zealand animal shelter

MC Gates^{*§}, K Mancera^{†‡}, A Dale[†] and S Zito^{†#}

*School of Veterinary Science, Massey University, Private Bag 11-222, Palmerston North 4442, New Zealand

†RNZSPCA, PO Box 15-309, New Lynn, Auckland 0640, New Zealand

‡Current address: Departamento de Etología y Fauna Silvestre, Facultad de Medicina Veterinaria y Zootecnia, Universidad Nacional Autónoma de México, Coyoacán 04510, DF, México

Current Address: RSPCA Australia, 5/6 Napier Cl, Deakin, ACT 2600, Australia

§Author for Correspondence. Email: c.gates@massey.ac.nz

Supplementary Table 1. Questions used in surveys of adopters of kittens and cats from an animal shelter undertaken 1 week and 1 month after adoption.

* 4. Did the cat/kitten you adopted have any problem behaviours and, if so, what were they? Please, choose all that apply:

- ☐ The cat/kitten had no problem behaviours, I was happy with how he/she behaved
- ☐ The cat/kitten was very inactive
- ☐ The cat/kitten spent most of his/her time hiding
- ☐ The cat/kitten spent most of his/her time displaying attention seeking behaviours (for example, always demanding attention and following me around)
- ☐ Episodes of hyperactivity
- ☐ Excessive meowing and vocalising
- ☐ Unwanted predatory behaviours (for example, constantly stalking and launching towards moving objects/animals, catching and bringing prey home, etc.)
- ☐ Scratching items such as furniture and blinds that I do not want the cat/kitten to scratch
- ☐ Fear or phobia (for example, fear or phobia of certain noises such as thunder, or objects such as the vacuum cleaner, etc.)
- ☐ Self-injury (for example, overgrooming, excessive licking or nibbling)
- ☐ Destroying household items (for example, chewing plants, pushing objects off tables, etc.)
- ☐ Urination onto vertical surfaces (spraying)
- ☐ Toileting (urine or stools) onto unwanted horizontal surfaces (i.e. outside of the litter tray)
- ☐ Aggression towards animals that are not part of your household
- ☐ Aggression towards pets that were already present in the house before the adopted cat/kitten came home
- ☐ Aggression towards unfamiliar people
- ☐ Aggression towards people in the family

Other (please specify)

* 5. What happened to the cat/kitten or where is he/she now?

- ☐ I returned the cat/kitten to the SPCA
- ☐ I took the cat/kitten to a vet for rehoming
- ☐ I took the cat/kitten to an animal welfare organisation other than the SPCA or a rescue group for rehoming
- ☐ I rehomed the cat/kitten to a relative or friend
- ☐ I rehomed the cat/kitten to a person who was not a friend or relative
- ☐ The cat/kitten ran away and I haven't seen him/her since
- ☐ The cat/kitten was euthanised
- ☐ The cat/kitten passed away

If you can, please share some more details about what happened with the cat here

6. How attached do you feel to your adopted cat/kitten?

- ☐ Very attached
- ☐ Attached
- ☐ Not attached

* 7. How well does your cat/kitten get along with other regular members of your household (for example, partner, children, housemates, etc.)?

- ☐ Very well
- ☐ OK
- ☐ Poorly
- ☐ Other (please specify)

* 8. Do you have another cat or cats in your house? If so, how well does your new cat/kitten get along with your other cat(s)?

- ☐ I do not have another cat(s)/ The cat/kitten hasn't met my other cat(s)
- ☐ Very well
- ☐ OK
- ☐ Poorly

* 9. Do you have dog(s) in your house? If so, how well does your cat/kitten get along with your dog(s)?

- ☐ I do not have dog(s)/ The cat/kitten hasn't met my dog(s)
- ☐ Very well
- ☐ OK
- ☐ Poorly

* 10. What statement describes best your cat/kitten's living situation?

- ☐ My cat/kitten is confined to my house during the day and night.
- ☐ My cat/kitten is allowed to go out during the day but is confined to my property at all times (in a cat enclosure or contained outdoor area) and is confined to my house during the night.
- ☐ My cat/kitten is allowed to go outside during the day and night but is confined to my property at all times (in a cat enclosure or contained outdoor area).
- ☐ My cat/kitten is allowed to go outside during the day and is able to leave my property but is confined inside my house during the night.
- ☐ My cat/kitten is allowed to go outside during the day and night and is able to leave my property at all times.

* 11. On average how much time does your cat/kitten spend alone each day?

- ☐ Less than 4 hours
- ☐ 4 to 7 hours
- ☐ 8 to 10 hours
- ☐ More than 10 hours
- ☐ Other (please specify)

12. Where does your cat/kitten stay generally when you go away for a day or more?

- ☐ At home with a member of my household
- ☐ At home, with a person familiar to my cat/kitten visiting to take care of him/her daily
- ☐ At home, with a person familiar to my cat/kitten staying in the house
- ☐ At home, with a person unknown to my cat/kitten visiting to take care of him/her daily
- ☐ At home, with a person unknown to my cat/kitten staying in the house
- ☐ My cat/kitten stays in the house of a person familiar to him/her
- ☐ My cat/kitten stays in the house of a person unknown to him/her
- ☐ My cat/kitten stays in a cattery
- ☐ Other (please specify)

* 13. Have you seen your adopted cat/kitten show any of the following problem behaviours since he/she joined your family? Please, choose all that apply:

- ☐ My cat/kitten has had no problem behaviours, I am happy with how he/she behaves
- ☐ The cat/kitten is very inactive
- ☐ The cat/kitten spends most of his/her time hiding
- ☐ The cat/kitten spends most of his/her time displaying attention seeking behaviours (for example, always demanding attention and following me around)
- ☐ Episodes of hyperactivity
- ☐ Excessive meowing and vocalising
- ☐ Unwanted predatory behaviours (for example, constantly stalking and launching towards moving objects/animals, catching and bringing prey home, etc.)
- ☐ Scratching items such as furniture and blinds that I do not want the cat/kitten to scratch
- ☐ Fear or phobia (for example, fear or phobia of certain noises such as thunder, or objects such as the vacuum cleaner, etc.)
- ☐ Self-injury (for example, overgrooming, excessive licking or nibbling)
- ☐ Destroying household items (for example, chewing plants, pushing objects off tables, etc.)
- ☐ Urination onto vertical surfaces (spraying)
- ☐ Toileting (urine or stools) onto unwanted horizontal surfaces (i.e. outside of the litter tray)
- ☐ Aggression towards animals that are not part of your household
- ☐ Aggression towards unfamiliar people
- ☐ Other (please specify)

14. If you have seen your adopted cat/kitten show any problem behaviours, how concerned are you about them?

- ☐ My cat/kitten has had no problems, I am happy with how he/she behaves
- ☐ Very concerned
- ☐ Somewhat concerned
- ☐ Not concerned

* 15. Have you seen any of the following health problems in your adopted cat/kitten?

- ☐ My cat/kitten has had no health problems, he/she is very healthy
- ☐ Sneezing or runny nose
- ☐ Coughing
- ☐ Loose stool
- ☐ Vomiting
- ☐ Urinary problems (for example, urinary tract infection, incontinence, etc.)
- ☐ Skin conditions (for example, allergies, itchy red skin, bald spots, scars, wounds, etc.)
- ☐ Weight problems (for example, weight loss or excessive weight gain)
- ☐ Eye problems (for example, discharge, redness, swelling, etc.)
- ☐ Ear problems (for example, discharge, redness, swelling, etc.)
- ☐ Fleas or mites
- ☐ Feet, limb or tail problems (for example, redness, swelling, difficulty to move, etc.)
- ☐ Dental problems (for example, bad breath, drooling, tartar on teeth, tooth decay, etc.)
- ☐ Poor appetite
- ☐ Lethargy (for example, spending most of his/her time sleeping, lack of energy, etc.)
- ☐ Other (please specify)

16. If you have seen health problems in your adopted cat/kitten, how concerned are you about them?

- ☐ My cat/kitten has had no health problems, he/she is very healthy
- ☐ Very concerned
- ☐ Somewhat concerned
- ☐ Not concerned

* 17. Did you consider the following when adopting a cat/kitten? Please, choose all that apply:

- ☐ How the cat/kitten looked (color, hair length, etc.)
- ☐ The age of the cat/kitten
- ☐ The breed of the cat/kitten
- ☐ The adoption price of the cat/kitten
- ☐ The behaviour the cat/kitten showed when I first met him/her
- ☐ The time I would need to take care of the cat/kitten (for example, cleaning litter trays, feeding him/her, etc.)
- ☐ The time my household members (for example, partner, children, housemates, etc.) would need to take care of the cat/kitten
- ☐ The money I would need to take care of the cat/kitten (for example, buying cat litter, food, medication, etc.)
- ☐ The effect my cat/kitten would have on my daily routine (for example, through the need to adopt new cleaning habits, change my schedule to adapt to my cat/kitten's needs, etc.)
- ☐ Caring for a cat/kitten can help to develop a sense of responsibility and care for others
- ☐ Caring for a cat/kitten can provide an activity for me or other members of my household
- ☐ A cat/kitten can provide company and emotional support for me and/or my household members (partner, children, etc.)
- ☐ Adopting a new cat/kitten can provide company for another pet already in my household
- ☐ Adopting a cat/kitten is a way to support animal welfare organisations
- ☐ Adopting a cat/kitten is a way to alleviate the loss of a previously owned cat
- ☐ A cat/kitten can keep rats, mice and other animals away
- ☐ None of the above
- ☐ Other (please specify)

18. How do you feed your cat/kitten? Please, choose all that apply

☐ Using the same kind of food most of the time

☐ At about the same time, every day

☐ Once a day

☐ Twice a day

☐ More than twice a day

☐ My cat/kitten has food available at all times

☐ Other (please specify)

* 19. How often do you do/use the following to train your cat/kitten?

	Always	Very often	Sometimes	Rarely	Never
Food rewards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Toys or play rewards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strokes, gentle calls, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Remaining silent, turning away, ignoring him/her, etc. when he/she does something wrong	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rubbing his/her nose in the mess, yelling at him/her, etc. when he/she does something wrong	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shock collars or electric devices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Squirt bottles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Introducing my cat/kitten to a variety of new people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Introducing my cat/kitten to other cats	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Introducing my cat/kitten to other animals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Playing with my cat/kitten at least once a day	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using basic commands (for example, no, stop, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Allowing my cat/kitten to start our interactions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Allowing my cat/kitten to hide whenever he/she wants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 20. If you notice something wrong with your cat/kitten's health how likely are you to do the following?

	Very likely	Likely	Somewhat likely	Unlikely	Very unlikely
Ask for advice from or take my cat/kitten to see a veterinarian	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ask for advice from or take my cat/kitten to see someone at the SPCA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ask for advice from a friend or relative (who is not a veterinarian)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Look on the internet for advice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 21. If you notice something wrong with your cat/kitten's behaviour how likely are you to do the following?

	Very likely	Somewhat likely	Unlikely	Very unlikely
Ask for advice from or take my cat/kitten to see a veterinarian	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ask for advice from or take my cat/kitten to see someone at the SPCA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ask for advice from or take my cat/kitten to see a friend or relative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Look for advice on the internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ask for advice from or take my cat/kitten to see a behaviourist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 22. How useful was the information provided to you by SPCA staff, in the SPCA's take home package and on the SPCA website in the following areas?

	Very useful	Somewhat useful	Of little use	Of no use	I did not receive any information in this area
Normal cat/kitten behaviour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Methods to train my cat/kitten	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How to introduce my cat/kitten to my household members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How long to keep my cat/kitten indoors before letting him/her go outside	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The daily care that my cat/kitten needs to maintain his/her well-being	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The medical care that my cat/kitten needs to maintain his/her well-being	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The money and time that would be needed to take good care of my cat/kitten	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 23. Have you contacted the SPCA since your adoption?

- ☐ No
- ☐ Yes, to let them know the cat/kitten is happy and we are enjoying our new family member
- ☐ Yes, about my cat/kitten's health
- ☐ Yes, about my cat/kitten's behaviour
- ☐ Yes, I contacted the SPCA to return the cat/kitten
- ☐ Yes, I contacted the SPCA for another reason (please specify)

* 24. If you contacted the SPCA after the adoption, how useful was the information/support you received?

- ☐ I did not contact the SPCA after the adoption or just contacted them to let them know my cat/kitten was happy and we are enjoying our new family member
- ☐ Very useful
- ☐ Somewhat useful
- ☐ Of little use
- ☐ Of no use

* 25. What kind of post-adoption support from the SPCA do you think would be most helpful for recent adopters?

- ☐ An email from the SPCA after a week of adoption
- ☐ A call from the SPCA after a week of adoption
- ☐ An email from the SPCA a month after the adoption
- ☐ A call from the SPCA a month after the adoption
- ☐ I would rather not be contacted directly by the SPCA
- ☐ I think other post-adoption support would be useful (please specify)

26. Is there anything else you would like to comment on?

27. Would you like someone from the SPCA to contact you about your cat/kitten? If so, please write down the best contact details for you (phone or email) below. This information will only be used to support you.

Thank you very much for completing this survey and telling us about your cat/kitten and adoption experience.

Supplementary Table 2. Level of adopter concern over problem behaviours in kittens and cats adopted from an animal shelter with at least one problem behaviour reported at one week and one month post-adoption.^a

Animals with problem behaviours	Happy with behaviour	Not concerned	Somewhat concerned	Very Concerned
Kitten 1 week (N = 16)	6 (38%)	8 (50%)	1 (6%)	1 (6%)
Kitten 1 month (N = 28)	11 (40%)	14 (50%)	1 (4%)	2 (7%)
Adult Cat 1 week (N = 24)	5 (21%)	12 (42%)	6 (25%)	1 (4%)
Adult Cat 1 month (N = 26)	4 (15%)	13 (50%)	2 (8%)	5 (19%)

^a Note: Total numbers in a column may not sum to N due to non-response for a question.

Supplementary Table 3: Reports from 153 adopters on the likelihood of using different information sources to answer behavioural questions about kittens and adult cats adopted from the participating shelter. ^a

Source of Information	Likelihood of using information source				
	Very Likely	Likely	Somewhat Likely	Unlikely	Very Unlikely
Veterinarian	129 (84%)	17 (11%)	2 (2%)	4 (3%)	0 (0%)
The shelter	38 (25%)	50 (33%)	39 (25%)	18 (12%)	7 (4%)
Friend or relative	21 (13%)	28 (19%)	34 (22%)	50 (33%)	18 (12%)
Internet	34 (22%)	45 (29%)	33 (22%)	30 (19%)	10 (7%)
Behaviourist	9 (6%)	26 (17%)	50 (33%)	43 (28%)	21 (14%)

^a Based on the responses provided in either the first or the only survey completed by the adopters during the study period.

Supplementary Table 4. Level of adopter concern over medical problems in kittens and cats adopted from the participating shelter with at least one medical problem reported at one week and one month post-adoption. ^a

Animals with medical problems	Level of Concern			
	Happy with health	Not concerned	Somewhat concerned	Very Concerned
Kitten 1 week (N = 19)	1 (5%)	8 (42%)	9 (47%)	1 (5%)
Kitten 1 month (N = 16)	4 (25%)	5 (31%)	6 (38%)	1 (6%)
Adult Cat 1 week (N = 20)	1 (5%)	6 (30%)	6 (30%)	7 (35%)
Adult Cat 1 month (N = 19)	5 (26%)	6 (32%)	2 (11%)	5 (26%)

^a Note: Total numbers in a column may not sum to N due to non-response for a question.

Supplementary Table 5. Reports from 153 adopters on the likelihood of using different information sources to answer medical questions about kittens and adult cats adopted from the participating shelter.^a

Source of Information	Likelihood of Using				
	Very Likely	Likely	Somewhat Likely	Unlikely	Very Unlikely
Veterinarian	140 (92%)	10 (7%)	2 (2%)	0 (0%)	0 (0%)
The shelter	32 (21%)	30 (20%)	45 (29%)	32 (21%)	15 (10%)
Friend or relative	22 (14%)	17 (11%)	35 (23%)	41 (27%)	38 (25%)
Internet	30 (19%)	28 (18%)	37 (24%)	30 (20%)	28 (18%)

^a Based on the responses provided in either the first or the only survey completed by the adopters during the study period. Total numbers in a row may not sum to N due to non-response for a question.