

# HOW TO SAY 'SPAY' BCSPCA UBC Research Report

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## **ABSTRACT**

Cat overpopulation has reached crisis point in many parts of Canada, fuelled in large part by the uncontrolled breeding of domestic cats. Persuading owners to fix their cats is a number one priority for the BC SPCA who, along with municipal animal control departments, pay a high price for managing unwanted animals. This research set out to gain deeper insights into the motivations of cat owners considering spay/neuter choices regarding their owned animals, to advance the development of a pro-social messaging toolkit for use in this area, and to gain a richer understanding of community attitudes towards cat over population issues at large. To achieve this goal a pilot spay/ neuter messaging campaign was conducted in conjunction with a field research project, the findings of which are contained within this report. A number of recommendations for future spay/ neuter campaigns, as well as for further research are made.

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This report was developed through a BCSPCA/ UBC MITACS Research Program.

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## 1. EXECUTIVE SUMMARY

### 1.1 Research Overview and Goals

Canada is currently experiencing a cat overpopulation crisis, fed in large part by the uncontrolled breeding of domestic owned animals. The aim of this research was threefold. The first goal was to test the applicability of existing academic research, in consumer behavior and sustainability marketing, in the area of animal welfare and cause marketing. The second goal was to gain insights from field research survey work drilling down into the incentives and barriers that impact cat owners making spay/neuter choices, as well as community attitudes towards cat over population issues at large. The third goal was to advance the development of a pro-social messaging toolkit that would be capable of encouraging pet owners to spay/ neuter their cats across a variety of real-world situations. To this end specific campaign appeal messaging options were considered and tested for situations in which owners must pay the full financial cost of the spay/ neuter procedure themselves, as well as for situations in which there would be funding available for reduced cost, or free, procedures.

### 1.2 Research Strategy

A complex research strategy was implemented that included a review of existing literature relating to past cat spay/neuter campaigns, similar pro-social appeals, and reported best practices in this area. Following on from this a research plan was developed that included an eighteen-week (6-week pre-test, 6-week intervention, 6-week post-test) experimental field study administered across two semi rural communities, as part of a BCSPCA spay/neuter messaging campaign in the area. Provision was made to both inform and access a separate random pretest – posttest telephone survey being administered by Malatest across the two semi-rural communities on general community attitudes. Liaison was carried out to ensure relevant attitudes of interest were captured before and after the field study. A website for the spay/neuter initiative was also set up and analytics for visits to this site were also collected. A subsequent analysis of the data was carried out in IBM SPSS, results were visualized and then reported with recommendations.

### 1.3 Research Results and Conclusions

The research was able to offer various take-away messages and recommendations for further research, and future campaigns. One of these was the observation that offering reduced cost procedures may run the risk of poaching or cannibalizing take up from owners that may have been willing to pay full cost for these procedures, especially in the case of neuter procedures. Another finding was the importance of establishing partnerships with stakeholders in the community prior to launching campaigns. Choice of communication method was found to be

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crucial, with internet access playing an increasing role, and recommendations are highlighted in this area. On the subject of barriers and incentives to spay/ neuter both cost of procedure and breeding concerns were respectively top most. However other barriers such as the inconvenience of the procedure also had major impacts, especially on higher income households, and incentives such as improving cat behaviour were also highly rated. Importantly also the research highlighted how many of the barriers and incentives to spay/ neuter were found to be highly nuanced, often interacting with other variables, such as cat gender, income, cost of procedure and messaging style. Details of these are included within the results and conclusions section and should be referenced carefully for use in future campaigns.

## 2. INTRODUCTION

### 2.1 Research Background

In 2012 the Canadian Federation of Humane Societies (CFHS) produced a Comprehensive Report on the Cat Overpopulation Crisis in Canada. This report echoed the findings of a previous report by the Humane Society of the US (HSUS; 1999), which brought to the forefront an increasing cat overpopulation problem that the USA was also experiencing. Most Canadian animal shelters surveyed reported being at, or near to, carrying capacity, largely as a result of rising cat numbers. In the previous year the report estimated that more than 119,000 cats had been admitted to registered Canadian shelters, over double the intake of dogs. Up to 95% of these cats were unaltered on arrival.

Although unverified, it is commonly stated that a single unaltered female cat and her offspring, if uncontrolled, can produce approximately 420,000 cats over a 7- year period. Even if this figure is inflated there is no doubt that the current scale of unmanaged cat breeding is causing a significant problem. The CFHS estimated that in 2011 there were 10.1 million cats in Canada, with cat ownership on the increase. However they also noted that attitudes towards responsible cat ownership were poor compared to attitudes of dog owners, with many cat owners allowing their unaltered cats to breed in an uncontrolled manner. One of the key recommendations of the CFHS (2012) report was, therefore, for the funding and support of research into cat spay/ neuter public education campaigns, based on behavioral science, that had the goal of achieving sterilization compliance in owned animals; a recommendation fully supported by the BC SPCA.

The BC SPCA is the largest animal welfare organization in Canada and has been involved in the protection and care of domestic, farm and wild animals for nearly 120 years. For over a decade,

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the BC SPCA has engaged in efforts to stem both dog and cat overpopulation in B.C. including educating the public on the need to spay and neuter, and providing spay/neuter services. However in spite of some progress the number of cats entering BC SPCA shelters has continued to grow, primarily in the area of homeless, rather than lost but owned, cats. According to internal BC SPCA figures the largest two groups of cats currently being admitted to their shelters are stray adult cats (approximately 6,000 annually), and stray kittens (approximately 5,000 annually). A more focused approach towards cat overpopulation was therefore deemed necessary, leading the BC SPCA to accord the issue top priority in their new five-year Strategic Plan.

Over recent years a number of reduced-cost or free cat spay/neuter initiatives have been implemented across the province by the BC SPCA, in an attempt to incentivize spay/ neuter take-up. While these have achieved some success past research suggests that additional methods, that go beyond removing economic barriers, are often also required to affect substantial behaviour change in these areas (Clayton, Litchfield and Geller, 2013; McDonald, Fielding and Louis, 2014). In the light of these findings research aimed at improving attitudes to spay/neuter initiatives, and influencing responsible cat ownership, through the use of strategic messaging appeals, would likely offer great value to any spay/neuter campaign aimed at combating cat overpopulation.

### 2.2 Research Purpose

This research project began development in 2015, and in 2016 was awarded research funding through a MITACS grant, set up between the BCSPCA and the Marketing Department of Sauder School of Business at the University of British Columbia. The overarching purpose of this research was to garner a better appreciation of how individual owners, as well as the community at large, respond to the general subject of cat overpopulation and specifically to spay/neuter programs, in order to inform a broader BCSPCA mission to tackle the cat over population crisis in British Columbia. The research had the additional hope of developing a tool kit of strategies that would assist in encouraging participant take-up for future spay/neuter programs.

## 3. APPROACH

### 3.1 Research Objectives

The primary purpose of the research project was to garner a better understanding of public attitudes on the subject of cat overpopulation and spay/neuter programs in rural and semi rural

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communities across BC, and to develop and test a variety of messaging and communication tools designed to increase cat owner spay / neuter take up.

To achieve these goals three research objectives were articulated. The first was to focus on gaining more insights into the incentives and barriers that impact cat owners making spay/neuter choices for their owned animals, as well as developing more understanding of how local community attitudes towards cat over population could influence successes and failures in spay/neuter campaigns. The second was to expand the on-going line of academic enquiry regarding benefit appeals, by exploring how different types of pro-social campaign appeals (self-benefit vs. community-benefit) might function in the context of the societal-centered goal of reducing a community cat overpopulation problem, through the promotion of responsible cat ownership practices such as spay/neutering animals. The third was to develop a variety of best-practice options or strategies that could guide and inform future work in this area.

The first and second objectives were chosen based on past related academic and field research in the area of pro-social behaviour change, alongside an examination of the findings from previous campaigns undertaken to encourage spay/neuter take up. While at an initial glance spay/neutering one's own cat may appear to have many self-benefits, a deeper inspection shows that for the typical cat owner in rural or semi rural BC there are actually many disincentives to spay/neutering an owned cat with outdoor access. The procedure itself may be personally expensive (costing up to \$300 in many areas) as well as time consuming and effortful, while the incidence of owned cats disappearing in these communities (due to accident, or wild animal interaction) can be relatively high. On the other hand acquiring new cats, from the large pool of homeless cats, to replace those that go missing is a simple, often cost-free, activity. This situation promotes a systemic low investment attitude towards cat ownership in many of these communities, resulting in cats often being viewed as 'easy come-easy go' pets, not worth investing heavily in, and not certainly worth the cost or hassle of spay/neutering, from a cat owners individual self-benefit perspective.

On the other hand for the community as a whole, and the animal shelters and welfare organizations working within them, the story is rather different. Excessive cat populations have many negative costs to the community at large and the contribution made by unaltered owned cats, with outdoor access, to the cat overpopulation issue is significant. One of the community benefit motivations for cat owners to spay/neuter an outdoor access cat under these circumstances may come from a desire to accrue a community-benefit in the same way that we can view a resident opting to recycle in a sustainable way as primarily community-benefit motivated. Contributing parties can reap rewards that are founded on the knowledge that they

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have played their part in making their community, the lives of the animals within it, and the world at large, better in some significant way. In terms of costs it is a hassle to take up the option of spay/neutering for a cat owner, in much the same way as it is a hassle for a resident to recycle their garbage or compost in a sustainable way. However, unlike recycling sustainably, for cat owners there is an additional cost to action that goes beyond hassle alone - the economic price of the spay/neuter procedure itself. The net result is such that although cat owners share some of the negative impacts of the cat overpopulation situation at large, as well as their own cat being unaltered, they may benefit more on an individual self level from not spay/ neutering their cat, in essence resulting in a tragedy of the commons situation.

### 3.2 Research Strategy

The research objectives included clarifying barriers and incentives to spay/neutering owned cats; investigating whether a personal economic loss to the consumer (in terms of full cost spay/neuter procedure vs. free spay/neuter procedure) might interact with the type of messaging appeal (self-benefit vs. community benefit) delivered to the consumer as part of the messaging campaign, in such a way that it impacts spay/neuter procedure take up; and developing a toolkit for future campaign use.

To achieve these objectives a number of research strategies were implemented.

- **Literature Review:** A review of existing literature relating to past cat spay/neuter campaigns and pro-social appeals of this type was carried out in order to inform the current research project of the most up-to-date findings as well as the most popular, and reported best practices, in this area.
- **Research Study:** A research plan was developed to include an eighteen-week (6-week pre-test, 6-week intervention, 6-week post-test) experimental field study administered across two semi rural communities, as part of a BCSPCA spay/neuter messaging campaign in the area.
- **Associated Research:** Provision was made to both inform and access a separate random pretest – posttest telephone survey being administered by Malatest across the two semi-rural communities on general community attitudes. Liaison was carried out to ensure relevant attitudes of interest were captured before and after the field study. A website for the spay/neuter initiative was also set up and analytics for visits to this site were also collected.

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### 3.3 Detailed Methodology

#### 3.3.1 Literature Review:

To gain an up-to-date overview of work in the field, including the current state of research, a brief review of recent literature relating to cat spay/ neuter programs and cat over-population across Canada and the USA was initiated. This was followed up with further secondary research exploring existing cat licensing programs in force across Canada, as well as suggested methods and best practices for the implementation of licensing programs, spay/neuter programs and TNR (Trap-neuter-Return) delivery. The literature review was carried out on-line using academic scientific resource databases, such as Google Scholar. These searches were augmented by more general online search engines, such as Google, and Bing, as well as by recommendations from key informants, including the BC SPCA Provincial office. A snowball style technique was then utilized to follow up on references and leads resulting from the initial research findings. The review process included documents detailing previous research in the area, as well as reports on attitudes to cat over-population and spay/neuter initiatives carried out both locally and internationally.

#### 3.3.2 Field Research Study:

##### *Summary*

The research project took the form of a field research study piggy-backed on a pilot messaging campaign promoting a short term spay/neuter initiative aimed at increasing take up of spay/neuter procedures as a means to reducing cat overpopulation. The spay/neuter initiative and research project were run across two semi rural communities in northern British Columbia (Dawson Creek and Fort St John). The short term promotional messaging campaign was designed to improve attitudes towards spay/neuter initiatives in general and to increase cat spay/neuter take up during the research period. The associated research was designed to examine and measure cat owner attitudes towards responsible cat ownership and spay/ neuter program initiatives in general, as well as to monitor numbers of spay/ neuters carried out before, during, and after the campaign.

##### *Design and Logistics*

The field study was based on a 2 (level of economic cost: free vs. full cost spay/neuter procedure) x 2 (message appeal: self benefit vs. community benefit) experimental design. Using pretest-posttest methodology, numbers of cat spay/neuters carried out by all local veterinary facilities were measured in each community for a six week period immediately prior to exposure to the campaign messaging appeals (T1), as well as for the 6 week period of the intervention (T2), and for the six week period immediately after the campaign messaging

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appeals ended (T3). Surveys were administered for the six weeks of the active campaign, and for six weeks after.

The two communities, although chosen to be demographically similar, had an important difference between them, which was whether the spay/neuter procedure available to resident cat owners during the campaign was sponsored, and thus free to owners at take up, or whether it was unsponsored and therefore offered at full cost to cat owners at a price of approximately \$100-\$250 per procedure.

Appeal messaging materials was generated in conjunction with the BCSPCA outreach officer to comply with partner branding. The appeals were consistent across conditions in their appearance and branding elements, with only some key written information varied according to messaging condition (free vs. full cost; self vs. community benefit). Each community was divided in to two sectors, by use of postcode and neighborhood districts. Each community sector was designated one message appeal type only (self-benefit appeal or community benefit appeal), resulting in two conditions per community. The promotional materials (door hangers and post cards) clearly reflected the reduced cost sponsored promotion where applicable, resulting in four conditions over two communities. One of the research objectives was to measure how much the cost of the procedure (free vs. full cost) affected attitudes toward the procedure, as well as actual take up. Another objective was to investigate if any interactions existed between the price of the procedure (free vs. full cost) and the type of message (self vs. community benefit) appeal given during the intervention period.

The promotional messaging material (approximately 2000 door hangers and 2000 postcard/flyers) were delivered by hand through door to door delivery, and automatically through Canada Post, at the start and middle of the active study period respectively. Since both communities combined were estimated to have an approximate private household number of 15,000 (Canadian Census 2011) this distribution was expected to cover approximately 28% of household groups within the communities. In addition billboard posters, and local radio/TV PSA's were broadcast in both areas in equal measure. These took the form of a neutral informative appeal type and were designed to highlight the cat spay/neuter initiative in general, as opposed to giving any messaging appeal specifically.

The study then coordinated with four local veterinary offices to collect the research data (surveys and procedure figures). Each veterinary office measured the numbers of spay/neuters carried out during the six-week study period, as well as for a six-week period before, and a six-

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week period after the intervention. Each veterinary office was also given promotional material (posters, bags and pens) as well as the surveys to hand out during the research period.

Veterinary staff were trained to administer the surveys to any person bringing in a cat to be spay/neutered during the research period. The short self-directed survey, was offered to clients upon booking in or collection of their cat for surgery. This survey collected data regarding which message clients had received (self benefit vs. community benefit), whether they had received the procedure free or at full cost, as well as measuring a variety of attitudes towards spay/neuter initiatives, responsible cat ownership, the BC SPCA, and cat overpopulation issues in general.

More generally the attitudes of community residents at large (both cat and non cat owners) towards responsible pet ownership, as well as cat overpopulation and spay/neuter initiatives and programs, were also measured through a pretest-posttest telephone survey administered separately by Malatest, which was randomly carried out on 150 residents in each community both before and after the six week spay/ neuter program appeals (300 residents in total before, and 300 residents after).

## 4 RESULTS

### 4.1 Literature Review

The literature review yielded a generous selection of past research in the specific and general areas of interest, as well as details of previous spay neuter projects administered across Canada and the US<sup>1</sup>. According to the CFHS report (2012) the rising cost of veterinary services is frequently cited as a barrier to owners accessing surgery, leaving animal breeding uncontrolled (Kass, 2007). As a result many municipalities across Canada and the USA now appear to offer reduced spay/ neuter services. These are typically provided by a variety of local SPCA offices, local humane societies, municipal or regional government initiatives, independent charities, private sector sponsorship (such as PetSmart), or a combination. Sometimes these surgeries are carried out in local high volume clinics, sometimes through vouchers and local vets, sometimes through mobile clinics. Initiatives may be long or short term. Prices typically range from free to

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<sup>1</sup> Further details on recent Canadian and US Spay Neuter programs are contained within a previous report by the author: Appreciating Public Attitudes Towards Cat Over-population and Spay/Neuter Programs in Cranbrook and the East Kootenay Region: A first step towards developing messaging and communication strategies that are meaningful for the community, and maximize awareness, support, and engagement.

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\$80 per animal with fees often income related. Although subsidized spay/neuter initiatives appear to be widely supported by respondents, the majority of those who responded to the question, "Is there a subsidized spay/neuter option in your community?" did not indicate that these services were available – 42% answering 'no', according to the CFHS. This response indicates that further work needs to be done to fund such initiatives, as well as increasing awareness of such services where they are available to maximize uptake of services.

Additional past research (Clayton, Litchfield and Geller, 2013; McDonald, Fielding and Louis, 2014) also acknowledges that when making voluntary decisions individuals may be guided by a multitude of factors above and beyond economic concerns, such as desire to minimize time or effort, to gain social approval, to avoid negative consequences, or to utilize default heuristics. Direct evidence of the impact of non-economic motives in the specific context of cat spay/neuter take up is evidenced in a Ralston Purina study (2000), carried out in the United States, which reported that the top reason US pet owners gave for not spay/ neutering their pet was that they just hadn't bothered to do it yet (29%). This can be compared to the 18% of owners who claimed that non-compliance was primarily because the procedure was unaffordable.

Traditionally, many messaging campaigns in the areas of conservation, animal welfare and sustainability have been conducted using education or information appeals, or by promoting abstract reasons for citizens to act in a more responsible way using injunctive normative appeals (for example describing why spay /neutering is the right thing to do for the community or society at large). However, while consumers are not always solely motivated by economic reasons, research (Clayton, Litchfield and Geller, 2013) suggests that they are also not always solely motivated by altruistic societal concerns either. Indeed past research in the field of pro-social sustainable consumer behaviour (Costanzo et al. 1986; Luchs et al. 2010, White and Simpson, 2013) has noted the difficulty in trying to encourage consumers to behave in a pro-social manner, when the goal is promoting a more societal, other focused good (such as more sustainable practices and outcomes). Individuals in this situation may frequently be resistant to engaging in activities that involve a cost to the individual-level self (in terms of time, effort or behavioural change). This has led to some researchers (such as White and Simpson, 2013) questioning whether self-benefit appeals, that highlight the benefits of pro-social actions to the individual self (see Nolan et al., 2008; White and Peloza 2009), or normative appeals, that highlight social norms regarding what others are doing or think should be done (see Cialdini, Kallgren and Reno, 1991; Cialdini, Reno, and Kallgren, 1990), are likely to be the most effective in influencing behaviour in these contexts.

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### 4.2 Research Results

In the context of the previous findings highlighted by the literature review the research project study design and data analysis were specifically constructed to test and explore some of these noted assumptions. The study collected data to measure two primary dependent variables. The first of these was the details and numbers of actual spay/ neuter procedures carried out during the research period by veterinary clinic. The second was attitudes of cat owners bringing in their animals to be spayed or neutered, as expressed in the answers to a set of questions contained within a survey that was administered by the veterinary clinic staff to all owners willing to participate in the research. All data was analyzed using IBM SPSS software.

#### 4.2.1 Spay/Neuter Procedures During the Research Period

##### *Fort St John Community*

##### Veterinary Records of Fixed Cats:

Procedure records supplied from each veterinary clinic show that during the period of research 174 cats were fixed in Fort St John by the two clinics that were monitored.

A Cross Tabulation Analysis in SPSS (Table 1. below) describes the breakdown by each six week research phase (Pre Research, Active Research, Passive Research) and by procedure (Spay vs Neuter).

			ResearchPhase			Total
			Pre Research	Active Research	Passive Research	
Procedure	neuter	Count	40	53	40	133
		% within Procedure	30.1%	39.8%	30.1%	100.0%
	spay	Count	47	38	43	128
		% within Procedure	36.7%	29.7%	33.6%	100.0%
Total		Count	87	91	83	261
		% within Procedure	33.3%	34.9%	31.8%	100.0%

Table. 1 Cross Tabulation of Cat Spays and Neuters in Fort St John by Research Period

Although the results may appear initially disappointing, in that they show no increase in overall procedures during either the Active Research or Passive Research Phases compared to the Pre Research period, they do reveal some useful data. What we can see from Table 1. is that Spay procedures reduced somewhat during the Active Research Phase to 30% (n=38) compared to the Pre Research Phase when they were at 37% (n=47) or the Passive Research Phase when they were at 34% (n=43). Neuter procedures on the other hand increased from 30% (n=40) in the Pre Research Phase, to 40% (n=53) in the Active Research Phase, before dropping back to 30 % (n=40) again in the Passive Research Phase. Although further tests, looking at significant

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differences, would need to be carried out these preliminary results suggest that in the Active Research Phase there appears to be an increased interest in Neuter procedures at the cost of Spay Procedures.

This result is corroborated by additional exploration of the data in a Cross Tabulation Table (Table 2. below) measuring the percentage share of procedures by Research Phase. This table shows that, during the Active Research Phase, Neuter procedures took up 58% of all procedures carried out, compared to the other two phases, during which the pattern is reversed and Spays instead held the majority share of procedures.

			ResearchPhase			Total
			Pre Research	Active Research	Passive Research	
Procedure	neuter	Count	40	53	40	133
		% within ResearchPhase	46.0%	58.2%	48.2%	51.0%
	spay	Count	47	38	43	128
		% within ResearchPhase	54.0%	41.8%	51.8%	49.0%
Total		Count	87	91	83	261
		% within ResearchPhase	100.0%	100.0%	100.0%	100.0%

Table. 2 Cross Tabulation of Cat Spays and Neuters in Fort St John by Research Period

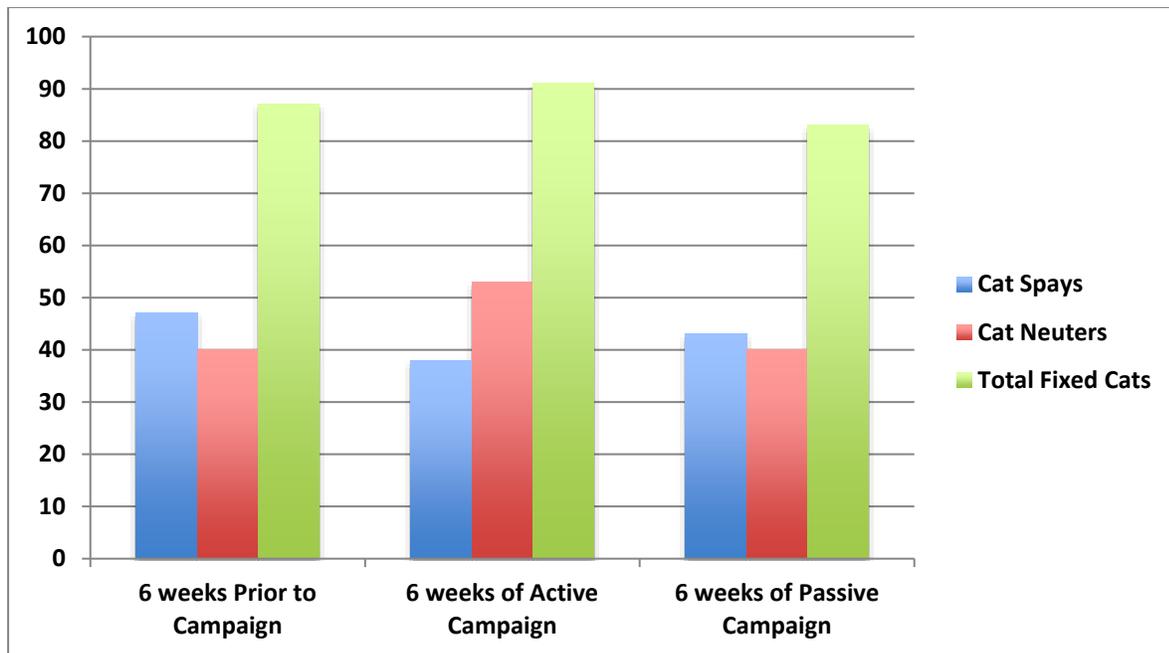


Chart 1. Cat Spays and Neuters in Fort St John by Research Period

To explore the significance of the above findings an independent samples t-test was carried out on the Fort St John Community looking at the Active Research Phase to assess how it compared to the Passive and Pre Research phases. The results, although not significant, were close

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enough to significance that, given the moderate sample size, they could be considered worth reporting ( $t(259) = 1.725, p=.086$ ). The results showed a lower mean ( $M=1.4176, SD=.4959$ ) during the Active Research Phase than during the other Research Phases ( $M=1.5294, SD=.5006$ ), indicating more Neuters were being done in the Active Research Phase. Looking at veterinary clinics separately it was evidential that this result ( $t(67.74) = 1.925, p=.058$ ) was more marked in the North Peace Veterinary Clinic, with means lower ( $M=1.3529, SD=.4851$ ) during the Active Research Phase, compared to the other Research Periods ( $M=1.5507, SD=.5011$ ). This near significant result indeed suggests that something that may have happened, as a result or during the campaign, to encourage additional neutering (and reduce spay procedures) across communities that were paying full cost for their procedures.

### Fort St John Results Summary:

The figures demonstrate no significant increase in cats being brought in for procedures during the Active and Passive Phases of the research, in either of the veterinary clinics, as a result of the campaign in Fort St John. However they do show a near significant increase in Neuter procedures and a decrease in Spay procedures.

### **Breakdown of procedures by Veterinary Clinic:**

#### **Rivers Animal Hospital**

##### **Pre Research Period: 53 cats**

Procedures carried out in 6 weeks prior to research period (Jan 4- Feb 14)

Spays 30

Neuters 23

Research Period Total: 105 cats

##### **Active Research Period: 57 cats**

Procedures carried out in 6 weeks of active research period (Feb 15- March 27)

Spays 26

Neuters 31

##### **Passive Research Period: 48 cats**

Procedures carried out in 6 weeks following active research period (March 28-May 8)

Spays 22

Neuters 26

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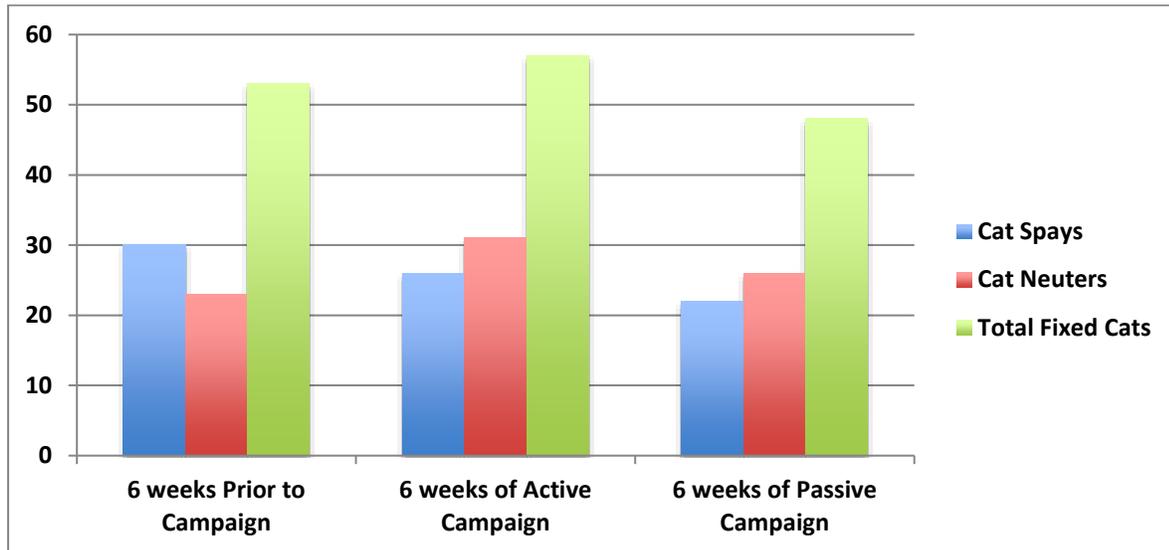


Chart 2. Cat Spays and Neuters at Rivers Animal Hospital in Fort St John by Research Period

### **North Peace Veterinary Clinic**

#### **Pre Research Period: 34 cats**

Procedures carried out in 6 weeks prior to research period (Jan 4- Feb 14)

Spays 17

Neuters 17

Research Period Total: 69 cats

#### **Active Research Period: 34 cats**

Procedures carried out in 6 weeks of active research period (Feb 15- March 27)

Spays 12

Neuters 22

#### **Passive Research Period: 35 cats**

Procedures carried out in 6 weeks following active research period (March 28-May 8)

Spays 21

Neuters 14

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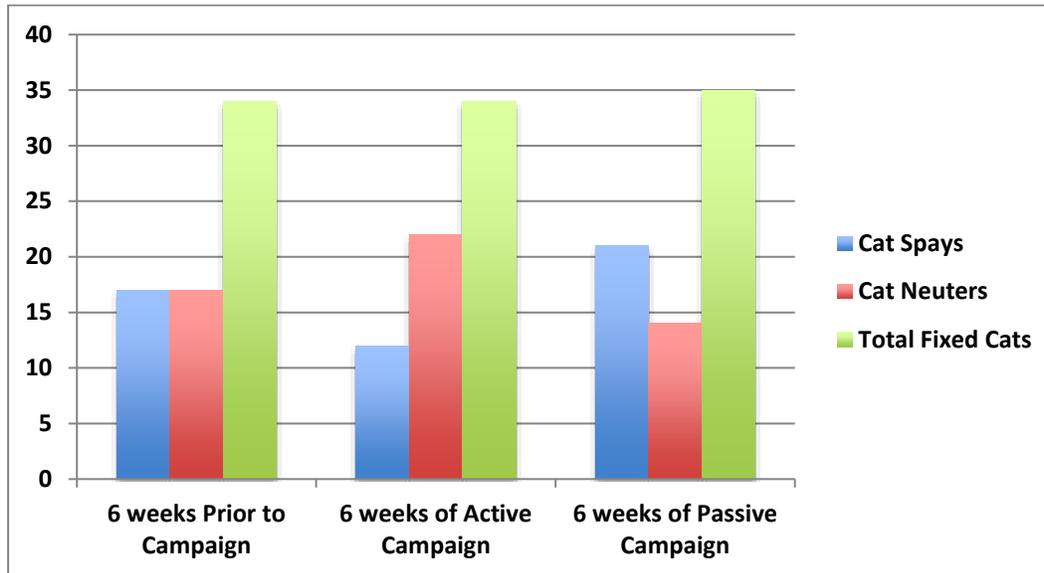


Chart 3. Cat Spays and Neuters at North Peace Veterinary Clinic in Fort St John by Research Period

### Ratio of surveys to actual procedures carried out:

Of the 105 cats fixed at Rivers Animal Hospital during the research period surveys relating to 14/105 cats or 13.3% of the cats were received. Of the 69 cats fixed at the NPVC surveys relating to 34/69 or 49.3% were received. The higher ratio of surveyed cat owners at NPVC speaks to the considerable effort the entire staff at the NPVC made to collaborate and support the research, for which the research team are extremely grateful. These results also highlight the necessity of working closely with supportive partners, and the impact that the goodwill of stakeholders can have when carrying out research of this nature. The data contained within the surveys is explored in more detail later in the report.

### *Dawson Creek Community*

#### Veterinary Record of Fixed Cats:

Procedure records supplied from each veterinary clinic showed that during the period of the research 300 cats were fixed by the two clinics that were monitored in Dawson Creek.

A Cross Tabulation Analysis in SPSS describes the breakdown by each six week research phase (Pre Research, Active Research, Passive Research) and procedure (Spay vs Neuter) in Table 3.

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			ResearchPhase			Total
			Pre Research	Active Research	Passive Research	
Procedure	neuter	Count	44	48	50	142
		% within Procedure	31.0%	33.8%	35.2%	100.0%
	spay	Count	34	76	48	158
		% within Procedure	21.5%	48.1%	30.4%	100.0%
Total	Count		78	124	98	300
	% within Procedure		26.0%	41.3%	32.7%	100.0%

Table. 3 Cross Tabulation of Cat Spays and Neuters in Dawson Creek by Research Period

Scrutiny of the data by type of procedure demonstrates that almost all of the increase in procedure numbers carried out in the Active Research Phase appears to be attributable to an increase in Spay procedures. Specifically it can be seen that 48% of of the spays (n=76) carried out over the entire 18 week period were carried out during the six weeks of the Active Research Phase. Neuter procedures however remained fairly constant during the 18 week monitoring period, with 31% carried out in the Pre Research 6 week period, 34% carried out during the Active Research Phase and 35% carried out during the Passive Research Phase. Assessing percentages by Research Phase we can see from the Cross Tabulation Table 4. that in the Active Research Phase 61% of procedures were spays, which is distinct from the much more equal splits in procedures, in both the Pre Research and Passive Research Phases.

### Procedure \* ResearchPhase Crosstabulation

			ResearchPhase			Total
			Pre Research	Active Research	Passive Research	
Procedure	neuter	Count	44	48	50	142
		% within ResearchPhase	56.4%	38.7%	51.0%	47.3%
	spay	Count	34	76	48	158
		% within ResearchPhase	43.6%	61.3%	49.0%	52.7%
Total	Count		78	124	98	300
	% within ResearchPhase		100.0%	100.0%	100.0%	100.0%

Table. 4 Cross Tabulation of Cat Spays and Neuters in Dawson Creek by Research Period

To assess the statistical significance of the above results an independent samples t-test was performed on the Dawson Creek Community data looking at the Active Research Phase and comparing it to the Passive and Pre Research phases. The results show a higher mean during the Active Research Phase (M=1.6129, SD=.4891), compared to other periods of Research (M=1.4659, SD=.5003) demonstrating that there was a higher tendency for Spay Procedures

## How to say ‘Spay’ BCSPCA UBC Research Report

during this Active Research Phase , a finding which was statistically significant,  $t(268.6) = 2.539$ ,  $p=.012$ .

We also examined the influence of whether the procedure was done at full or reduced cost. Cross Tabulation in Table 5. shows that reduced cost/free spay procedures made up the lions share (47%) of all procedures, in the surgeries in Dawson Creek, carried out during the Active Research Phase. This result is not necessarily surprising since spay procedures are typically more costly than neuter procedures, so it would make financial sense for cat owners to utilize reduced cost funding to ease the particularly painful financial cost of spaying.

			ResearchPhase			Total
			Pre Research	Active Research	Passive Research	
Procedure by Cost	SPAY Full Cost Procedure	Count	34	18	32	84
		% within ResearchPhase	43.6%	14.5%	32.7%	28.0%
	SPAY Reduced Cost/Free Procedure	Count	0	58	16	74
		% within ResearchPhase	0.0%	46.8%	16.3%	24.7%
	NEUTER Full Cost Procedure	Count	44	17	29	90
		% within ResearchPhase	56.4%	13.7%	29.6%	30.0%
	NEUTER Reduced Cost/Free Procedure	Count	0	31	21	52
		% within ResearchPhase	0.0%	25.0%	21.4%	17.3%
Total		Count	78	124	98	300
		% within ResearchPhase	100.0%	100.0%	100.0%	100.0%

Table 5. Cross Tabulation of Cat Spays and Neuters in Dawson Creek by Research Period and cost of procedure

Again we checked the statistical significance of this result. For cats fixed at full cost in the Dawson Creek community the data showed no statistically significant differences between the ratio of spays and neuters done during the Active Research Phase. However for cats fixed at reduced cost an independent samples t-test ( $t(124) = 2.307$ ,  $p=.023$ ) showed a significantly greater amount of spays were requested and carried out during the Active Research Phase ( $M=1.6517$ ,  $SD=.4791$ ) compared to outside of this phase ( $M=1.4324$ ,  $SD=.5023$ ).

### Dawson Creek Results Summary:

Procedures went up significantly during the Active Research Phase. Further analysis confirmed that this was almost entirely due to an increase in Spays done at either at reduced cost or for free. Cats fixed at full cost during the Active Research phase were equally proportioned between spay and neuter procedures.

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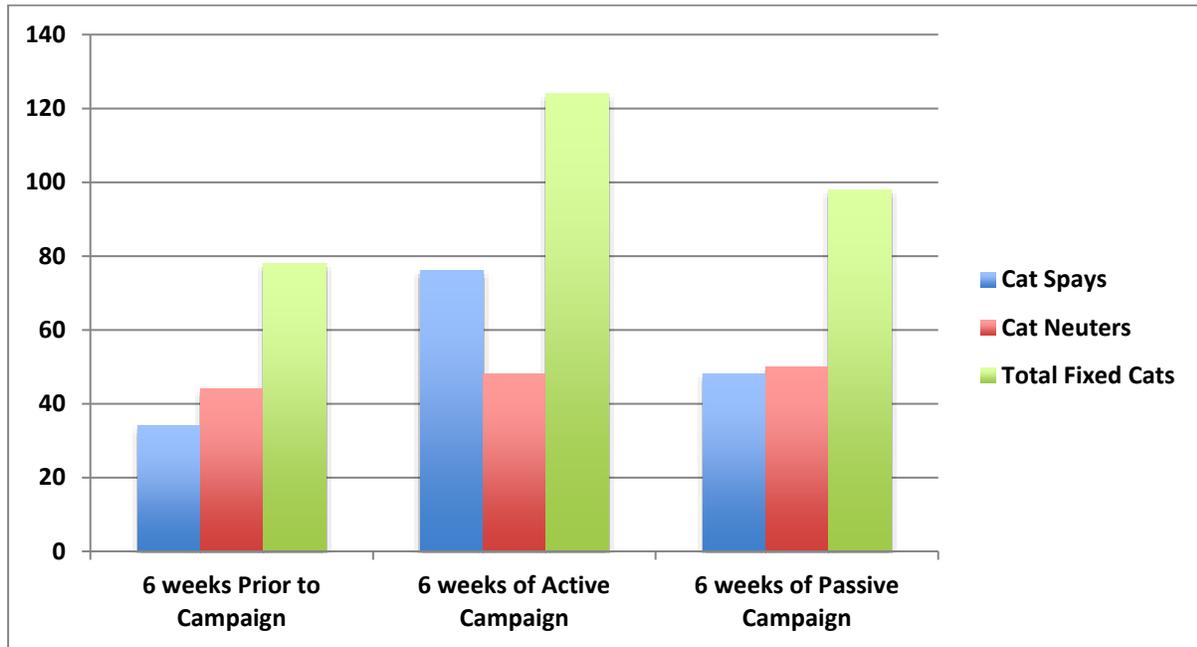
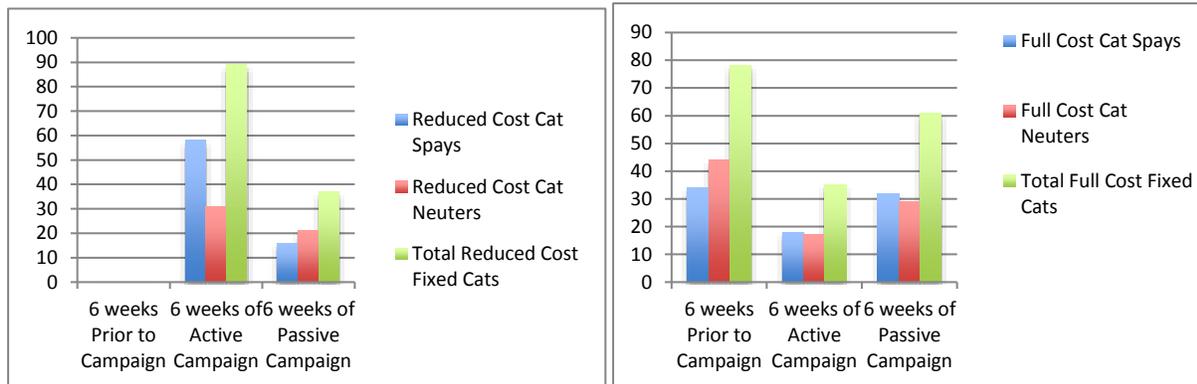


Chart 4. Cat Spays and Neuters in Dawson Creek by Research Period



Charts 5. & 6. Cat Spays and Neuters in Dawson Creek by Research Period and Cost

### Breakdown of procedures by Veterinary Clinic:

#### Dawson Creek Veterinary Clinic

##### Pre Research Period: 47 cats

Procedures carried out in 6 weeks prior to research period (Jan 4- Feb 14)

Spays 22

Neuters 25

Research Period Total: 124 cats

##### Active Research Period: 69 cats

Procedures carried out in 6 weeks of active research period (Feb 15- March 27)

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Full Cost:

Spays 13

Neuters 8

Reduced Cost:

Spays 34

Neuters 14

### Passive Research Period: 55 cats

Procedures carried out in 6 weeks following active research period (March 28-May 8)

Full Cost:

Spays 21

Neuters 14

Reduced Cost:

Spays 9

Neuters 11

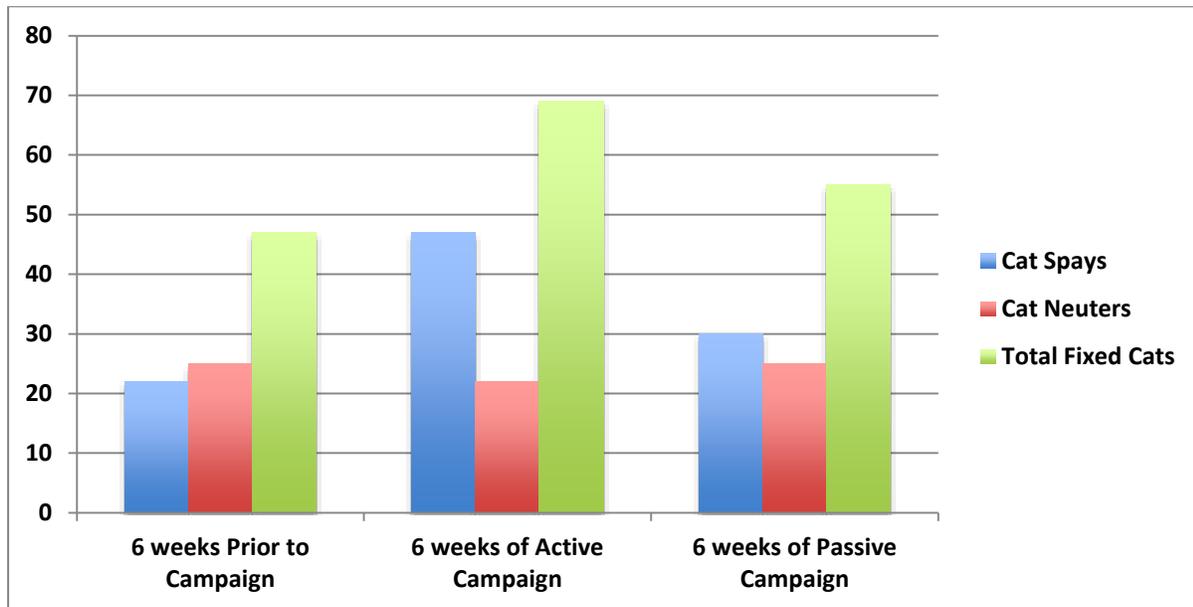
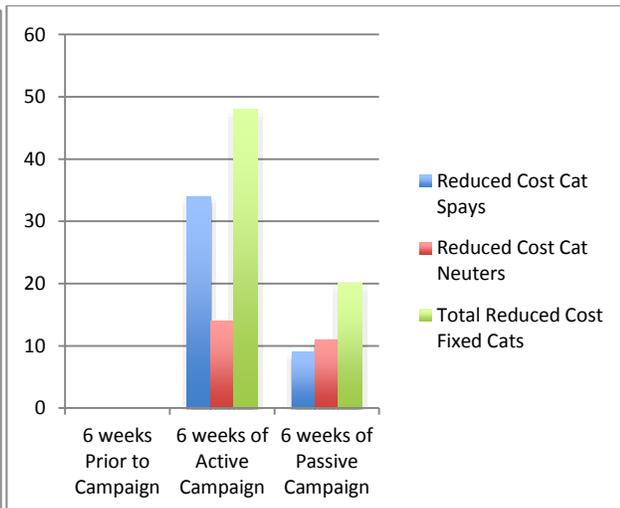
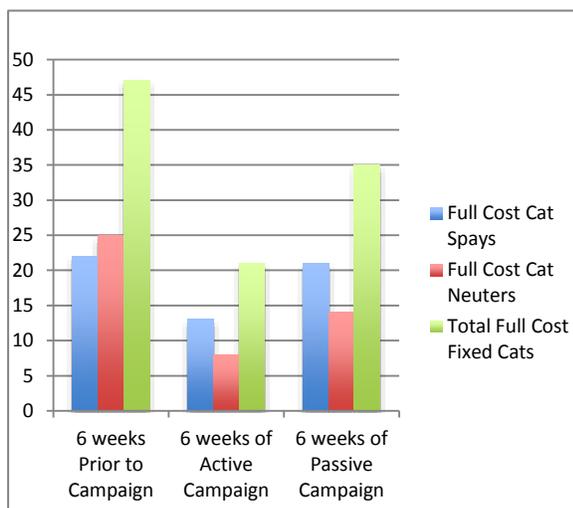


Chart 7. Cat Spays and Neuters at Dawson Creek Veterinary Clinic in Dawson Creek by Research Period



Charts 8. & 9. Cat Spays & Neuters at Dawson Creek Veterinary Clinic in Dawson Creek by Research Period and Cost.

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### South Peace Animal Hospital

#### **Pre Research Period: 31 cats**

Procedures carried out in 6 weeks prior to research period (Jan 4- Feb 14)

Spays 12

Neuters 19

Research Period Total: 98 cats

#### **Active Research Period: 55 cats**

Procedures carried out in 6 weeks of active research period (Feb 15- March 27)

Full Cost:

Reduced Cost:

Spays 5

Spays 24

Neuters 9

Neuters 17

#### **Passive Research Period: 43 cats**

Procedures carried out in 6 weeks following active research period (March 28-May 8)

Full Cost:

Reduced Cost:

Spays 11

Spays 7

Neuters 15

Neuters 10

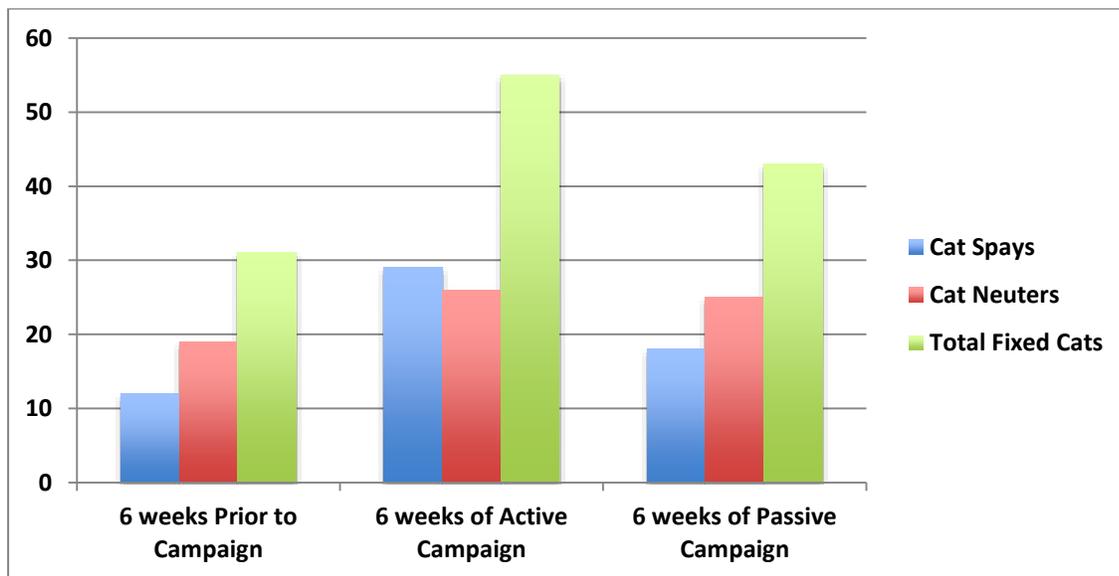
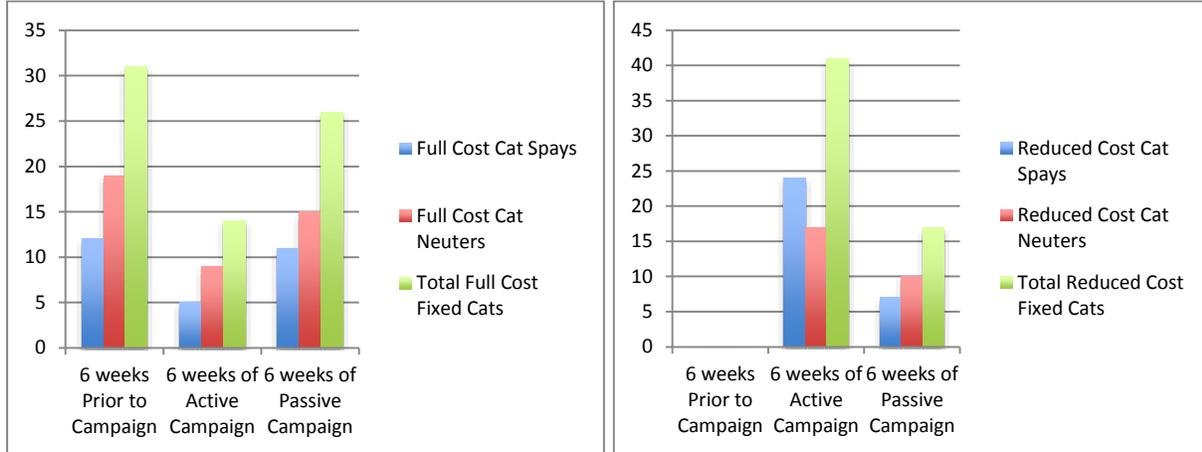


Chart 10. Cat Spays and Neuters at South Peace Animal Hospital in Dawson Creek by Research Period

## How to say 'Spay' BCSPCA UBC Research Report



Charts 11. & 12. Cat Spays & Neuters at South Peace Animal Hospital in Dawson Creek by Research Period and Cost

### Surveyed Cats:

In the Dawson Community 70 full surveys were completed during the entire research period Feb 15- May 8 2016. Breakdown by vet clinic below.

South Peace Animal Hospital: 55

Dawson Creek Veterinary Clinic: 15

These 70 surveys gave details on 71 cats that were brought in for spay/neuters. Of these 71 cats 35 were marked as female cats and 34 were marked as male cats. Two did not have gender details.

### Ratio of surveys to actual procedures carried out:

Of the 124 cats fixed at Dawson Creek Vet Clinic during the research period surveys relating to 15/124 cats or 12.1% of the cats were received. Of the 98 cats fixed at the South Peace Animal Hospital surveys relating to 55/98 or 56.1% were received. Again, as with Fort St John, the differences in these percentages of surveyed owners bear testament to the difference a dedicated veterinary clinic team of staff can make in supporting research aims, for which the resaearch team is deeply grateful. The data contained within the surveys is explored in more detail in the survey section that follows.

### 4.2.2 Research Survey Data

During the Research Period 124 surveys were returned, although a sizable number were missing some data in places. Missing data usually fell in the demographic section and, disappointingly, this often included the section that would have allowed the messaging condition to be matched to the survey respondents answers. This was particularly true of the Fort St John data, which is perhaps not surprising since these residents were receiveing no free procedures

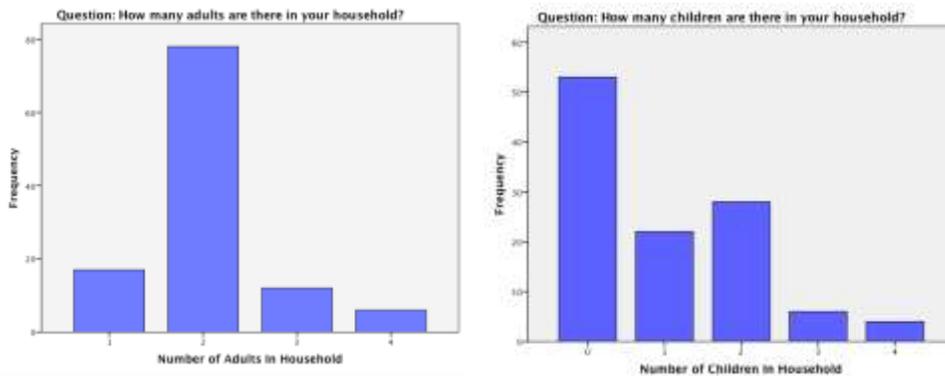
## How to say 'Spay' BCSPCA UBC Research Report

and therefore may have had less incentive to fill in the survey questions diligently. As a result of this short fall not as much analysis regarding the type of messaging could take place as was initially planned.

### General Survey Demographics

#### Numbers of Adults and Children in Surveyed Families.

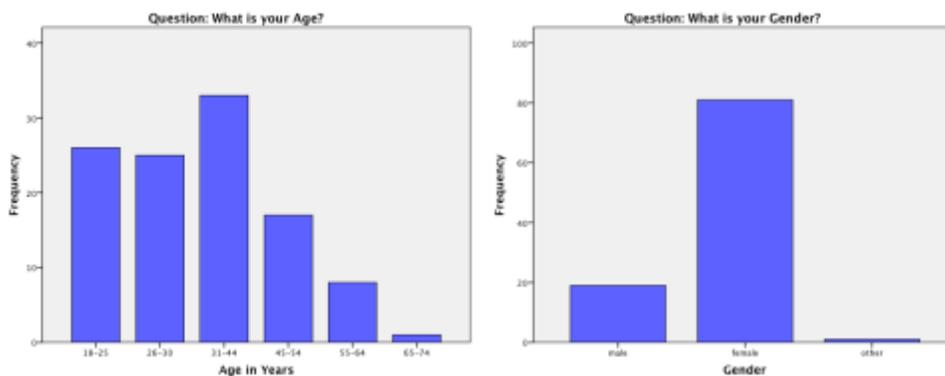
Survey respondents were asked how many adults and children were in their household. In terms of adults the highest frequency of response was for two adults, with 69% of respondents choosing this option. This was followed by one adult (15%), then three adults (10.6%) and four adults (5.3%). The most frequent category for numbers of children in households was zero (46.9%) followed by two (24.8%), one (19.5%), three (5.3%) and four (3.5%).



Charts 13. & 14. Family composition demographics

#### Age and Gender of Survey Respondents

Survey respondents were generally fairly well spread across the 18-54 year age groups. Specifically the highest frequency was seen in the 31-44 years age category (30%) followed by the 18-25 year age group (23.6%), the 26-30 year age group (22.7%) and the 45-54 year age group (15.5%). Only 8.2% of respondents were over 54 years old. In terms of gender 80.2% of respondents identified as female, and 18.8% as male.

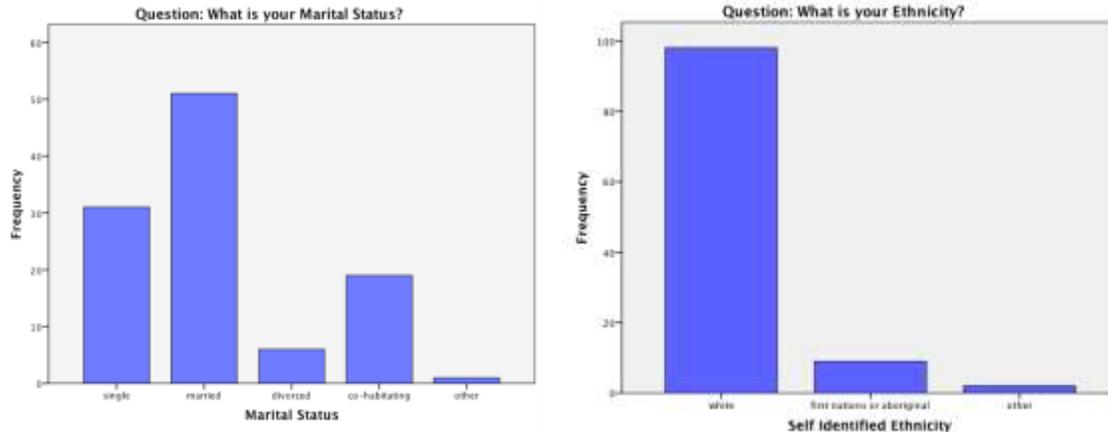


Charts 15. & 16. Age and gender demographics

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### Marital Status and Ethnicity of Survey Respondents

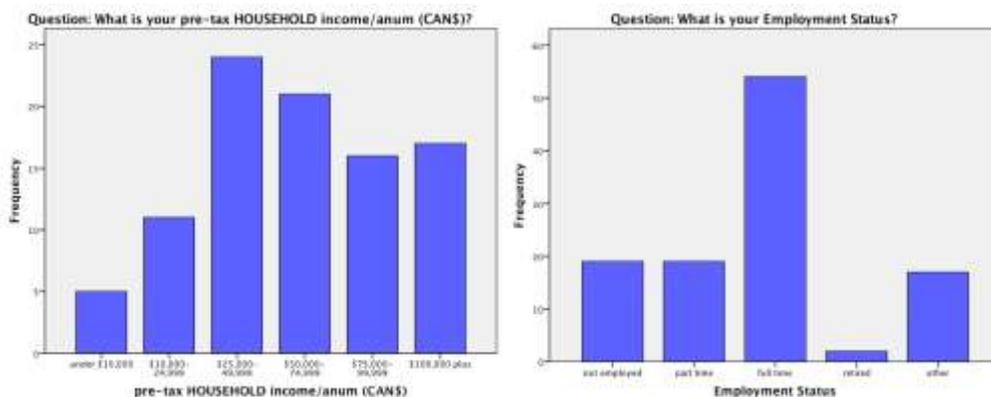
Of the respondents questioned 47.2% identified as married, 28.7% as single, 17.6% as cohabiting and 5.6% as divorced. Regarding ethnicity 89.9% of respondents identified as White, and 8.3% as First Nations/ Aboriginal.



Charts 17. & 18. Marital status and ethnicity demographics

### Income and Employment of Survey Respondents

Pre-tax household income (annual in Can\$) was widely spread with the highest frequency in the \$25,000-\$49,999 category (25.5%), followed by the \$50,000-\$74,999 category (22.3%). Of the remainder 35.1% identified as having an income of \$75,000 or over, and 17% as having an income of under \$25,000. The largest employment category identified was full time at 48.6% followed by part time work or unemployed, both at 17.1%. Only 1.8% of respondents identified as retired.



Charts 19. & 20. Income and employment demographics

### Education Level of Survey Respondents

The majority of respondents stated that their highest educational level was high school (52.7%). This was followed by 15.5% who indicated they had a diploma, 15.5% who indicated they had technical or skills based training, and 12.7% with a graduate degree.

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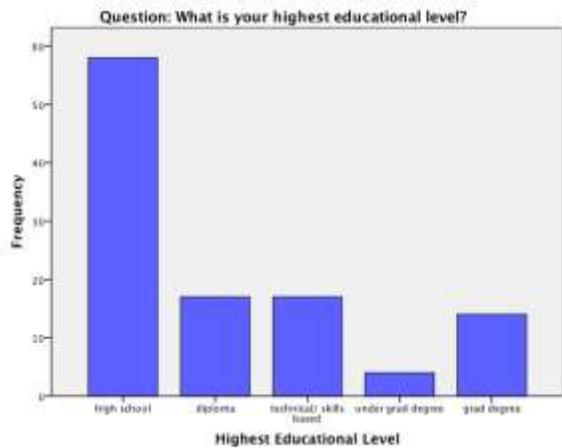


Chart 21. Education demographics

### Animal Ownership of Survey Respondents

Survey respondents were asked to account for how many cats they owned. Generally the most common response was ownership of one cat (42.4%), with 39% of respondents owning 2 cats and only 17.7% owning more than 2 cats. Regarding dog ownership 41.5% of survey respondents did not own any dogs. Of all respondents 37.3% owned a single dog and 21.2% owned two or more dogs. The majority (86.4%) of households did not own any other animals.

### Demographic Differences Between the Fort St John and Dawson Creek Survey Respondents

A number of demographic differences were observable in the data captured from the two communities respondents. In terms of adults and children in households Dawson Creek respondents had a lower percentage of two adult households (59.4%) compared to Fort St John respondents (84.1%). The number of children in households however was similar across communities with 47.7% of Fort St John respondents reporting zero children, and 27.3% two children, compared to Dawson Creek respondents reporting 46.4% households with zero children, and 23.2% with two children. In terms of age and gender the most common age bracket in Dawson Creek respondents was 31-44 years (35.8%) compared to Fort St John respondents with 20.9% in this age bracket. Fort St John respondents were more evenly spread between the ages of 18 and 54 years compared to Dawson Creek respondents, but there were no especially major differences in terms of age otherwise. From the point of view of gender 73% of Dawson Creek survey respondents were women, whilst in Fort St John 92.1% were women. This was confirmed as significant by an independent samples t test ( $t(98.96) = -2.165, p=.03$ )

## How to say 'Spay' BCSPCA UBC Research Report

Regarding marital status and ethnicity 62.8% of respondents from Fort St John identified as married, compared to 36.9% of Dawson Creek respondents. Cohabitation rates were higher amongst respondents from Dawson Creek (21.5%) compared to Fort St John (11.6%). Nearly 98% of Fort St John respondents identified as ethnically white, compared to 84.8% of Dawson Creek respondents, again this result was statistically significant ( $t(92.22) = 2.593, p=.01$ ). This difference in ethnicity was primarily accounted for by the fact that Dawson Creek respondents had larger numbers identifying as First Nations/Aboriginal (12.1%) compared to Fort St John (2.3%) respondents.

In terms of income and employment 57.8% of Fort St John respondents reported a pre tax household income of \$75,000 or higher, and only 2.6% reported having a household income of under \$25,000. In Dawson Creek however incomes were generally lower with only 19.6% of respondents reporting a pre tax household income of \$75,000 or higher, and 26.8% reporting having a household income of under \$25,000. This difference in income between community respondents was also statistically significant ( $t(92) = -4.153, p=.00$ ).

Finally analysis showed that 42.6% of Dawson Creek respondents reported as being in full time work, whereas 58.1% of Fort St John respondents reported to be in full time work. In terms of highest educational level achieved 13.9% of Fort St John respondents reported an educational level of undergraduate degree or higher, compared to 17.9% of Dawson Creek respondents. In the Dawson Creek sample 55.2% of respondents had high school as their highest educational level compared to 48.8% in the Fort St John sample.

### **Differences between Survey Demographics, Actual Demographics (and Malatest results).**

As with any research the issue of representativeness should be considered, especially when there is a potential hope to be able to generalize the research results. Our survey sample may be generalizable to cat owners in the communities, but can not be considered representative of the Dawson Creek or Fort St John Communities at large. An example of this can be seen in terms of the difference in both age and gender of the survey respondents compared to the Dawson Creek and Fort St John actual populations, as measured by Statistics Canada in the 2011 census, and by Malatest in their associated research. See below for a gender comparison illustrating the differences.

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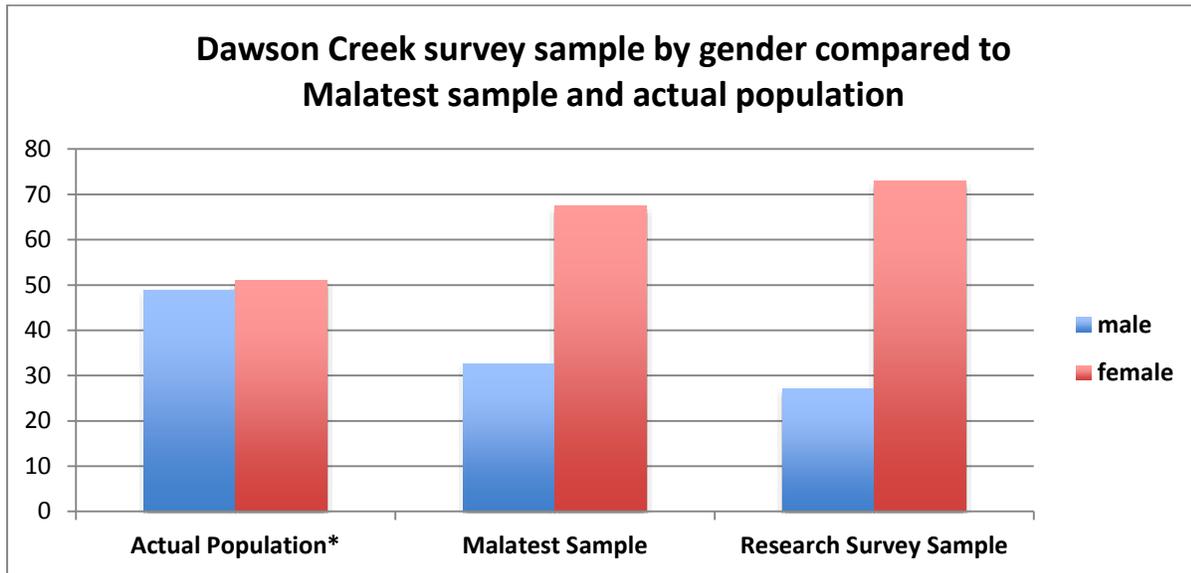


Chart 22. Dawson Creek sample comparison

\* Source: Statistics Canada, 2011 Census of Population, Statistics Canada Catalogue no. 98-311-XCB2011022.

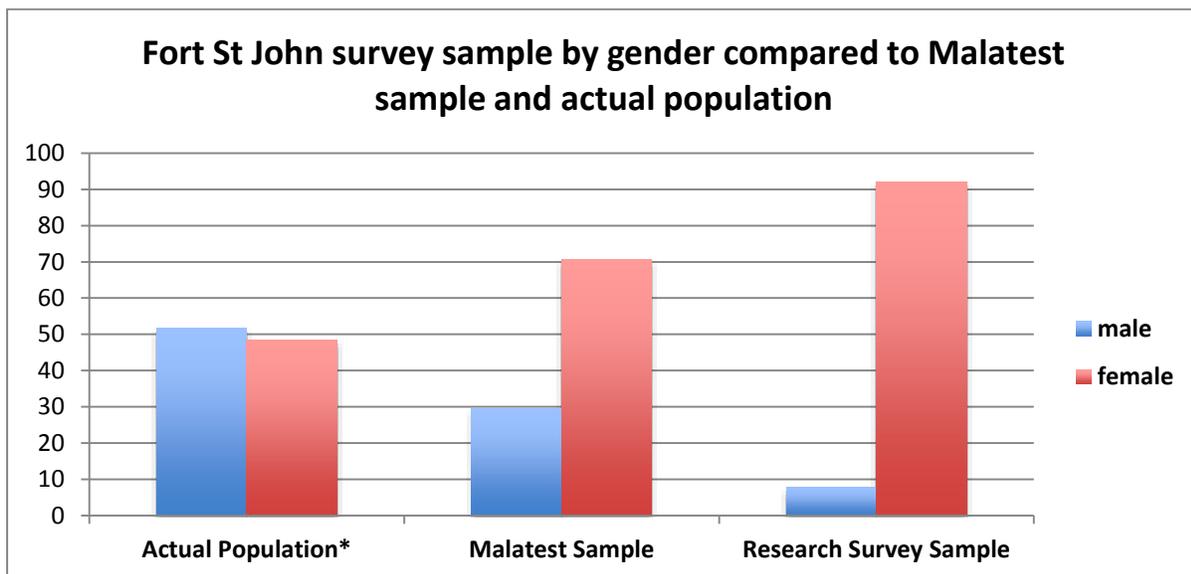


Chart 23. Fort St John sample comparison

\* Source: Statistics Canada, 2011 Census of Population, Statistics Canada Catalogue no. 98-311-XCB2011022.

### *Survey Distribution and Collection Data*

#### **Returned Survey Distribution and Collection dates.**

As previously reported 124 surveys were collected of which 120 identified which community they belonged to. The figures show that 59.2% of all surveys were collected from Dawson Creek, and 40.8% from Fort St John. Breaking surveys down by veterinary clinic we had 45.8%

## How to say 'Spay' BCSPCA UBC Research Report

of all surveys returned from South Peace Animal Hospital in Dawson Creek, and 28.3% returned from the North Peace Veterinary Clinic. Dawson Creek Veterinary Clinic collected 13.3% of all our surveys and the Rivers Animal Hospital collected 12.5%. Rivers Animal Hospital also had the highest amount of incomplete surveys collected, with a good number of surveys collected from this clinic lacking basic demographic information.

In terms of when most surveys were collected there was a clear grouping of surveys being collected during mid March, around the peak of the Active Research Phase, and there was another high in late April as the final collection period came to a close. The latter high may reflect a drive on the part of clinic staff to collect surveys as the research drew to a close.

### *Detailed Survey Findings*

#### Valuation of Animals

Across both communities general views on cat issues were sought. Stray cats were considered to be a problem in the community by 53% of all respondents. The idea of bringing in cat licensing was supported (agree/strongly agree) by 34.5%, and unsupported by 30.2% (disagree/strongly disagree) with 39.3% remaining neutral. Views were generally split between whether cats were, or were not, low maintenance pets, with slightly more (41.3%) supporting this view. There was support for the view that feeding a cat made someone responsible for it (50.5%). There was very strong disagreement with the idea that cats were not as valuable as dogs (85.1%). Owners were strongly in favour of all outside access cats being spay/neutered (85.4%).

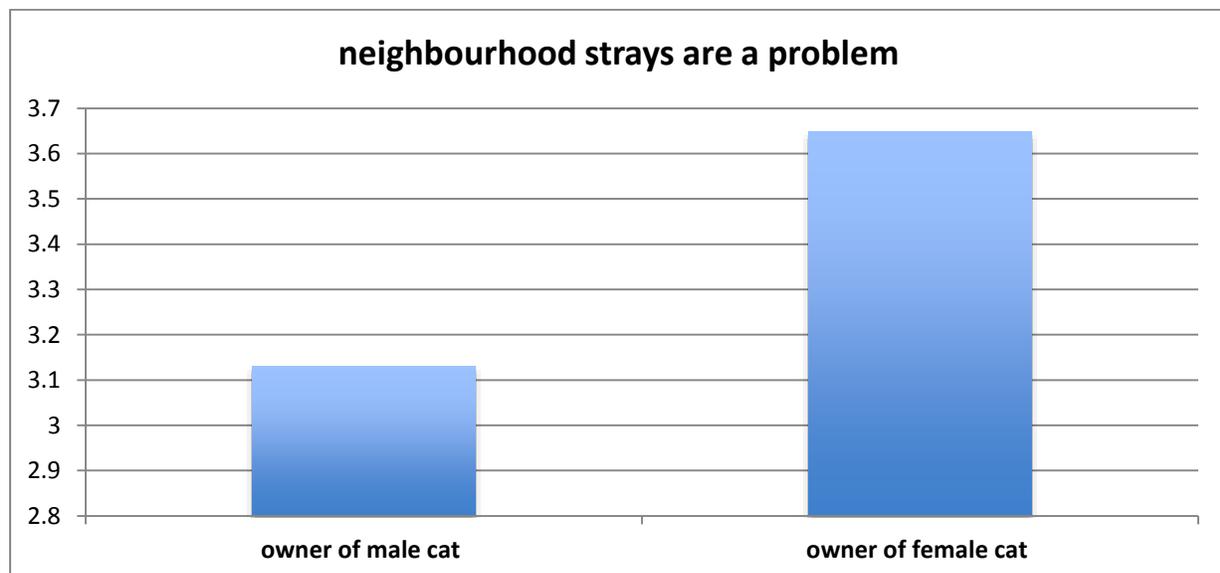


Chart 24. Perception that stray cats are a problem in neighbourhood, by cat gender. Measurement scale in means.

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An independent samples t-test ( $t(106) = -2.549, p = .012$ ) revealed a significant difference in how people felt about stray cats in the area, depending on whether they were bringing in a male or female cat to be fixed. Owners bring in a female to be spayed considered neighbourhood stray cats to be more of a problem ( $M = 3.6481, SD = 1.0123$ ) than did male cat owners getting their cat neutered ( $M = 3.1296, SD = 1.0997$ ). There were no significant differences across communities, nor were there significant differences dependent on cost of procedure.

### Valuation of BC SPCA

Across both communities 94.7% of respondents either agreed or strongly agreed that the BCSPCA did a valuable job, and 87.6% that the BCSPCA did a professional job. The percentage of respondents that felt that the BCSPCA did a trustworthy job was 87.6%, and 95.7% of respondents supported the work of the BCSPCA in their community.

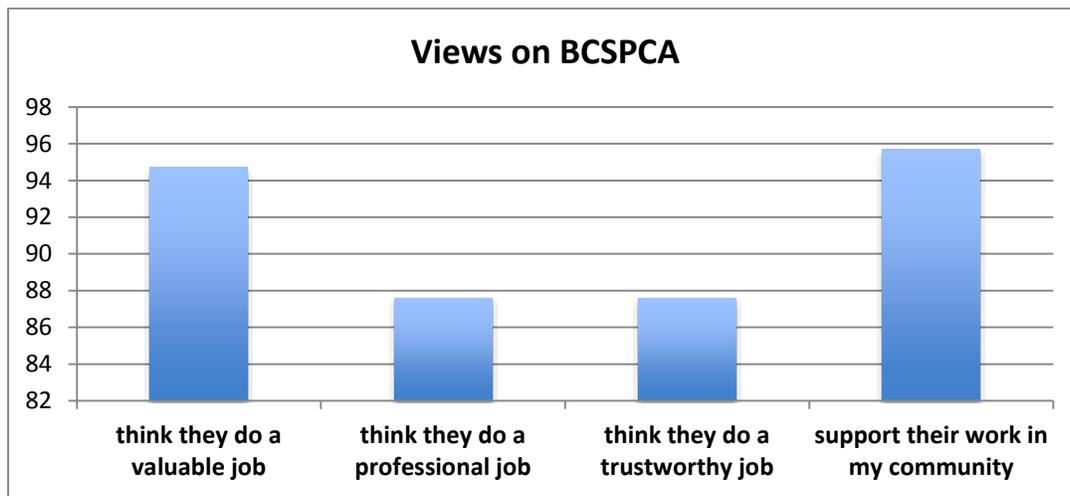


Chart 25. Perception of the BCSPCA. Measurement scale in percentage.

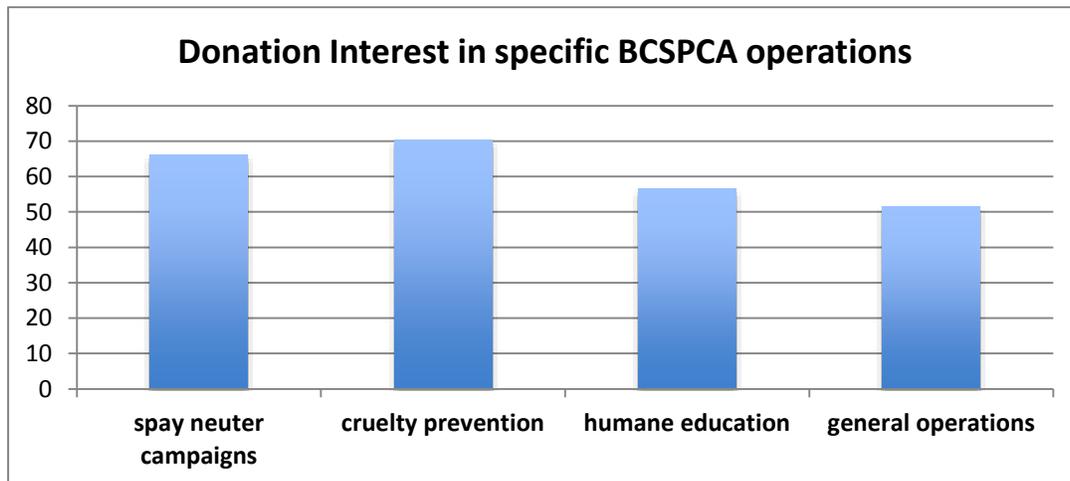


Chart 26. Donation Intention to BCSPCA operations. Measurement scale in percentage.

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In terms of donation intention 66% of respondents said they were somewhat or very interested in donating to spay/neuter campaigns, 70.3% to cruelty prevention campaigns, 56.6% to humane education, and 51.5% of respondents to general operations.

### Campaign Impact/ Information Source

Across all groups the largest information source that respondents said that they noticed which prompted them to come in to have their cat spay/neutered was door hangers (28.2%), followed by personal communication (21.8%). This was in turn followed by internet/online source (17.9%), BCSPCA staff (12.8%), radio ad (9%), community poster (3.8%), local newspaper (2.6%), other (2.6%) and lastly TV ad (1.3%). These results can be directly compared to the results in the Malatest Research, later in this report, asking about campaign info, but this time of the general public, as opposed to cat owners that had brought their cat in to be fixed.

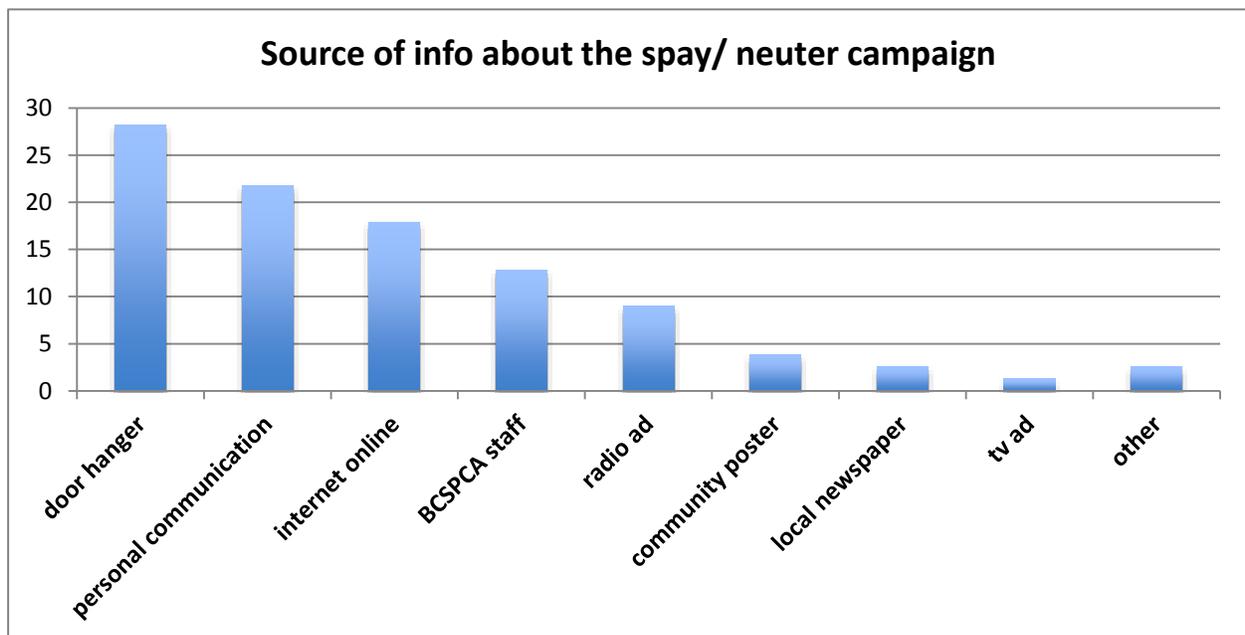


Chart 27. Source of information about the campaign. Measurement scale in percentage.

Separating the data by community displayed a number of different patterns. It should be remembered that there were no reduced cost options in Fort St John so these residents were all paying full cost. Likewise most survey respondents in Dawson Creek were owners that received their procedure at reduced cost or free.

## How to say 'Spay' BCSPCA UBC Research Report

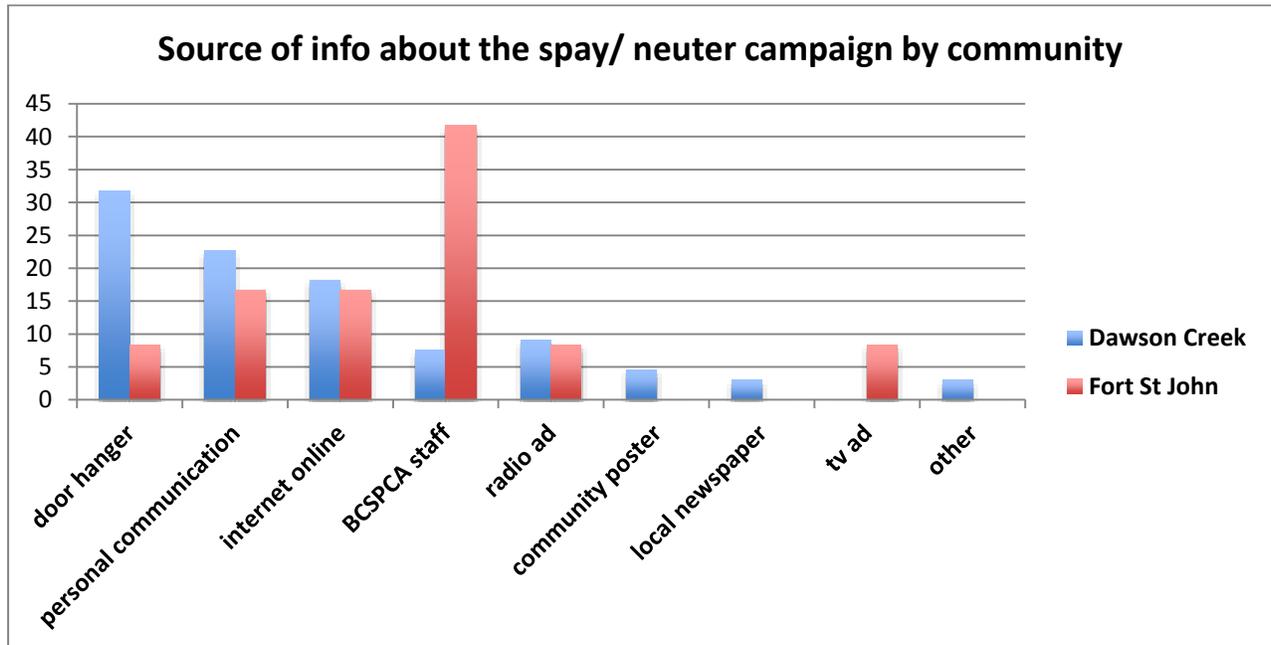


Chart 28. Source of information about the campaign by community. Measurement scale in percentage.

### Influence of Cost and Cat Gender

#### *Procedure by Cat Gender.*

Over both communities the genders of the cats being brought in for procedures during the campaign were found to be broadly equal with 48.7% of cats reported to be being male, and 51.3% of cats reported to be female. There were no major differences between communities with these figures. For further insights see the separate breakdown of how this changed with cost-of-procedure below.

#### *Cost of Procedure by Survey Participation.*

Over the entire survey collection period (Active and Passive Research Phases) and across both communities 48.8% of all procedures detailed in surveys were done at full cost and 56.2% were done at reduced cost. However this combined result gives a false appreciation of the data since all procedures carried out in Fort St John were done at full cost.

Focusing on the Dawson Creek area alone the data shows that during the Active and Passive Research Phases combined 95.7% of surveyed respondents had their cat fixed at reduced cost, and only 4.3% of respondents had their cat fixed at full cost. A look at the veterinary figures clearly shows how this proportion is substantially different from the actual cats fixed, at full and reduced cost. In terms of actual procedures carried out in Dawson Creek during the Active and Passive Research Phases combined there were 96 reported full cost procedures, and 126

## How to say 'Spay' BCSPCA UBC Research Report

reduced cost/free procedures, which represents 43.2% of actual procedures carried out at full cost and 56.8% of actual procedures carried out at reduced cost or free. We can therefore see that almost all of the survey respondents in Dawson Creek were from the 56.8% of the community that had their cats fixed at reduced cost. When looking at the data and analysis therefore it is important to be mindful that in Dawson Creek there is very little survey data from owners who paid full cost to fix their cat, and that the opinions contained within the surveys are not at all representative of these owners.

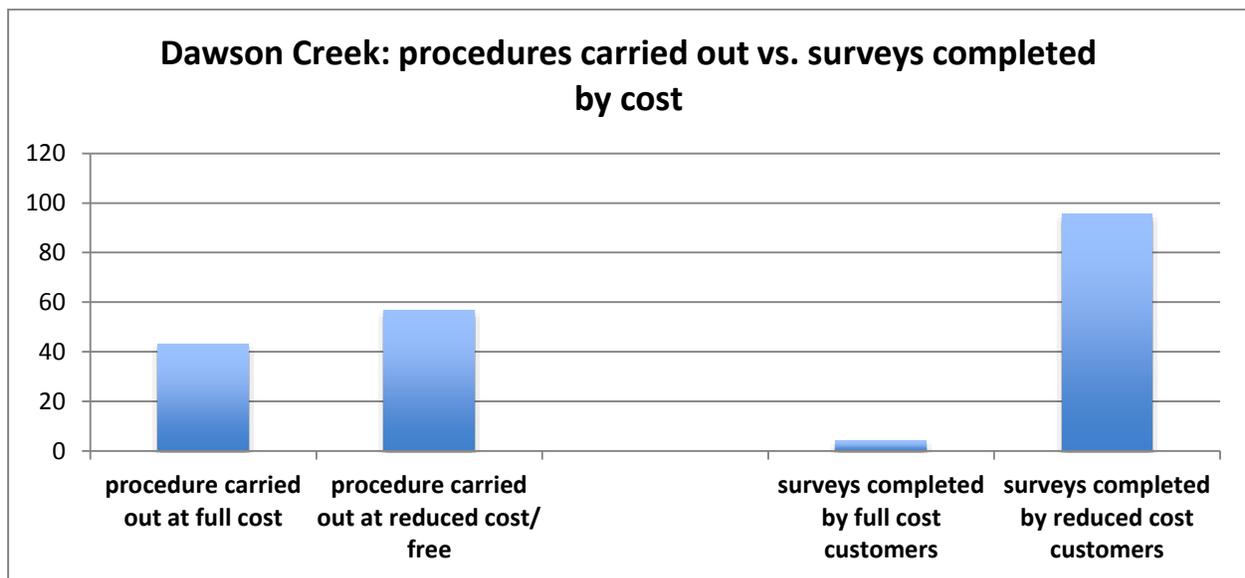


Chart 29. Procedures carried out compared to surveys completed. Measurement scale in percentage.

### Barriers, Incentives, and Motives for Spay/ Neuter Take Up

Survey respondents were given a choice of 10 named barriers (plus one open option) for reasons why people in their community might not spay neuter their cat. See appendix. This list of barriers was formed from barriers cited in past research and work in the area as well as barriers suggested by past BC SPCA research. Survey respondents were asked to rank the top 5 barriers in order of how important they considered each barrier to be. Some respondents found it difficult to do this ranking task, so the analysis also assessed how frequently each barrier occurred in a list of top three barriers, as well as how often it was mentioned at all.

Survey respondents were also given a choice of 9 named incentives (plus one open option) for reasons why people in their community might feel incentivized to spay neuter their cat. See appendix. This list of incentives was formed from incentives cited in past research and work in the area as well as incentives suggested by past BC SPCA research. Survey respondents were asked to rank the top 5 incentives in order of how important they considered each one to be.

## How to say 'Spay' BCSPCA UBC Research Report

Some respondents found it difficult to do this ranking task also, so it was also assessed how frequently each incentive occurred in a list of top three incentives, as well as how often it was mentioned at all.

In addition to these tasks we asked survey respondents to give, in their own words, three reasons why they personally had chosen to come in to get their cat spay/neutered on that occasion. These answers were coded into a variety of grouped answers relating to reasons such as “cat health” “improved behaviour” “breeding concerns” etc. The answers to this question generally followed along similar lines to the barrier and incentive lists, but did contain some additional insights, such as the hassle factor of heat and breeding related behaviour impacting owners motivations to bring a cat in.

### *Barriers to spay/neutering a cat*

Not surprisingly “cost of procedure” was listed in the top three barriers the most frequently on average ( $M = .9189$ ,  $SD = .2742$ ). This named barrier was followed by “not a priority” ( $M = .3874$ ,  $SD = .4894$ ), and “inconvenience” ( $M = .3243$ ,  $SD = .4702$ ). “Transport concerns” ( $M = .2342$ ,  $SD = .4254$ ) and “lack of information on how to get it done” ( $M = .2182$ ,  $SD = .4149$ ) were also listed as significant barriers.

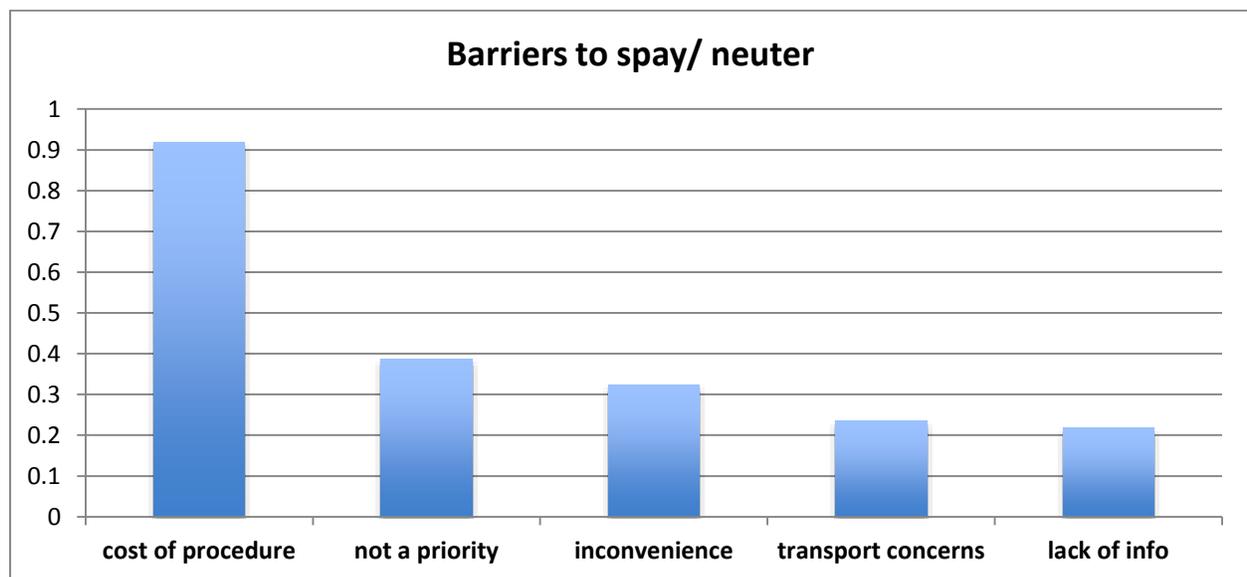


Chart 30. Barriers to spay/ neuter. Measurement scale in means.

### *Incentives for spay/neutering*

Not surprisingly “to prevent breeding” was listed in the top three incentives the most frequently on average ( $M = .8000$ ,  $SD = .4022$ ). This was followed by “reducing cat over

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population" (M= .5444, SD= .5008), and "because it was the right thing to do" (M= .4111, SD= .4948). To reduce "cat fighting/disturbances" (M= .3111, SD= .4655) , "to make the cat more friendly/companionable" (M= .2778, SD= .4504) and "concern for cat well-being" (M= .2111, SD= .4104) were also listed as significant incentives to spay/neutering.

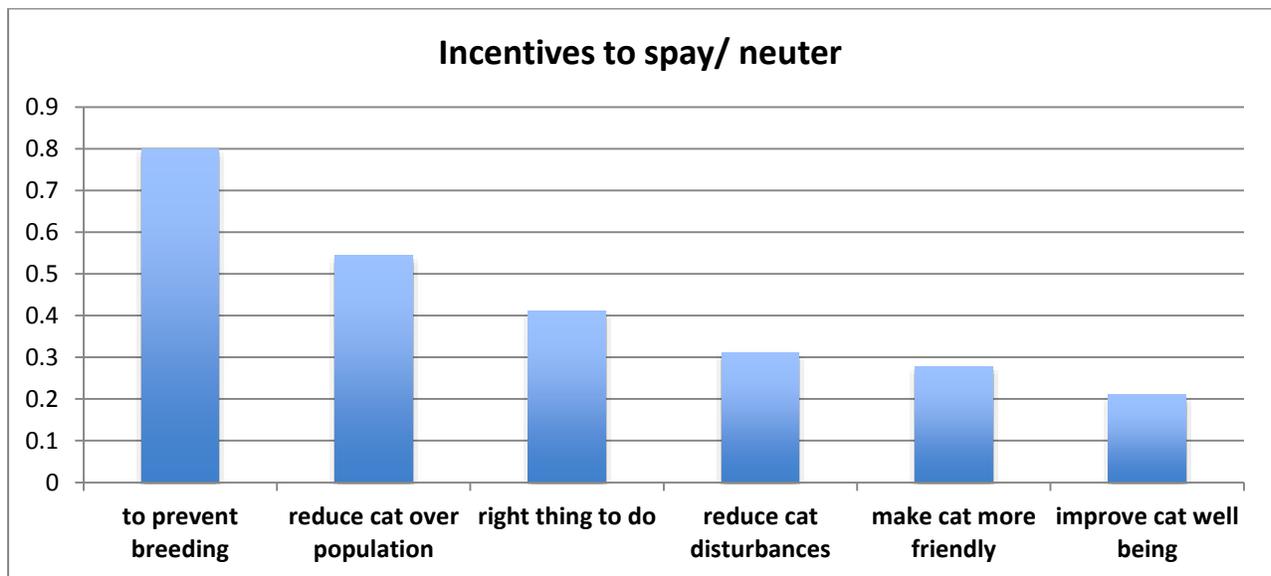


Chart 31. Incentives to spay/ neuter. Measurement scale in means.

### *Reasons individuals gave for bringing their own cat in to be spay/neutered on that occasion*

"To avoid having kittens" as a reason for bringing a cat in accounted for 17.5% of all answers, and was listed as the number one reason to bring a cat in for 35.2% of the time. When grouped together concerns regarding cat breeding, cat population issues and unwanted kittens accounted for 33.3% of all reasons for bringing an individual cat in to be fixed.

Reducing unwanted behaviour specifically associated with heat cycles (bleeding, yowling, spraying fighting, wandering) was another reasons that people gave for bringing a cat in. Grouped together this accounted for 20.4% of reasons why owners brought a cat in to be fixed.

Pragmatics ("less complications" "needed doing" "responsible thing to do" "so that cat can go out""keep cat clean") accounted for 16.8% of all reasons.

Improving cat behaviour reasons , specifically "improving cat tempement" as well as "making the cat less aggressive", and "reducing hassel from other cats" was also a popular reason for

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bringing a cat into be fixed. Grouped together a desire to improve cat behaviour accounted for 11.7% of reasons for bringing a cat in.

Improving or safeguarding cat health and wellbeing (“improve wellbeing”, “keep cat safe”, “love cat”) was another popular reason for bringing a cat in. Grouped together reasons of this type accounted for 9.5% of stated reasons for bringing a cat in.

Keeping costs down (“free SPCA program” “reduce vet bills”) was seen as a minor reason to bring a cat in to be fixed and accounted for 5.6% of all reasons. Other reasons accounted for 2.7% of reasons.

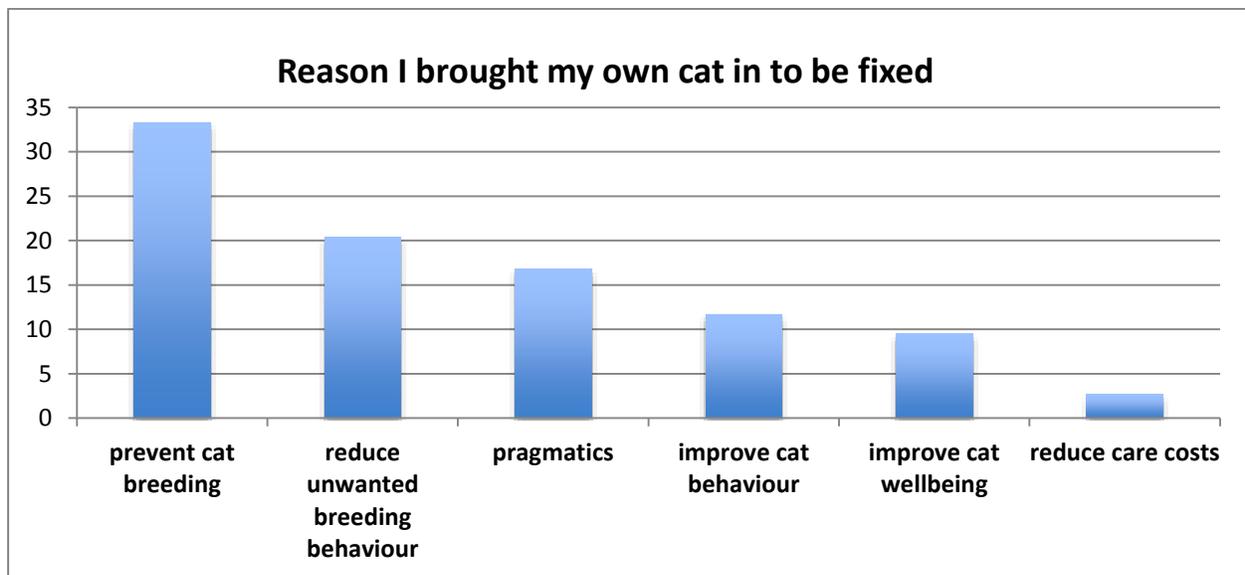


Chart 32. Reasons to spay/ neuter. Measurement scale in percentage.

### *Impact of Cat Gender on Barriers, Incentives and Reasons to spay/ neuter*

In terms of general barriers to spay/neutering the only significant difference between cat owners bringing in male cats versus female cats to be fixed was seen in the barrier “inconvenience”. This was significantly more highly rated as a barrier by owners bringing in a male cat ( $M=.42$ ,  $SD=.4986$ ), compared to those bringing in a female cat ( $M=.18$ ,  $SD=.3881$ ) as evidenced by an independent samples t-test ( $t(92.4)= 2.686$ ,  $p=.009$ ). In terms of general incentives to spay/neutering an independent samples t-test revealed no significant differences between cat owners of male vs. female cats coming in to be fixed.

Not surprisingly there were differences according to cat gender for the individual reasons owners gave for why they were bringing their cat in to be fixed with the number one reason

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showing a significant difference in an independent samples t-test ( $t(102) = 3.903, p = .000$ ). Specific descriptive results are noted below.

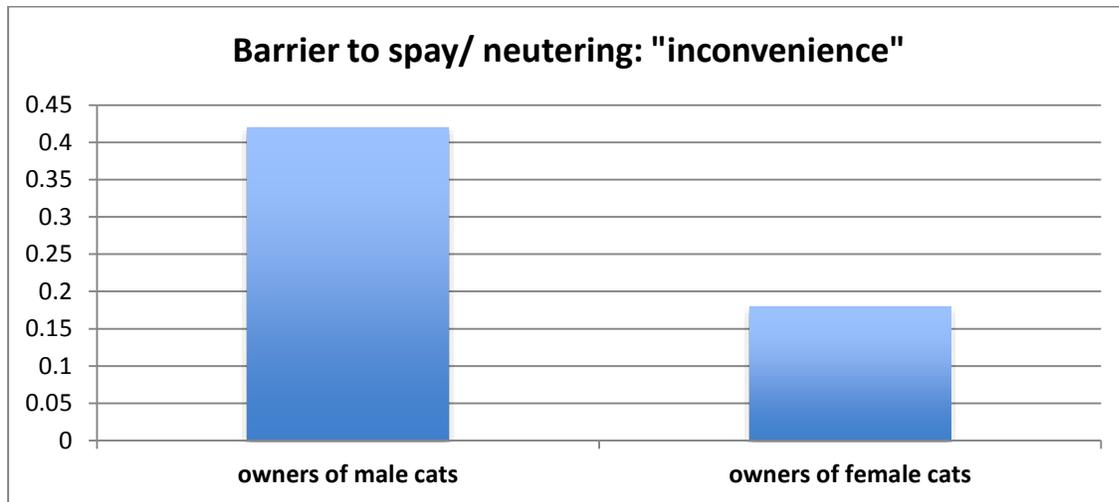


Chart 33. Barrier to spay/ neuter "inconvenience" by cat gender. Measurement scale in means.

*Reason for bringing a male cat in to be fixed:*

### **Prevent cat breeding**

When grouped together concerns regarding cat breeding, cat population issues and unwanted kittens accounted for 30.6% of all reasons for bringing a male cat in to be fixed.

### **Reduce unwanted breeding behaviour**

Reducing unwanted behaviour specifically associated with heat cycles (bleeding, yowling, spraying fighting, wandering) was another reasons that people gave for bringing a cat in. Grouped together this accounted for 24.1% of reasons for owners bringing a male cat in to be fixed.

### **Pragmatics**

Pragmatics ("less complications" "needed doing" "responsible thing to do" "so that cat can go out""keep cat clean") accounted for 18.3% of all reasons to bring a male cat in.

### **Improve cat behaviour**

Behavioural reasons, specifically "improving cat temperament" as well as "making the cat less aggressive", and "reducing hassel from other cats" were also popular reasons for bringing a cat into be fixed. Grouped together a desire to improve cat behaviour accounted for 11.2% of reasons for bringing a male cat in.

### **Improve cat wellbeing**

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Improving or safeguarding cat health and wellbeing (“improve wellbeing”, “keep cat safe”, “love cat”) was another popular reason for bringing a cat in. Grouped together reasons of this type accounted for 9.2% of stated reasons for bringing a male cat in.

### **Reduce care costs**

Keeping costs down (“free SPCA program” “reduce vet bills”) was seen as a minor reason to bring a cat in to be fixed and accounted for 6% of all reasons to bring in a male cat. Other reasons accounted for under 1% of reasons given.

*Reason for bringing a female cat in to be fixed:*

### **Prevent cat breeding**

When grouped together concerns regarding cat breeding, cat population issues and unwanted kittens accounted for 34.6% of all reasons for bringing a female cat in to be fixed. Measured alone “preventing kittens” and “preventing breeding” accounted for 68% of first choice reasons for bringing in a female cat to be spayed.

### **Reduce unwanted breeding behaviour**

Reducing unwanted behaviour specifically associated with heat cycles (bleeding, yowling, spraying fighting, wandering) was another reasons that people gave for bringing a cat in. Grouped together this accounted for 16.9% of reasons for owners bringing a female cat in to be fixed.

### **Pragmatics**

Pragmatics (“less complications” “needed doing” “responsible thing to do” “so that cat can go out” “keep cat clean”) accounted for 17.4% of all reasons to bring a female cat in.

### **Improve cat behaviour**

Behavioural reasons, specifically “improving cat temperament” as well as “making the cat less aggressive”, and “reducing hassel from other cats” were also popular reasons for bringing a cat into be fixed. Grouped together a desire to improve cat behaviour accounted for 13.6% of reasons for bringing a female cat in.

### **Improve cat wellbeing**

Improving or safeguarding cat health and wellbeing (“improve wellbeing”, “keep cat safe”, “love cat”) was another popular reason for bringing a cat in. Grouped together reasons of this type accounted for 8.2% of stated reasons for bringing a female cat in.

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### Reduce care costs

Keeping costs down (“free SPCA program” “reduce vet bills”) was seen as a minor reason to bring a cat in to be fixed and accounted for 4.9% of all reasons to bring in a female cat. Other reasons accounted for 4.4% of reasons given.

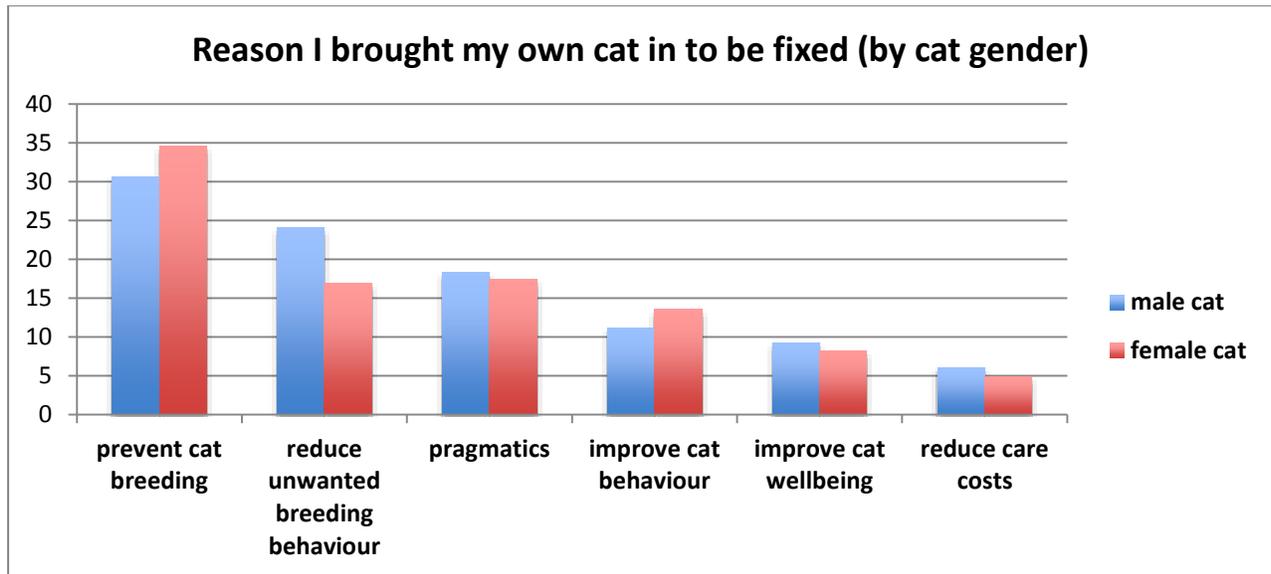


Chart 34. Reason I brought my cat in by cat gender. Measurement scale in percentage.

### *Impact of Cost of Procedure on Barriers, Incentives and Reasons to spay/neuter*

In terms of general barriers to spay/neutering an independent samples t-test revealed a significant difference between cat owners receiving free/reduced cost services vs. full cost services in the barrier “not a priority” ( $t(97.78)=3.193, p=.002$ ), with a higher rating for this barrier being noted in owners who paid for full cost cost treatment ( $M=.5400, SD=.5035$ ) compared to owners getting a free or reduced fee procedure ( $M=.2500, SD=.4367$ ).

In the other direction there was a significant difference between cat owners receiving free/reduced cost services vs. full cost services in the barrier “dislike organizations involved” ( $t(59)=-3.013, p=.004$ ) with a higher rating for this barrier being noted in owners who received a free/reduced cost treatment ( $M=.1333, SD=.3428$ ) compared to owners paying full cost ( $M=.0000, SD=.0000$ ). There was also a significant difference between cat owners receiving free/reduced cost services vs. full cost services in the barrier “lack of information” ( $t(105.3)=-2.332, p=.022$ ) with a higher rating for this barrier being noted in owners who received a free/reduced cost treatment ( $M=.3000, SD=.4621$ ) compared to owners paying full cost ( $M=.1224, SD=.3312$ ).

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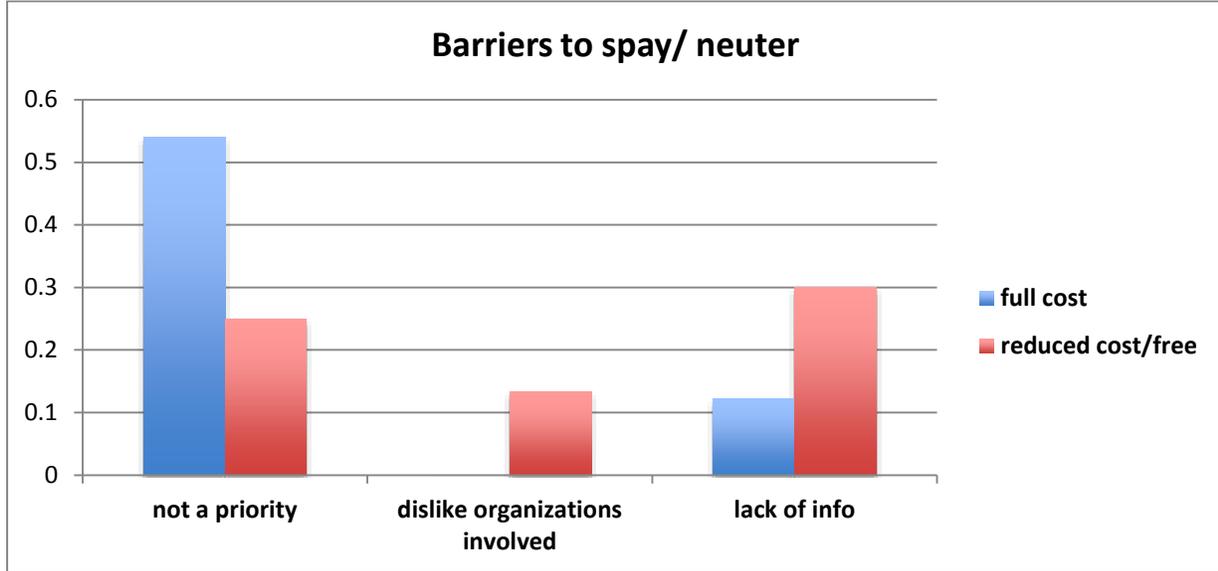


Chart 35. Significant differences to barriers by cost of procedure. Measurement scale in means.

In terms of general incentives to spay/neutering an independent samples t-test revealed a significant difference between cat owners receiving free/reduced cost services vs. full cost services in the incentive "reducing cat population" ( $t(88)=-2.033$ ,  $p=.045$ ) with a higher rating for the incentive "reducing cat population" being noted in owners who received a free/reduced cost treatment ( $M=.6346$ ,  $SD=.4862$ ) compared to owners paying full cost ( $M=.4211$ ,  $SD=.5004$ ) for their cat to be fixed.

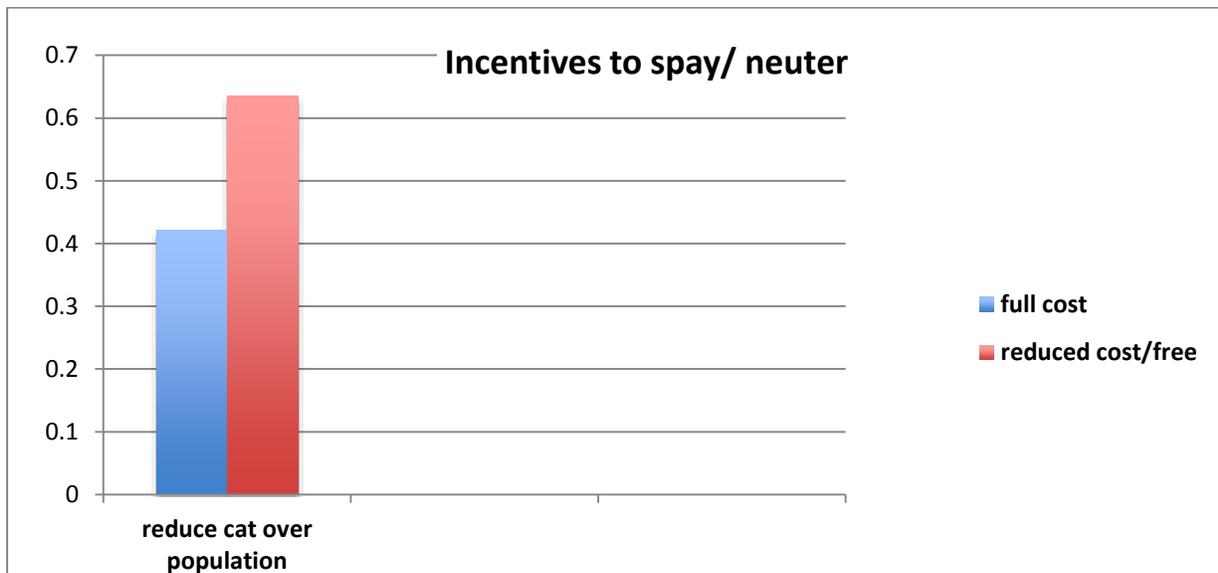


Chart 36. Significant differences to incentives by cost of procedure. Measurement scale in means.

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There was also an influence of the cost of the procedure on how correlated gender was with breeding concerns as the main reason to bring a cat in. In cats receiving procedures the relationship between cat gender (1=male, 2=female) and breeding prevention as the number one reason for bringing the cat in increased from  $r(44)=.303$ ,  $p=.048$  (full price procedure) to  $r(65)=.509$ ,  $p=.000$  (free/reduced cost procedure). This suggests that owners may be more motivated to bring in female cats (as opposed to male cats) to be fixed because of breeding concerns, when reduced cost or free procedures are available.

A few other correlations occurred that varied by cost of procedure. Amongst the reduced cost/free procedure group the motivation to fix a cat because of a "concern for other wildlife" was negatively related to income ( $r(49)=-.289$ ,  $p=.044$ ). In other words this motivation seemed stronger in people with lower income levels, in the free / reduced cost procedure group. In the full cost group however income was seen as positively related to a desire to be seen as a responsible owner ( $r(40)=.531$ ,  $p=.000$ ) being the motivator for an owner bring in a cat.

Looking at cat gender by cost of procedure a few others findings also emerged as noteworthy. Cat gender was related to a desire to be seen as responsible owner by others ( $r(59)=.266$ ,  $p=.042$ ) in the reduced cost group only. In other words in the reduced cost group fixing female cats (as opposed to male cats) was related to a motivation to be seen as a responsible owner. On the other hand in the full cost group the gender of the cat was related to the motivation of "reducing cat over population" ( $r(36)= -.491$ ,  $p=.002$ ). In other words bringing male cats in to be fixed was related to this concern in the full cost group. Gender of the cat was also related to heat cycles being a motive to spay/ neuter ( $r(43)=.307$ ,  $p=.045$ ), in that female cat owners were more likely than male cat owners to see heat cycles as a reason to fix cats in full cost groups.

### *Impact of Community on Barriers, Incentives and Reasons to spay/ neuter*

A series of independent samples t-tests, looking at differences between the two communities, yielded the following significant results:

#### *Barriers to spay/ neuter by community*

Barrier 2 (inconvenience of procedure) was found to have a much higher mean in the Fort St John community ( $M=.4468$ ,  $SD=.5025$ ) than it did in the Dawson Creek community ( $M=.2344$ ,  $SD=.4270$ ) according to an independent samples t-test ( $t(89) = -2.343$ ,  $p=.02$ ).

Likewise Barrier 8 (not a priority) also had a much higher mean in the Fort St John community ( $M=.5532$ ,  $SD=.5025$ ) than it did in the Dawson Creek community ( $M=.2656$ ,  $SD=.4452$ ) according to an independent samples t-test ( $t(92) = -3.184$ ,  $p=.002$ ).

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On the otherhand the Dawson Creek community demonstrated a much higher mean ( $M=.1250$ ,  $SD=.3333$ ) for Barrier 9 (dislike organizations involved) than was seen in the Fort St John community ( $M=.00$ ,  $SD=.00$ ) according to an independent samples t-test ( $t(109) = 2.568$ ,  $p=.012$ ).

The Dawson Creek community also showed a higher mean ( $M=.2813$ ,  $SD=.4532$ ) for Barrier 10 (lack of information on how to get it done) than was seen in the Fort St John community ( $M=.1304$ ,  $SD=.3405$ ) according to an independent samples t-test ( $t(107.76) = 1.993$ ,  $p=.049$ ).

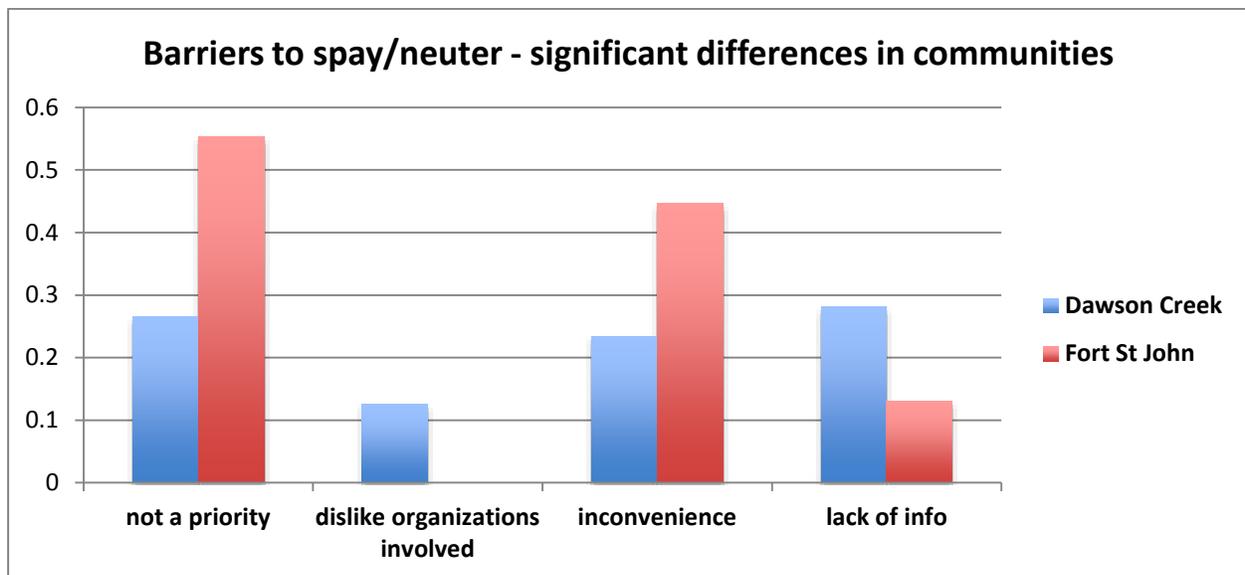


Chart 37. Significant differences to barriers by community. Measurement scale in means.

### *Incentives to spay/ neuter by community*

In terms of differences between the two communities the only incentive that significantly differed between communities was Incentive 4 (reducing the cat population in the community). With this incentive the Dawson Creek community showed a significantly higher mean ( $M=.6364$ ,  $SD=.4855$ ) in terms of placing it in the top 3 incentives, compared to Fort St John ( $M=.4000$ ,  $SD=.4971$ ). An independent samples t-test confirmed this to be a significant difference between communities ( $t(88) = 2.231$ ,  $p=.028$ ).

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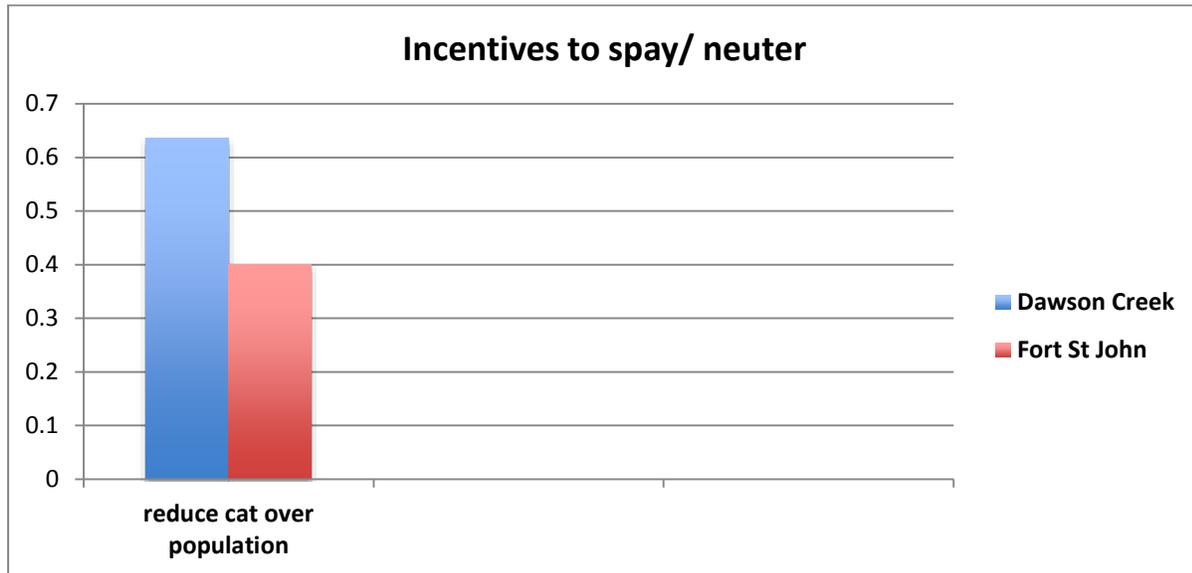


Chart 38. Significant differences to incentives by community. Measurement scale in means.

### Self vs. Community Benefit Message Impacts

We were only able to recover messaging (self vs. community benefit) information for 61 surveys, which represented under half of our sample. Of these only 24 surveys were from the full cost procedure condition. With such low numbers it was perhaps not surprising that in regression analysis no obvious significant results were found between messaging condition, cost of procedure, and numbers of cats brought in.

However analyzing the full cost procedure surveys alone there could be seen to be a significant and medium sized positive correlation between male cat gender and self-benefit messaging ( $r(24) = .410, p=.047$ ). To rephrase we found that in the group of owners that paid full cost for their procedure there was a positive relationship between male cats being brought in and the self-benefit messaging, and conversely a positive relationship between female cats being brought in and the community-benefit messaging. This was not true in the reduced cost/ free procedure condition. Unfortunately the regression analysis between messaging condition, cost of procedure and gender of cat brought in was not significant as a model. However the model was near significant, as were the interactions, which may give some support to the theory that self-benefit messaging may be related to more male cats being brought in, and visa versa with females, in the full cost condition.

In the full cost condition a couple of other relationships also were noted. The self benefit message was also positively related to survey respondents citing the reason for bringing in their

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car to be fixed as the “right thing to do as an owner” ( $r(24)=.418$ ,  $p=.042$ ). In other words this motivation for spay/ neutering was related to receiving a self-benefit message, when paying full cost. Similarly “cat wellbeing” as a reason to bring a cat in was also similarly related to a self-benefit message ( $r(26)=.428$ ,  $p=.029$ ).

On the other hand in terms of the reduced cost/free procedure group we found that self-benefit messaging was (almost significantly) negatively related to “reducing cat overpopulation” being given as a reason to bring a cat in to be fixed ( $r(52)=-.267$ ,  $p=.055$ ). In other words for people that were part of the reduced cost group “reducing cat overpopulation” seemed to be less of a reason to fix their cats when paired with a self-benefit message. Also to note there was a medium negative relationship ( $r(43)=-.308$ ,  $p=.045$ ) between the self-benefit messaging and household income in this group. To rephrase this self-benefit messaging was associated with lower household incomes when procedures were done at reduced cost/free, but not when they were paid at full cost.

There was a medium positive relationship ( $r(39)=.330$ ,  $p=.040$ ) between household income and cost being listed as one of the top 3 barriers to spay neutering in respondents that had paid full price. This appeared somewhat counter-intuitive, since it appears to suggest that the higher the income the more likely you are to say cost is a barrier. This pattern was not observed in reduced cost procedures, where there was no relationship between income and listing cost of the procedure as a barrier.

### 4.3 Associated Research Results

#### 4.3.1 Fix Your Cat Website Activity

A website was set up for the campaign by the BCSPCA, containing information about getting cats spayed or neutered. <http://www.sPCA.bc.ca/pet-care/health-safety/spayneuter/fix-your-cat.html>. Over the 12 week survey collection period (6 weeks Active and 6 weeks Passive Research), and afterwards for several months this Fix Your Cat website was monitored for a) number of times visited and b) duration of time spent on the site.

Initially, in the first three weeks of the campaign launch, the site saw a range of 26-67 visits per week ( $M=49.3$ ) and an average time spent on the website of approximately two minutes. However during the second half of Active Research (week three to week six) activity tailed off substantially to a mean of 4-5 visits per week, and an average duration of 1min 20 secs. For the six weeks of Passive Research that followed this Active Research phase the mean number of visits reduced further ( $M=3.2$ ), and duration on the site fell to a mean of approximately 1

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minute. For the twelve weeks following the Passive Research phase there was sporadic activity, averaging 3 visits per week, and a mean time spent on the site per visit of just under a minute. For the twelve weeks following this (August-November) site visit numbers dropped to an average of 2 per week, although time spent on the site went up to an average of two minutes.

### 4.3.2 Malatest Research Data

Malatest Market Research Company was independently employed by the BCSPCA to do telephone survey work prior to the campaign and immediately after it. Over a 2-week period Malatest administered 400 random sample telephone surveys (200 in Fort St John, 200 in Dawson Creek) before the campaign began. They then followed up 6 weeks after the campaign launch with a similar post campaign questionnaire (200 surveys in Fort St John, 200 surveys in Dawson Creek).

A number of findings emerged as a result of this research, and are contained in a separate report. In summary the research found that there were a number of dissimilar demographical factors as well as variations in attitudes expressed between the two communities. This is to be expected but nonetheless highlights the need for any research results to be considered with care when it comes to expectations of generalizability. It should also be noted that the telephone sample, although randomly carried out, was not representative of the general population in either area, with significantly older people, as well as females, agreeing to participate in both surveys, than the population actually contains at large. Overall 61% of pre campaign participants (68% of post campaign participants) owned a pet of some type, and in the region of 53% of pre campaign participants (50% of post campaign participants) owned a cat specifically.

In both communities opinions were garnered that strongly suggested dogs were valued more than cats. However survey respondents also expressed generally responsible attitudes towards cats. Cost was expressed as the largest perceived barrier to spay/neutering a cat, followed by "too much bother", and "lack of responsibility". Cost was perceived as a higher barrier in Dawson Creek compared to Fort St John. This may in part reflect the higher socio economic status of Fort St John residents compared to Dawson Creek residents. Fort St John respondents reported "lack of information" as a higher barrier compared to Dawson Creek, but only before the campaign began, suggesting the campaign may have had a beneficial result in this area.

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Another result from the Malatest research was that people's perceptions of whether their community had any cat spay/neutering educational programs in place increased following the campaign in both communities. Likewise both communities showed slightly higher interest in their municipality subsidizing spay/neutering campaigns after the campaign than before it.

On the negative side both communities reported being fairly unaware of the campaign when surveyed less than a week after the campaign had finished. In terms of specific components of the campaign the following results were noted. In terms of unaided recall posters around town, followed by social media and door-hangers, were the most significant components for Fort St John residents. In Dawson Creek door hangers and newspapers were recalled well unaided, followed by social media. When assisted with recall nearly 40% of Dawson Creek residents recalled that door hangers and postcards were present, 20% that radio ads were present, and 34% that TV ads were present. When assisted with recall 9% of Fort St John residents recalled that door hangers and postcards were present, 19% that radio ads were present, and 26% that TV ads were present.

### 4.4 Summary of Results

The literature review results suggest that that cat owners are welcoming of more spay neuter initiatives, as well as needing more information about them, where they do exist. Previous research also suggests that barriers to spay/ neutering extends beyond cost alone, to include a variety of hassle factors. Past campaigns to encourage spay/ neutering have varied from educational to altruistic in terms of messaging appeals with mixed results.

In terms of actual spay/neuter procedures carried out before and during the campaign there are a number of observations that can be made from the research data. Firstly in Fort St John there is evidence of very little change in spay/ neuter procedures carried out overall as a result of the messaging campaign. However there is evidence for a near significant rise in proportions, with slightly more neuters (as opposed to spays) being carried out during the Active Campaign Phase. In Dawson Creek the story is rather different. A significant large rise in spays can be seen during the Active Research Phase, compared to before the Campaign. However neuter procedures appear to increase only a small amount during the Active Phase. However when the data is split into Full Cost and Reduced cost procedures another pattern emerges, which suggests that there may have been a significant cannibalization of full cost procedure bookings during the campaign. Cannibalization in the context of consumer behaviour typically refers to the phenomenon of an increase in sales of one product in a range that occurs primarily as a result of "poaching" market share from another product in the range. In this case the lure of

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free/reduced cost spay and neuter procedures available during the campaign appears to have significantly cannibalized or poached customers from full cost spay and neuter procedure bookings during this same period.

This was examined in more detail in the analysis by splitting procedure type and cost. Veterinary figures show that in the six weeks prior to the campaign there were 32 full cost spays recorded in Dawson Creek. However once the campaign began the number of full cost spays reduced to 18 over a similar six week period, while a total of 58 reduced cost/free spays were done during this same period. We may postulate that potentially 14 of the reduced cost spay neuters that were carried out during this time were therefore cannibalized from full cost booking customers. Allowing for this we still have an increase of 44 spays carried out during the Active Research phase above the amount carried out during the six-week period prior to the campaign launch. In terms of neuters we see a similar pattern of cannibalization emerging. Veterinary figures show that in the six weeks prior to the campaign there were 42 full cost neuters recorded in Dawson Creek. However once the campaign began the number of full cost neuters reduced to 17 over a similar six-week period. In the case of neuters completed at reduced cost during the Active Research Phase however the numbers were somewhat lower at 30 procedures. In the case of neuters therefore, once the cannibalizing effect has been accounted for we have a rise of approximately five procedures completed at reduced cost during the Active Research phase. In conclusion we can say that the results suggest that spays increased significantly during the Active Research phase, allowing for the cannibalization effect, however neuters did not. This result suggests that perhaps in future campaigns it may be worth considering reducing the cost of spay procedures only (and keeping neuters at full cost) to avoid losing full cost paying customers for neuter procedures.

In terms of the survey results a number of interesting findings emerged in the analysis. Demographically the surveys revealed a varied sample set that differed between the communities, and also was not necessarily representative of the populations as a whole. This finding was similar to the findings of the Malatest research. Certain veterinary clinics collected higher quantities of surveys than others in large part due to varying levels of staff enthusiasm. There were mixed feelings regarding cat licensing, but strong feelings in favour of cats being of value, as well as a consensus that outdoor access cats should be fixed. There were some differences in concerns about stray cats in the community based on the gender of the cat an owner was bringing in. Views of the BC SPCAs work in the community were generally favorable, with cruelty prevention being the area that drew the most interest from a donation perspective. In terms of the information source and campaign impact door hangers, personal

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communication (friends and BCSPCA staff), internet and radio ads were all mentioned as impactful, although this varied somewhat across communities.

Regarding barriers, and incentives to spay neuter take up a number of findings emerged. Cost of procedure was considered to be the main barrier, followed by inconvenience and a feeling that the procedure was not considered a priority. Perhaps one of the more surprising relationships was that household income was correlated with cost being a barrier in the full price procedure group. In terms of incentives the prevention of breeding and cat population reduction were considered major incentives to spay or neuter. However there were a number of other incentives rating highly such as the feeling that it was the right thing to do, as well as a desire to reduce cat disturbances, and to make a cat more friendly as well as to increase the cat's wellbeing. In terms of motives that brought individual owners in while preventing breeding was top most, reducing irritating breeding behaviour (males fighting, females on heat) also rated highly as motivation.

There were a number of differences based on the gender of cat being brought in. Inconvenience was seen as significantly more of a barrier to bringing in a male cat, compared to a female cat. Cost of procedure also had an impact on barriers and incentives to spay / neuter, with owners that paid full cost more likely to consider the barrier "not a priority" to be important, and owners that got free or reduced cost services more likely to consider "lack of information" to be a barrier. Owners receiving free or reduced cost procedures were also more likely to consider "reducing the cat over-population" as a major incentive. There were also some variations on how correlated cat gender was with different barriers and incentives, depending on the cost of the procedure. An example of this was the case of breeding concerns, one of the main incentives to fix a cat, in which there were indications to suggest that owners may be more motivated by worries about breeding to bring in a female cat to be fixed, when reduced cost or free procedures were available.

A number of variations in the barriers and incentives could also be seen by community, with respondents in Fort St John seeing "inconvenience" and "not a priority" as larger barriers, and "reducing the cat over population" problem as less of an incentive.

In terms of self-benefit vs. community benefit messaging analysis under-reporting of the information regarding which message type respondents had received caused a major impact on how much analysis could be achieved. Despite the shortfall of data however it appeared from the results that were obtained that there was a correlation between self-benefit messaging and more male cats (rather than female cats) being brought in when owners were paying full cost.

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For owners paying full cost self benefit messaging was also positively correlated with “cat wellbeing” and the “right thing to do” motivations for bringing cats in to be fixed. There were a number of small effects and interactions between household income and motivations to bring cats in to be fixed.

In terms of associated research results the fix-your-cat website was monitored over an eight month period. Results showed the site to be more active during the Active Research Phase, but numbers were generally not high. The results from the separate Malatest research broadly confirmed some of the survey data results. The areas in which it varied from the survey data results, may in part be attributable to the fact that this research was carried out across all members of the communities concerned, whereas the surveys were only administered to cat owners bringing in cats to be fixed. The pre-test post-test element of the research showed a minimal awareness of the campaign across the communities at large. However on the plus side both communities showed slightly higher interest in their municipality subsidizing spay/neutering campaigns after the campaign compared to before it. The Malatest research respondents signaled a slightly different set of sources for the campaign information that they recalled, which may have been as a result of the more diverse sample set compared to the survey respondents who were all cat owning respondents.

## 5 CONCLUSIONS AND RECOMMENDATIONS

The long-term objective of this research was to explore strategies that would assist the BCSPCA, alongside other humane organizations, tackle the pressing issue of cat over population concerns across BC and Canada. More specifically the research set out to test a number of methods of spay/ neuter campaign messaging, as well as communication strategies, to ascertain which would be most likely to achieve success in terms of public awareness, support, and engagement, and to offer up recommendations for future campaigns. A number of ideas and suggestions can be drawn in this respect.

### 5.1 Literature Review Conclusions

Past literature suggests that that cat owners are generally welcoming of more spay neuter initiatives especially when they include reduced cost options. However even when such initiatives exist it appears that cat owners often lack sufficient information about them to achieve optimal take up. Previous research furthermore suggests that barriers to spay/ neutering extend beyond cost alone, to include a variety of hassle factors. Past campaigns to encourage spay/ neutering have tended to vary from educational to injunctive or altruistic in

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their type of messaging appeal, yielding mixed results. It appears that, rather than offering a single type of message designed to work for all occasions, it may be better to consider combining a mixture of appeal and information within the campaign message, that is adjusted to suit the audience and circumstances, in order to leverage optimal results.

### 5.2 Research Conclusions

#### 5.2.1 Spay/ Neuter Procedure Conclusions

No significant increases in spay and neuter procedures were seen in Fort St John as a result of the Spay Neuter Campaign. In Dawson Creek a significant increase was seen especially in the area of spay procedures, which in part appears to be due to cannibalization of full cost bookings for spay procedures. However above and beyond this there was also a significant rise in spay procedures carried out in the Active Research Phase, suggesting that the campaign had a significant positive impact in terms of encouraging owners to carry out spay procedures. For neuters however the campaign had less benefit, since the results show that the numbers of reduced cost neuters carried out appeared to be almost entirely as a result of cannibalization from full cost paying neuter procedures. In conclusion therefore we can say that future campaigns might consider the option of offering reduced cost/free options for spay procedures only, whilst keeping neuter procedures at full price. This would avoid the risk of cannibalization from full cost neuter procedures that may otherwise have been willingly paid for by customers. Further research is recommended to ascertain whether this strategy would have any adverse effects elsewhere.

#### 5.2.2 Research Survey Conclusions

In terms of the survey results there were a number of interesting findings worthy of interpretation. From an administration standpoint the differing volume of surveys collected by each of the four veterinary clinics clearly demonstrates the importance of strategic alliances, and flags the significant impact partner organizations may have on the success of a campaign. Future campaigns of this type would be wise to invest substantially in partner relationships and building stakeholder involvement prior to beginning any campaign work.

In terms of the campaign information source and impact certain media emerged as more successful than others for cat owners. Door hangers, personal communication (friends and BCSPCA staff), internet and radio ads were all mentioned as impactful, although this varied somewhat across the two communities. On the other hand TV ads were generally less impactful. These findings suggest that future campaigns might benefit from utilizing internet messaging more, especially in rural communities, and cast doubt as to the value of TV

## How to say 'Spay' BCSPCA UBC Research Report

advertising with an increasing number of channels on air and dwindling audience figures. Further insights were achieved by separating the communities. Results showed that BCSPCA staff had considerably more impact in bringing in Fort St John owners, than in Dawson Creek, with this being the number one source of spay/ neuter campaign information for these respondents. For Dawson Creek respondents however door hangers were clearly the best contact method. Considering most Dawson Creek respondents were taking advantage of free/ reduced cost spay neuter procedures, and all Fort St John respondents were paying full cost, these results may suggest that different communication strategies should be considered dependent on whether procedures are being funded or not.

From a demographic standpoint the surveys reveal a varied sample set that differs across communities, and is not necessarily representative of the populations of either community or of British Columbia as a whole. Whether it is representative of cat owners in the area or British Columbia could be explored further.

Some general questions regarding feelings on issues of cat population, licensing and stray cats in the community were collected within the surveys. In terms of cat licensing there were mixed feelings, with no clear consensus in favour or against. In some ways this is a positive result since the expectation might be to see less enthusiasm. However it should be remembered that these views were collected from cat owners bringing in cats to be fixed, and as such likely to be from a more responsible sector of the pet owning public. Respondents also expressed some concerns regarding stray cats in their areas, especially owners of female cats. Respondents were also in strong agreement that cats were of similar value to dogs, as well as a strong agreement that outdoor access cats should be fixed. Combined these opinions may offer support for a future initiative involving some form of cat licensing, perhaps at reduced cost for fixed animals with outdoor access.

Views on the BCSPCA were also sought. These were generally favorable, and supportive of local operations, with strong support for the role that the BCSPCA performs. In terms of willingness to donate the area of cruelty prevention drew the most interest, followed by spay neuter initiatives. This represents an unsurprising result, but reinforces the evidence that these specific operations draw the most donation support interest from the public, and should be leveraged where possible.

Regarding barriers, and incentives to spay neuter take up a number of findings emerged. Cost of procedure was considered to be the main barrier, followed by inconvenience and a feeling that the procedure was not considered a priority. Notably however the latter two barriers were

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considered significantly more important for owners paying for full cost procedures, which included the whole Fort St John community where average household incomes were higher and no procedures were carried out at reduced cost. The obvious conclusion to draw here is that the hassle factor may be a more significant barrier for higher income families, and if this is the case finding ways in which to reduce this barrier may prove successful in leveraging increased spay neuter take up. There were a few differences based on the gender of cat being brought in. The main difference was that inconvenience was seen as significantly more of a barrier to bringing in a male cat, compared to a female cat. This finding has relevance for any spay/neuter campaign looking to target one procedure only, ie spay, over the other, be it for funding reasons or other priorities.

Finally on the subject of barriers there were a number of findings that were somewhat surprising and would merit further investigation. One such finding was that household income was positively correlated with the barrier "cost of procedure" amongst full price procedure respondents. This result is counter-intuitive, since it appears to suggest that the higher your income the more likely you are to say cost is a barrier, and would obviously merit further investigation. This pattern was not observed in respondents receiving reduced cost procedures, where there was no relationship between income and the barrier "cost of procedure". Another perplexing result, which would be worthy of further investigation was seen in Dawson Creek, in respondents who had received reduced cost procedures. Among these Dawson Creek respondents the barrier "lack of information" was seen as significantly more important than in Fort St John, despite an active campaign running in Dawson Creek which was offering reduced cost spay neuters.

In terms of incentives the prevention of breeding and cat population reduction were considered major incentives to spay or neuter, which was not an surprising result. However there were a number of other incentives that rated highly, such as the feeling that it was the right thing to do, as well as a desire to reduce cat disturbances, to make a cat more friendly, and to increase a cat's wellbeing. These incentives would be worthy of further investigation and potential leveraging in future campaigns. Owners receiving free or reduced cost procedures were also more likely to consider "reducing the cat over-population" as a major incentive, which would be worthy of further exploration. Cat gender also interacted with cost of procedure under certain circumstances to influence incentives for bringing in a cat to be spay/neutered. One example of this was with the incentive of reducing cat breeding, where the relationship between female cats being brought in and this motive was higher in respondents who were receiving a reduced cost or free procedure, than with full cost recipients. In terms of reasons that brought individual owners in for procedures while preventing breeding was

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unsurprisingly top most. However reducing irritating breeding behaviour (male fighting, females on heat) also rated very highly as a motivation to spay/ neuter, and would be worth considering leveraging more in future campaigns.

Finally one of the hopes of this research was to look at messaging appeal types and their success rates in encouraging take up. We had two main appeal types (self benefit and community benefit) and had anticipated that these might interact with the cost of the procedure (free/ reduced cost vs. full cost). Lack of data on message type received prevented the full analysis expected and hoped for in this area. However one notable result that did emerge which was that there appeared to be a tendency for more male cats to be brought in for neutering with a self-benefit appeal, when owners were paying full cost for the procedure. This result may suggest that future appeals wishing to prioritize male cats being neutered could do well to opt for a self benefit message and full cost procedure combination, or conversely could utilize a community benefit message paired with a reduced cost/ free procedure to maximize the recruitment of female cats being brought in to be spayed. It would be advisable to do further research to confirm this prediction.

In terms of other messaging appeal related results it was also noted that for owners paying full cost for their cat's procedure a self-benefit message appeared to be positively correlated with two specific motivations for bringing a cat in to be fixed; that of "cat wellbeing" concerns and it being the "right thing to do". This may suggest that future campaigns would do well to specifically leverage these two motivations if circumstances dictate. Conversely in terms of reduced cost/free procedure owners we found that a self-benefit message appeared to be negatively related to "reducing cat overpopulation" as a motivation to fix a cat. In other words for respondents that were part of the reduced cost group "reducing cat overpopulation" seemed to be less of a reason to fix a cat when paired with a self-benefit message. Future research into these findings is strongly recommended to corroborate these results. Finally it was noted that there appeared to be a relationship between a self-benefit message and lower household incomes when procedures were undertaken as part of the reduced cost/ free initiative, which did not exist when procedures were undertaken at full cost. If corroborated this finding could suggest that a self-benefit message has more appeal for low-income families being offered reduced cost/ free spay neuter options.

Lastly to note there appeared to be a positive relationship between household income and cost being listed as one of the top 3 barriers to spay neutering in respondents that had paid full price. This appears somewhat counterintuitive, since it suggests that the higher the income the more likely you are to say cost is a barrier. This pattern was not observed in reduced cost

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procedures, where there was no relationship between income and listing cost of the procedure as a barrier, and it would be advisable to investigate this result further.

### 5.3 Associated Research Conclusions

The volume of visits to the fix-your-cat website were poor, and the site appears to have been an under utilized resource. It is likely that not enough links were set up, nor publicity put in place, to send interested parties to the site. It would have been interesting to have seen if posting the three campaign videos to this site would have yielded more general traffic and increased volume. Future campaigns of this type should aim to improve their leverage of social media, as well as other internet resources of this type, in order to reap optimal results.

At first glance the results from the Malatest research also appear disappointing and at times appear in some conflict with the survey data findings. When considering the Malatest research results however it is important to consider how the Malatest sample set differs not only from the actual populations of Fort St John and Dawson Creek, as well as the survey sample of this research, but also from the defined population of interest for this research. Defining a population of interest lies at the heart of understanding a target audience. This research set out to understand community attitudes towards cats at large, but also to specifically drill down into the attitudes and behaviour of cat owners. However the Malatest research focus was primarily concerned with understanding community attitudes towards cat population issues, including respondents who were not cat owners. As a result owning a cat was not a qualifying factor in the Malatest sampling plan. Indeed within the sample that Malatest surveyed only 61% of pre campaign participants (68% of post campaign participants) owned a pet of any type, and only 53% of pre campaign participants (50% of post campaign participants) owned a cat specifically. With approximately half of the Malatest sample not being cat owners, it is therefore no surprise that their research produced slightly different results to the survey sample results in this report at times.

An example of this can be seen in the area of cat valuation, where the Malatest research found that for both communities dogs were more valued than cats. However our survey research found that amongst the sample of cat owners this wasn't a commonly held view.

There were some commonalities. Malatest's research reported that cost was expressed as the largest perceived barrier to spay/neutering a cat, followed by "too much bother", and "lack of responsibility" a finding echoed in these research results. Cost was perceived as a higher barrier by Malatest in Dawson Creek compared to Fort St John, which may in part reflect the higher socio economic status of Fort St John residents compared to Dawson Creek residents. Fort St

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John respondents reported “lack of information” as a higher barrier compared to Dawson Creek, but only before the campaign began, suggesting the campaign may have had a beneficial result in this area.

One useful area of findings from the Malatest research was in the area of pre test post test changes. The Malatest research found that people’s perceptions of whether their community had any cat spay/neutering educational programs in place increased following the campaign in both communities. Likewise both communities showed slightly higher interest in their municipality subsidizing spay/neutering campaigns after the campaign than before it. On the negative side both communities reported being fairly unaware of the campaign when surveyed by Malatest less than a week after the campaign had finished. However considering that only half of the Maltest sample contained cat owners such a lack of retention of not necessarily relevant information was perhaps not very surprising. Likewise lack of recall for specific components of the campaign was perhaps less relevant considering the Malatest sample set contained only 50% non cat owners.

### 5.3 Summary of Conclusions and Recommendations for Future Research

While this research was unable to offer a simple messaging toolkit that might have been hoped for it was nonetheless able to offer a number of useful take-aways and make recommendations for future research, as well as for future campaigns. One of these was the observation that, based on the research findings, offering reduced cost neuter procedures to cat owners may run the risk of poaching or cannibalizing take up from owners that may have been willing to pay full cost for these procedures. Offering reduced costs spays did not seem to have such a marked risk of cannibalization.

Another observation was that barriers that revolved around hassle (eg. “inconvenience”, “not a priority”) were frequently cited as reasons not to fix a cat, and appeared to be stronger disincentives to fix a cat amongst owners in higher income brackets, especially when they were paying full cost for the procedure. Methods that are capable of reducing barriers to action are proven to facilitate an increase in behaviour change in areas where resistance is common. In terms of incentives and reasons to fix cats alongside reducing breeding the issues of improving cat behaviour and decreasing annoying heat related behaviour arose as important motives for fixing cat. Future campaigns might leverage these incentives to good effect.

Another finding of note was that many of the barriers and incentives to spay/ neuter were found to be highly nuanced in their agency and appeared to interact with other variables. These variables included cat gender, income, cost of procedure and messaging style. Details of these

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are included within the results section and should be referenced in future campaign designs. There was some evidence that cat gender was interacting with messaging style in the full cost group, which suggests that the type of messaging appeal (self vs. community benefit) may indeed offer potential leveraging options for future campaigns.

The method of communication was also flagged as important for campaigns of this nature to consider. Semi rural communities such as these are active on social media, and the internet offers excellent opportunities for low cost communication. Television on the other hand may not offer a cost effective method for communicating information or driving take up in this area. The three videos made for the campaign were not posted online, and this would be advised for future campaigns. These videos were however broadcast on the radio, which seemed to produce reasonable results. It is probable that radio may offer better value than television as a communication tool directed at rural and semi rural communities. Another key take away is that door hangers and postcards appeared effective as a communication tool in the reduced cost/ free group, but not so much in the full cost group where personal word of mouth produced the best response.

Finally in terms of general views about cats and the BCSPCA, while there was not found to be widespread support for traditional cat licensing there was not widespread opinion against it either, and there was support for the view that all cats with outside access should be fixed. The BCSPCA was generally valued. The importance of solid partnerships with stakeholders in the community was found to be vital to success.

In summary finding the correct message for a spay/neuter campaign's target audience is clearly a challenging goal. While a number of recommendations have been made in this report these suggestions represent only a few ways to tempt and engage people in pro-social appeals such as this. Many people within the key target segment in all likelihood see no need to change their behaviour and are only minimally invested in the product and service concerned. While some sections of the community are clearly motivated by financial constraints, and will be more easily persuaded through reduced cost spay/ neuter fees, they will also still need to be engaged through a solid awareness and outreach campaign that will need to be intelligently crafted. This would likely be a campaign that offers not only reduced cost spay/neuters, but also reduces barriers to action, such as lack of information or the hassle factor, and comes bundled into a clear but engaging message. For the most resistant segments a strategy that combines both carrot and stick may be needed ultimately, preferably one that also contains some form of penalty type component. While this may take the form of concrete direct penalties, such as fines for non compliance, it could also take the form of less obvious penalties such as concerns

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regarding social stigmas relating to irresponsible ownership behaviour, or the leveraging of fears regarding increased costs or hassles connected to owning intact cats.

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## APPENDIX

### Research Materials:

1. Promotional Tote Bag design (front and back) given as a thank you for participation

**BCSPCA**  
SPEAKING FOR ANIMALS

Fix your cat right away

**Call now to fix YOUR cat**

**Service car**

**Groceries**

**Fix the Cat**

**DAWSON CREEK**  
Dawson Creek Veterinary Clinic (250) 782 5616  
South Peace Animal Hospital (250) 782 7297

**FORT ST JOHN**  
North Peace Veterinary Clinic (250) 785 4578  
Rivers Animal Hospital (250) 785 8387

2. Door-hangers (front and back) a) SELF BENEFIT APPEAL (Dawson Creek version)

**Why should you fix your cat?**

**Research shows that, as an individual, you can reduce the cat overpopulation problem by fixing your cat.**

Left unfixed a female cat, along with her kittens, can produce thousands of cats during a lifetime, and start breeding as early as 4 months.

An unfixed male cat can roam widely and father hundreds of kittens a year. Unfixed cats can be a nuisance, behave more aggressively, and get into fights night after night.

**You can prevent this as an individual. Make a difference by fixing your cat.**

**Think about the benefits, for you as an individual, if you fix your cat.**

Fixing your cat is one of the best things you can do to protect your cat's health. Your cat will fight less, your vet bills will be lower and your fixed cat will be healthier and happier. Fixed cats are more likely to be affectionate towards you and less likely to roam and get into trouble.

**You'll have a more pleasurable companion and fewer unexpected expenses with a fixed cat.**

**Call now to book your free spay/neuter (up to \$300 value!) at Dawson Creek BCSPCA (250) 782-2444**

Bring in this door-hanger to receive a free gift.

**FixYourCat.ca**

**BCSPCA**  
SPEAKING FOR ANIMALS

College of Veterinarians of British Columbia

Fix your cat right away

# How to say 'Spay' BCSPCA UBC Research Report

## Door-hangers (front and back) b) COMMUNITY BENEFIT APPEAL (Dawson Creek version)



**Why should we fix our cats?**

Research shows that, as a community, we can reduce the cat overpopulation problem by fixing our cats.

Left unfixed a female cat, along with her kittens, can produce thousands of cats during a lifetime, and start breeding as early as 4 months. An unfixed male cat can roam widely and father hundreds of kittens a year. Unfixed cats can be a nuisance, behave more aggressively, and get into fights night after night.

**We can prevent this as a community. Make a difference by fixing your cat.**

vancouver foundation

**Think about the benefits, for our community, if we fix our cats.**

Fixing our cats is good for us all. Fixing helps reduce the cat overpopulation problem, and the unnecessary animal suffering that goes with that. It reduces animal control costs for our community and our shelters. Fixing our cats means less feral cat colonies, and less risk of environmental damage and nuisance from territorial fighting, and hunting of other animals.

**We'll have a better, healthier, community with fixed cats.**

**Call now to book your free spay/neuter (up to \$300 value!) at Dawson Creek BCSPCA (250) 782-2444**



Bring in this door-hanger to receive a free gift.

[FixYourCat.ca](http://FixYourCat.ca)

College of Veterinarians of British Columbia

**BCSPCA**  
SPEAKING FOR ANIMALS



Fix your cat right away

## 3. Postcard/Flyers (front and back) a) SELF BENEFIT APPEAL (Fort St John version)



**Why should you fix your cat?**

Research shows that, as an individual, you can reduce the cat overpopulation problem by fixing your cat.

Left unfixed a female cat, along with her kittens, can produce thousands of cats during a lifetime, and start breeding as early as 4 months. An unfixed male cat can roam widely and father hundreds of kittens a year. Unfixed cats can be a nuisance, behave more aggressively, and get into fights night after night.

**You can prevent this as an individual. Make a difference by fixing your cat.**

vancouver foundation

**Think about the benefits, for you as an individual, if you fix your cat.**

Fixing your cat is one of the best things you can do to protect your cat's health. Your cat will fight less, your vet bills will be lower and your fixed cat will be healthier and happier. Fixed cats are more likely to be affectionate towards you and less likely to roam and get into trouble.

**You'll have a more pleasurable companion and fewer unexpected expenses with a fixed cat.**

**Call your local vet now to book your spay/neuter procedure:**

North Peace Veterinary Clinic  
(250) 785 4578

Rivers Animal Hospital  
(250) 785 8387



Bring this postcard to your vet appointment to receive a free gift.

College of Veterinarians of British Columbia

**BCSPCA**  
SPEAKING FOR ANIMALS



Fix your cat right away

# How to say 'Spay' BCSPCA UBC Research Report

## Postcard/Flyers (front and back) b) COMMUNITY BENEFIT APPEAL (Fort St John version)

**FixYourCat.ca**



### Why should we fix our cats?

Research shows that, as a community, we can reduce the cat overpopulation problem by fixing our cats. Left unfixed a female cat, along with her kittens, can produce thousands of cats during a lifetime, and start breeding as early as 4 months. An unfixed male cat can roam widely and father hundreds of kittens a year. Unfixed cats can be a nuisance, behave more aggressively, and get into fights night after night.

**We can prevent this as a community. Make a difference by fixing your cat.**

vancouver foundation

### Think about the benefits, for our community, if we fix our cats.

Fixing our cats is good for us all. Fixing helps reduce the cat overpopulation problem, and the unnecessary animal suffering that goes with that. It reduces animal control costs for our community and our shelters. Fixing our cats means less feral cat colonies, and less risk of environmental damage and nuisance from territorial fighting, and hunting of other animals.

**We'll have a better, healthier, community with fixed cats.**

**Call your local vet now to book your spay/neuter procedure:**

<p><b>North Peace Veterinary Clinic</b> (250) 785 4578</p>	<p><b>Rivers Animal Hospital</b> (250) 785 8387</p>
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Bring this postcard to your vet appointment to receive a free gift.

College of Veterinarians of British Columbia

**BCSPCA**  
SPEAKING FOR ANIMALS



Fix your cat right away



Bring this postcard to your vet appointment to receive a free gift.

## 4. Vet Posters (Dawson Creek and Fort St John)

Fix your cat right away **FixYourCat.ca**



### Do you have an unfixed cat?

### Don't delay – fix them today!

**Free Spay/Neuter Now Available!**  
Up to \$300 value – for a limited time only  
Call the BC SPCA to book yours today  
Dawson Creek BC SPCA (250) 782-2444

Fix your cat right away **FixYourCat.ca**



### Do you have an unfixed cat?

### Don't delay – fix them today!

**Spay/neuter appointments available at your local vet**

<p><b>North Peace Veterinary Clinic</b> (250) 785 4578</p>	<p><b>Rivers Animal Hospital</b> (250) 785 8387</p>
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## 5. Research Poster (for display in vet clinics where surveys were to be administered)



### UBC BC SPCA Spay/Neuter Research Study Info.

**Why are we doing this study?** The aim of this research is to learn more about the experiences of cat owners and their feelings about spay/neuter initiatives and pet ownership. You are being invited to take part in this research because you have shown an interest in booking your cat in to be spay/neutered.

**Who is carrying out this study?** This research is being carried out by UBC in conjunction with the BC SPCA. The Principal Investigator is Dr. Katherine White, and the Co-Investigator is Cluny South, Sauder School of Business, UBC. Tel (604) 827-3711.

**Who is funding this study?** The study is being funded by a Mitacs National Research Project Grant and the Vancouver Foundation in partnership with the BC SPCA.

**How will the study be done?** This study consists of a short questionnaire that will take between 5-10 minutes of your time. In it you will be asked a number of questions about cat spay/ neuter initiatives and pet ownership in general. You will also be asked some demographic questions to help researchers understand the impact that different variables, such as gender or age, may have on people's decisions.

**Can I read the results?** The results of this study will be reported for Mitacs as well as the BC SPCA. Additionally the main findings may be published in academic journals. You will be given the option to directly receive information on the results.

**Is there any way this study could be bad for me?** We do not think there is anything in this study that could harm or be bad for you.

**What are the benefits of participating?** You may be helped by this study through learning of more ways in which your actions as a pet owner could improve your cat's wellbeing and the health of your community in general. Your answers will also help us understand how we can support pet owners generally in the future.

**How will my identity be protected?** Your identity will be kept strictly confidential. All documents will be identified by code only and kept secure. You will not be identified by name in any reports of the completed study. Computer data records relating to your responses will not contain any identifying information.

**Who can I contact if I have questions or concerns about the study?** If you have any questions or desire further information with respect to this study, you may contact one of the UBC study staff at the number listed above. If you have concerns about your rights or your experiences while participating in this study, please contact the Research Participant Complaint Line on 604-822-8598 or toll free 1-877-822-8598.

Thank you for your participation.

## 6. Veterinary Survey Consent form plus Survey

### Cat Spay/Neuter Questionnaire Instructions:

Attached is a short questionnaire, which has been designed to take between 5-10 minutes of your time. We greatly appreciate any information you can give us for this research study on cat spay/neuter issues, and cat populations across British Columbia.

#### Please Note:

Your responses are completely confidential and will not be used for any reasons other than this academic research study. You do not have to answer any questions in this questionnaire if you do not wish to do so. You will not be contacted further, unless you make a request for additional information, or indicate that you would like to take part in future research.

Please tear off and retain this front cover sheet, along with the consent form, for your information and future reference regarding the research study.

Please hand in the rest of your questionnaire on completion to the reception desk who will pass it on to the UBC Cat Spay/ Neuter Research Study team.

Once again thank you for being involved in this research work aimed at helping to understand attitudes towards cats and other animals in the community, as well as in British Columbia in general.

**Principal Research Investigator:** Dr. Katherine White, Sauder School of Business UBC, Tel (604) 827-3711

**Co-Investigator:** Cluny South, Sauder School of Business ISGP UBC, Email [clunysouth@alumna.ubc.ca](mailto:clunysouth@alumna.ubc.ca).

### Cat Spay/Neuter Questionnaire

Veterinary Clinic/ Hospital Name:	Cat: Male / Female	Voucher Number:
1. Please tell us how many animals you / your household currently own:		
Cats (Female) _____	Dogs (Female) _____	Other Animals: _____
Cats (Male) _____	Dogs (Male) _____	
2. How many animals have you had fixed (spayed or neutered), before this current one?		
Cats (Female) _____	Dogs (Female) _____	Other Animals: _____
Cats (Male) _____	Dogs (Male) _____	
3. How likely are you to bring in another cat to be fixed in the next year?		
<input type="checkbox"/> Very Likely	<input type="checkbox"/> Likely	<input type="checkbox"/> Unlikely
<input type="checkbox"/> I don't own any more cats.	<input type="checkbox"/> Very Unlikely	<input type="checkbox"/> Not Sure at all
4. Did you bring your cat in as part of a BC SPCA spay/neuter campaign?		
<input type="checkbox"/> Yes	<input type="checkbox"/> No	
If YES, how did you hear about it? Please tick all that apply.		
<input type="checkbox"/> Television	<input type="checkbox"/> Radio	<input type="checkbox"/> Poster
<input type="checkbox"/> BC SPCA Staff	<input type="checkbox"/> Local Newspaper	<input type="checkbox"/> Door-hanger
<input type="checkbox"/> Other (please specify) _____	<input type="checkbox"/> Personal Communication	<input type="checkbox"/> Internet/Online
5. Please tell us what you know about <u>any</u> spay/ neuter campaigns (including this one), past or present.		
6. How likely are you to recommend the BCSPCA spay/neuter campaign to others?		
<input type="checkbox"/> Very Likely	<input type="checkbox"/> Likely	<input type="checkbox"/> Unlikely
<input type="checkbox"/> Very Unlikely	<input type="checkbox"/> Not Sure	
7. Please elaborate on why you gave this answer.		
8. Thinking about your community, what would you say are the <b>5 main barriers</b> that <u>deter</u> people from spaying/neutering cats? Feel free to add to the list if you wish.		
Please rank them in order of importance with 1 = <b>most important</b> and 5 = <b>least important</b> .		
_____	Cost of procedure	
_____	Inconvenience	
_____	Transport issues	
_____	Aftercare issues	
_____	Not fair to cat (prevents natural breeding behaviour/harms cat)	
_____	Negative impact on relationship with cat	
_____	Some one else's responsibility	
_____	Not a priority	
_____	Dislike organization/s involved	
_____	Lack of information on how to get it done	
_____		
_____		

# How to say 'Spay' BCSPCA UBC Research Report

9. Thinking about your community again, what would you say are the 5 main reasons that make people want to spay/neuter their cats? Feel free to add to the list in the spaces given if you wish.

Please rank them in order of importance with 1 = most important and 5 = least important.

<input type="checkbox"/> Lower vet / care costs for their cat
<input type="checkbox"/> Less cat fighting/disturbances in community
<input type="checkbox"/> Makes their cat more friendly and companionable
<input type="checkbox"/> Reduces cat overpopulation in area
<input type="checkbox"/> To prevent their cat breeding/ care of unwanted kittens
<input type="checkbox"/> Awareness that it is the right thing to do as a pet owner
<input type="checkbox"/> Desire to be seen as a responsible pet owner by others
<input type="checkbox"/> Concern for wellbeing of their cat
<input type="checkbox"/> Concern for other animals/wildlife
<input type="checkbox"/> _____
<input type="checkbox"/> _____

10. Think about yourself specifically now. On this occasion, what were the three main factors that made you decide to bring your cat in to be spayed/neutered:

- 1.
- 2.
- 3.

This next section asks you some more general questions on the subject of cats in your community.

11. Please read the following statements and mark your answer using the scale strongly disagree to strongly agree.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. Stray/feral cats are a problem in my community.					
b. Cats should be licensed (like dogs).					
c. Cats are low maintenance pets.					
d. Feeding a cat makes a person responsible for it.					
e. Cats are not as valuable as dogs.					
f. All cats with outside access should be spayed/neutered.					

12. If you have any other comments on cat issues in your local area, please use the space below to tell us more:

Page 3 of 5

13. We would like to hear your views on the BCSPCA as an organization. Please read the following statements and mark your answer using the scale strongly disagree to strongly agree.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. I think the BCSPCA does a valuable job					
b. I think the BCSPCA does a professional job					
c. I think the BCSPCA is a trustworthy organization					
d. I support the BCSPCA's work in my community					

14. Thinking only about cash donations to the BCSPCA now, please indicate how interested you would be in donating towards the following specific causes if you were asked:

	Not At All Interested	Not Very Interested	Neutral	Somewhat Interested	Very Interested
<input type="checkbox"/> Spay/Neuter Initiatives					
<input type="checkbox"/> Cruelty Prevention					
<input type="checkbox"/> Humane Education					
<input type="checkbox"/> General BC SPCA Operations					
<input type="checkbox"/> Other (please specify below): _____					

15. If you have anything further to add, you may do so in the space provided below.

Thank you for the input you have given so far on the BCSPCA and cat neutering issues.

This final short section collects standard demographic information. This information is collected and analyzed for population demographic research purposes only. All information is entirely confidential and no identifying information is ever linked to demographic data at any stage.

16. Number of adults in your household:  One  Two  Three  Four or more

17. Number of children under 18 in your household:  One  Two  Three  Four or more

18. Gross Household Income (before tax):

<input type="checkbox"/> under \$10,000	<input type="checkbox"/> \$50,000-74,999
<input type="checkbox"/> \$10,000-24,999	<input type="checkbox"/> \$75,000-99,999
<input type="checkbox"/> \$25,000-49,999	<input type="checkbox"/> higher than \$100,000

19. Gender (of respondent):  Male  Female  Other

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20. Ethnic Origin/Race (of respondent):

<input type="checkbox"/> White	<input type="checkbox"/> Asian
<input type="checkbox"/> Hispanic or Latino	<input type="checkbox"/> First Nations or Aboriginal
<input type="checkbox"/> Black or African Canadian	<input type="checkbox"/> Other: _____

21. Age (of respondent):

<input type="checkbox"/> under 18	<input type="checkbox"/> 45 - 54
<input type="checkbox"/> 18 - 25	<input type="checkbox"/> 55 - 64
<input type="checkbox"/> 26 - 30	<input type="checkbox"/> 65 - 74
<input type="checkbox"/> 31 - 44	<input type="checkbox"/> 75 or older

22. Marital Status (of respondent):

<input type="checkbox"/> Single	<input type="checkbox"/> Co-habiting
<input type="checkbox"/> Married	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Divorced	

23. Highest Educational Level (of respondent):

<input type="checkbox"/> High School	<input type="checkbox"/> Diploma (under 2 years)
<input type="checkbox"/> Undergraduate Degree	<input type="checkbox"/> Technical / skills-based accreditation
<input type="checkbox"/> Graduate Degree	<input type="checkbox"/> Other: _____

24. Current Employment Status (of respondent):

<input type="checkbox"/> Not employed	<input type="checkbox"/> Retired
<input type="checkbox"/> Part-time	<input type="checkbox"/> Other
<input type="checkbox"/> Full-time	

25. In order that we may understand which area your comments relate to please indicate the last 3 digits of your postal code

\_\_\_\_\_

If you prefer, you can indicate the cross street nearest to your home below:

\_\_\_\_\_

You have completed the Survey.

Thank you so much for your time. If you would be interested in further information about this survey including the results, or would be willing to answer further questions relating to cat well-being and spay/neuter campaigns in the area, please indicate how you would like to be contacted below. Please note any contact details you may choose to give will remain strictly confidential and will only be used in connection with this specific research study.

Preferred contact method and details: \_\_\_\_\_

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## UBC BC SPCA SPAY/ NEUTER RESEARCH STUDY CONSENT FORM

**Why are we doing this study?** The aim of this research is to learn more about the experiences of cat owners and their feelings about spay/neuter initiatives and pet ownership. You are being invited to take part in this research because you have shown an interest in booking your cat in to be spayed/neutered.

**Who is carrying out this study?** This research is being carried out by UBC in conjunction with the BC SPCA. The Principal Investigator is Dr. Katherine White, and the Co-Investigator is Cluny South, Sauder School of Business. Tel (604) 827-3711.

**Who is funding this study?** The study is being funded by a Mitacs National Research Project Grant and the Vancouver Foundation in partnership with the BC SPCA.

**How will the study be done?** This study consists of a short questionnaire that will take between 5-10 minutes of your time. In it you will be asked a number of questions about cat spay/ neuter initiatives and pet ownership in general. You will also be asked some demographic questions to help researchers understand the impact that different variables, such as gender or age, may have on people's decisions.

**Can I read the results?** The results of this study will be reported for Mitacs as well as the BC SPCA. Additionally the main findings may be published in academic journals. You will be given the option to directly receive information on the results.

**Is there any way this study could be bad for me?** We do not think there is anything in this study that could harm or be bad for you.

**What are the benefits of participating?** You may be helped by this study through learning of more ways in which your actions as a pet owner could improve your cat's wellbeing and the health of your community in general. Your answers will also help us understand how we can support pet owners generally in the future.

**How will my identity be protected?** Your identity will be kept strictly confidential. All documents will be identified by code only and kept secure. You will not be identified by name in any reports of the completed study. Computer data records relating to your responses will not contain any identifying information.

**Who can I contact if I have questions about the study?** If you have any questions or desire further information with respect to this study, you may contact one of the UBC study staff at the number listed above.

**Who can I contact if I have concerns about the study?** If you have any concerns about your rights or your experiences while participating in this study, please contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or toll free 1-877-822-8598.

**Consent:** Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time. You do not have to answer any question if you do not feel comfortable answering it. If the questionnaire is completed it will be assumed that consent has been given.

1

# How to say 'Spay' BCSPCA UBC Research Report

## 7. Survey debriefing form



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Principle Investigator: Katherine White, Marketing Department, Sauder School of Business, UBC, Vancouver, V6T 1Z2. Telephone: (604) 827-3711.

### Debriefing Form:

Thank you once again for participating in this research study being carried out by UBC, and funded by a Mitacs research grant in partnership with the BC SPCA.

The purpose of the research is to understand what makes people decide to spay/neuter their cats, and how different types of campaign messaging appeals, combined with the cost of action, impact how likely people are to carry out the procedure. To investigate this, we have distributed information flyers, encouraging pet owners to book their cat in to be spayed/ neutered, across two communities with two different versions of appeal wording on them. One version discusses what benefits spay/neutering brings to owners themselves, the other version discusses what benefits are brought to the community at large. This research is being carried out in two areas, one of which has a grant that provides for free spay/ neuter procedures, and one that does not. This allows us to assess how much the cost also impacts take-up. Our research prediction is that the cost of the procedure, and the wording of the appeal promoting it, will act together to encourage people to spay/neuter their cat, with more people paying at cost to themselves to spay/neuter when they see a community benefit, and more people taking-up the free spay neuters when they are aware of the personal benefit to themselves.

Your time contributing to this research is greatly appreciated. It will add to academic understanding of why people are motivated to behave in certain ways regarding pet ownership. The final research findings will also enable the BC SPCA and other not-for-profit organizations, as well as local municipalities involved in animal control, to better understand attitudes regarding cat overpopulation issues and cat spay/neuter initiatives.

**Confidentiality:** Please note that any information you gave will be kept strictly confidential and will remain securely held in an academic research storage facility until such time as it may be securely destroyed. No personal information will leave the academic facility or become part of any final report.

If you have any questions about the study or would like to find out more about the results of the research please contact the Principal Investigator, Dr. Katherine White, Sauder School of Business, Tel. (604) 827-3711.

If you have concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or long distance e-mail [RSIL@ors.ubc.ca](mailto:RSIL@ors.ubc.ca) or call toll free 1-877-822-8598 (Toll Free: 1-877-822-8598)

## Appendix BCSPCA Final Report: Research Materials

### 1. Promotional Tote Bag design (front and back) given as a thank you for participation

**BCSPCA**  
SPEAKING FOR ANIMALS

**Call now to fix YOUR cat**

**Service car**

**Groceries**

**Fix the Cat**

**DAWSON CREEK**  
Dawson Creek Veterinary Clinic (250) 782 5616  
South Peace Animal Hospital (250) 782 7297

**FORT ST JOHN**  
North Peace Veterinary Clinic (250) 785 4578  
Rivers Animal Hospital (250) 785 8387

### 2. Door-hangers (front and back) a) SELF BENEFIT APPEAL (Dawson Creek version)

**Why should you fix your cat?**

**Research shows that, as an individual, you can reduce the cat overpopulation problem by fixing your cat.**

Left unfixed a female cat, along with her kittens, can produce thousands of cats during a lifetime, and start breeding as early as 4 months.

An unfixed male cat can roam widely and father hundreds of kittens a year. Unfixed cats can be a nuisance, behave more aggressively, and get into fights night after night.

**You can prevent this as an individual. Make a difference by fixing your cat.**

**Fix your cat right away**

**vancouver foundation**

**Think about the benefits, for you as an individual, if you fix your cat.**

Fixing your cat is one of the best things you can do to protect your cat's health. Your cat will fight less, your vet bills will be lower and your fixed cat will be healthier and happier. Fixed cats are more likely to be affectionate towards you and less likely to roam and get into trouble.

**You'll have a more pleasurable companion and fewer unexpected expenses with a fixed cat.**

**Call now to book your free spay/neuter (up to \$300 value!) at Dawson Creek BCSPCA (250) 782-2444**

**Bring in this door-hanger to receive a free gift.**

**FixYourCat.ca**

**College of Veterinarians of British Columbia** **BCSPCA**  
SPEAKING FOR ANIMALS

Door-hangers (front and back) b) COMMUNITY BENEFIT APPEAL (Dawson Creek version)



**Why should we fix our cats?**

Research shows that, as a community, we can reduce the cat overpopulation problem by fixing our cats.

Left unfixed a female cat, along with her kittens, can produce thousands of cats during a lifetime, and start breeding as early as 4 months. An unfixed male cat can roam widely and father hundreds of kittens a year. Unfixed cats can be a nuisance, behave more aggressively, and get into fights night after night.

**We can prevent this as a community. Make a difference by fixing your cat.**



**Think about the benefits, for our community, if we fix our cats.**

Fixing our cats is good for us all. Fixing helps reduce the cat overpopulation problem, and the unnecessary animal suffering that goes with that. It reduces animal control costs for our community and our shelters. Fixing our cats means less feral cat colonies, and less risk of environmental damage and nuisance from territorial fighting, and hunting of other animals.

**We'll have a better, healthier, community with fixed cats.**

**Call now to book your free spay/neuter (up to \$300 value!) at Dawson Creek BCSPCA (250) 782-2444**



Bring in this door-hanger to receive a free gift.

**FixYourCat.ca**







Fix your cat right away

3. Postcard/Flyers (front and back) a) SELF BENEFIT APPEAL (Fort St John version)




**Why should you fix your cat?**

Research shows that, as an individual, you can reduce the cat overpopulation problem by fixing your cat.

Left unfixed a female cat, along with her kittens, can produce thousands of cats during a lifetime, and start breeding as early as 4 months. An unfixed male cat can roam widely and father hundreds of kittens a year. Unfixed cats can be a nuisance, behave more aggressively, and get into fights night after night.

**You can prevent this as an individual. Make a difference by fixing your cat.**



**Think about the benefits, for you as an individual, if you fix your cat.**

Fixing your cat is one of the best things you can do to protect your cat's health. Your cat will fight less, your vet bills will be lower and your fixed cat will be healthier and happier. Fixed cats are more likely to be affectionate towards you and less likely to roam and get into trouble.

**You'll have a more pleasurable companion and fewer unexpected expenses with a fixed cat.**

**Call your local vet now to book your spay/neuter procedure:**

North Peace  
Veterinary Clinic  
(250) 785 4578

Rivers Animal  
Hospital  
(250) 785 8387



Bring this postcard to your vet appointment to receive a free gift.







Fix your cat right away

Postcard/Flyers (front and back) b) COMMUNITY BENEFIT APPEAL (Fort St John version)

FixYourCat.ca

vancouver foundation



**Why should we fix our cats?**

Research shows that, as a community, we can reduce the cat overpopulation problem by fixing our cats.

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**We'll have a better, healthier, community with fixed cats.**

**Call your local vet now to book your spay/neuter procedure:**

<p>North Peace Veterinary Clinic (250) 785 4578</p>	<p>Rivers Animal Hospital (250) 785 8387</p>
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Bring this postcard to your vet appointment to receive a free gift.



Fix your cat right away

College of Veterinarians of British Columbia

**BCSPCA**  
SPEAKING FOR ANIMALS

4. Vet Posters (Dawson Creek and Fort St John)



Fix your cat right away

FixYourCat.ca



Fix your cat right away

FixYourCat.ca



**Do you have an unfixed cat?**

**Don't delay – fix them today!**

**Free Spay/Neuter Now Available!**  
Up to \$300 value – for a limited time only  
Call the BC SPCA to book yours today  
Dawson Creek BC SPCA (250) 782-2444



**Do you have an unfixed cat?**

**Don't delay – fix them today!**

**Spay/neuter appointments available at your local vet**

<p>North Peace Veterinary Clinic (250) 785 4578</p>	<p>Rivers Animal Hospital (250) 785 8387</p>
---	--

vancouver foundation

College of Veterinarians of British Columbia

**BCSPCA**  
SPEAKING FOR ANIMALS

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College of Veterinarians of British Columbia

**BCSPCA**  
SPEAKING FOR ANIMALS

## 5. Research Poster (for display in vet clinics where surveys were to be administered)



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### UBC BC SPCA Spay/Neuter Research Study Info.

**Why are we doing this study?** The aim of this research is to learn more about the experiences of cat owners and their feelings about spay/neuter initiatives and pet ownership. You are being invited to take part in this research because you have shown an interest in booking your cat in to be spay/neutered.

**Who is carrying out this study?** This research is being carried out by UBC in conjunction with the BC SPCA. The Principal Investigator is Dr. Katherine White, and the Co-Investigator is Cluny South, Sauder School of Business, UBC, Tel (604) 827-3711.

**Who is funding this study?** The study is being funded by a Mitacs National Research Project Grant and the Vancouver Foundation in partnership with the BC SPCA.

**How will the study be done?** This study consists of a short questionnaire that will take between 5-10 minutes of your time. In it you will be asked a number of questions about cat spay/neuter initiatives and pet ownership in general. You will also be asked some demographic questions to help researchers understand the impact that different variables, such as gender or age, may have on people's decisions.

**Can I read the results?** The results of this study will be reported for Mitacs as well as the BC SPCA. Additionally the main findings may be published in academic journals. You will be given the option to directly receive information on the results.

**Is there any way this study could be bad for me?** We do not think there is anything in this study that could harm or be bad for you.

**What are the benefits of participating?** You may be helped by this study through learning of more ways in which your actions as a pet owner could improve your cat's wellbeing and the health of your community in general. Your answers will also help us understand how we can support pet owners generally in the future.

**How will my identity be protected?** Your identity will be kept strictly confidential. All documents will be identified by code only and kept secure. You will not be identified by name in any reports of the completed study. Computer data records relating to your responses will not contain any identifying information.

**Who can I contact if I have questions or concerns about the study?** If you have any questions or desire further information with respect to this study, you may contact one of the UBC study staff at the number listed above. If you have concerns about your rights or your experiences while participating in this study, please contact the Research Participant Complaint Line on 604-822-6598 or toll free 1-877-822-8598.

Thank you for your participation.

## 6. Veterinary Survey Consent form plus Survey

### Cat Spay/Neuter Questionnaire Instructions:

Attached is a short questionnaire, which has been designed to take between 5-10 minutes of your time. We greatly appreciate any information you can give us for this research study on cat spay/neuter issues, and cat populations across British Columbia.

#### Please Note:

Your responses are completely confidential and will not be used for any reasons other than this academic research study. You do not have to answer any questions in this questionnaire if you do not wish to do so. You will not be contacted further, unless you make a request for additional information, or indicate that you would like to take part in future research.

Please tear off and retain this front cover sheet, along with the consent form, for your information and future reference regarding the research study.

Please hand in the rest of your questionnaire on completion to the reception desk who will pass it on to the UBC Cat Spay/Neuter Research Study team.

Once again thank you for being involved in this research work aimed at helping to understand attitudes towards cats and other animals in the community, as well as in British Columbia in general.

**Principal Research Investigator:** Dr. Katherine White, Sauder School of Business UBC, Tel (604) 827-3711

**Co-Investigator:** Cluny South, Sauder School of Business ISGP UBC, Email [cluny.south@alumna.ubc.ca](mailto:cluny.south@alumna.ubc.ca).

### Cat Spay/Neuter Questionnaire

Veterinary Clinic/ Hospital Name:	Cat:	Male / Female	Voucher Number:
1. Please tell us how many animals you / your household currently own:			
Cats (Female) _____	Dogs (Female) _____	Other Animals: _____	
Cats (Male) _____	Dogs (Male) _____		
2. How many animals have you had fixed (spayed or neutered), before this current one?			
Cats (Female) _____	Dogs (Female) _____	Other Animals: _____	
Cats (Male) _____	Dogs (Male) _____		
3. How likely are you to bring in another cat to be fixed in the next year?			
<input type="checkbox"/> Very Likely	<input type="checkbox"/> Likely	<input type="checkbox"/> Unlikely	<input type="checkbox"/> Very Unlikely
<input type="checkbox"/> I don't own any more cats.	<input type="checkbox"/> Not Sure a		
4. Did you bring your cat in as part of a BC SPCA spay/neuter campaign?			
<input type="checkbox"/> Yes <input type="checkbox"/> No			
If YES, how did you hear about it? Please tick all that apply.			
<input type="checkbox"/> Television	<input type="checkbox"/> Radio	<input type="checkbox"/> Poster	<input type="checkbox"/> Door-hanger
<input type="checkbox"/> BC SPCA Staff	<input type="checkbox"/> Local Newspaper	<input type="checkbox"/> Internet/Online	
<input type="checkbox"/> Other (please specify) _____			
5. Please tell us what you know about any spay/ neuter campaigns (including this one), past or present.			
6. How likely are you to recommend the BCSPCA spay/neuter campaign to others?			
<input type="checkbox"/> Very Likely	<input type="checkbox"/> Likely	<input type="checkbox"/> Unlikely	<input type="checkbox"/> Very Unlikely
<input type="checkbox"/> Not Sure			
7. Please elaborate on why you gave this answer.			
8. Thinking about your community, what would you say are the 5 main barriers that deter people from spaying/neutering cats? Feel free to add to the list if you wish.			
Please rank them in order of importance with 1 = most important and 5 = least important.			
<input type="checkbox"/> Cost of procedure <input type="checkbox"/> Inconvenience <input type="checkbox"/> Transport issues <input type="checkbox"/> Aftercare issues <input type="checkbox"/> Not fair to cat (prevents natural breeding behaviour/harms cat) <input type="checkbox"/> Negative impact on relationship with cat <input type="checkbox"/> Some one else's responsibility <input type="checkbox"/> Not a priority <input type="checkbox"/> Dislike organization/s involved <input type="checkbox"/> Lack of information on how to get it done <input type="checkbox"/> _____ <input type="checkbox"/> _____			

9. Thinking about your community again, what would you say are the 5 main reasons that make people want to spay/neuter their cats? Feel free to add to the list in the spaces given if you wish,  
Please rank them in order of importance with 1 = most important and 5 = least important.

Lower vet / care costs for their cat  
 Less cat fighting/disturbances in community  
 Makes their cat more friendly and companionable  
 Reduces cat overpopulation in area  
 To prevent their cat breeding/ care of unwanted kittens  
 Awareness that it is the right thing to do as a pet owner  
 Desire to be seen as a responsible pet owner by others  
 Concern for wellbeing of their cat  
 Concern for other animals/wildlife  
 \_\_\_\_\_  
 \_\_\_\_\_

10. Think about yourself specifically now. On this occasion, what were the three main factors that made you decide to bring your cat in to be spayed/neutered:

1.  
2.  
3.

This next section asks you some more general questions on the subject of cats in your community.

11. Please read the following statements and mark your answer using the scale strongly disagree to strongly agree.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. Stray/feral cats are a problem in my community.					
b. Cats should be licensed (like dogs).					
c. Cats are low maintenance pets.					
d. Feeding a cat makes a person responsible for it.					
e. Cats are not as valuable as dogs.					
f. All cats with outside access should be spayed/neutered.					

12. If you have any other comments on cat issues in your local area, please use the space below to tell us more:

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13. We would like to hear your views on the BCSPCA as an organization. Please read the following statements and mark your answer using the scale strongly disagree to strongly agree.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. I think the BCSPCA does a valuable job					
b. I think the BCSPCA does a professional job					
c. I think the BCSPCA is a trustworthy organization					
d. I support the BCSPCA's work in my community					

14. Thinking only about cash donations to the BCSPCA now, please indicate how interested you would be in donating towards the following specific causes if you were asked:

	Not At All Interested	Not Very Interested	Neutral	Somewhat Interested	Very Interested
Spay/Neuter Initiatives					
Cruelty Prevention					
Humane Education					
General BC SPCA Operations					
Other (please specify below): _____					

15. If you have anything further to add, you may do so in the space provided below.

Thank you for the input you have given so far on the BCSPCA and cat neutering issues.

This final short section collects standard demographic information. This information is collected and analyzed for population demographic research purposes only. All information is entirely confidential and no identifying information is ever linked to demographic data at any stage.

16. Number of adults in your household:  One  Two  Three  Four or more

17. Number of children under 18 in your household:  One  Two  Three  Four or more

18. Gross Household Income (before tax):

<input type="checkbox"/> under \$10,000	<input type="checkbox"/> \$50,000-74,999
<input type="checkbox"/> \$10,000-24,999	<input type="checkbox"/> \$75,000-99,999
<input type="checkbox"/> \$25,000-49,999	<input type="checkbox"/> higher than \$100,000

19. Gender (of respondent):  Male  Female  Other

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20. Ethnic Origin/Race (of respondent):

<input type="checkbox"/> White	<input type="checkbox"/> Asian
<input type="checkbox"/> Hispanic or Latino	<input type="checkbox"/> First Nations or Aboriginal
<input type="checkbox"/> Black or African Canadian	<input type="checkbox"/> Other _____

21. Age (of respondent):

<input type="checkbox"/> under 18	<input type="checkbox"/> 45 - 54
<input type="checkbox"/> 18 - 25	<input type="checkbox"/> 55 - 64
<input type="checkbox"/> 26 - 30	<input type="checkbox"/> 65 - 74
<input type="checkbox"/> 31 - 44	<input type="checkbox"/> 75 or older

22. Marital Status (of respondent):

<input type="checkbox"/> Single	<input type="checkbox"/> Co-habiting
<input type="checkbox"/> Married	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Divorced	

23. Highest Educational Level (of respondent):

<input type="checkbox"/> High School	<input type="checkbox"/> Diploma (under 2 years)
<input type="checkbox"/> Undergraduate Degree	<input type="checkbox"/> Technical / skills-based accreditation
<input type="checkbox"/> Graduate Degree	<input type="checkbox"/> Other: _____

24. Current Employment Status (of respondent):

<input type="checkbox"/> Not employed	<input type="checkbox"/> Retired
<input type="checkbox"/> Part-time	<input type="checkbox"/> Other _____
<input type="checkbox"/> Full-time	

25. In order that we may understand which area your comments relate to please indicate the last 3 digits of your postal code

If you prefer, you can indicate the cross street nearest to your home below:

You have completed the Survey.

Thank you so much for your time. If you would be interested in further information about this survey including the results, or would be willing to answer further questions relating to cat well-being and spay /neuter campaigns in the area, please indicate how you would like to be contacted below. Please note any contact details you may choose to give will remain strictly confidential and will only be used in connection with this specific research study.

Preferred contact method and details: \_\_\_\_\_

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a place of mind

THE UNIVERSITY OF BRITISH COLUMBIA

UBC BC SPCA SPAY/ NEUTER RESEARCH STUDY CONSENT FORM

**Why are we doing this study?** The aim of this research is to learn more about the experiences of cat owners and their feelings about spay/neuter initiatives and pet ownership. You are being invited to take part in this research because you have shown an interest in booking your cat in to be spay/neutered.

**Who is carrying out this study?** This research is being carried out by UBC in conjunction with the BC SPCA. The Principal Investigator is Dr. Katherine White, and the Co-Investigator is Cluny South, Sauder School of Business. Tel (604) 827-3711.

**Who is funding this study?** The study is being funded by a Mitacs National Research Project Grant and the Vancouver Foundation in partnership with the BC SPCA.

**How will the study be done?** This study consists of a short questionnaire that will take between 5-10 minutes of your time. In it you will be asked a number of questions about cat spay/ neuter initiatives and pet ownership in general. You will also be asked some demographic questions to help researchers understand the impact that different variables, such as gender or age, may have on people's decisions.

**Can I read the results?** The results of this study will be reported for Mitacs as well as the BC SPCA. Additionally the main findings may be published in academic journals. You will be given the option to directly receive information on the results.

**Is there any way this study could be bad for me?** We do not think there is anything in this study that could harm or be bad for you.

**What are the benefits of participating?** You may be helped by this study through learning of more ways in which your actions as a pet owner could improve your cat's wellbeing and the health of your community in general. Your answers will also help us understand how we can support pet owners generally in the future.

**How will my identity be protected?** Your identity will be kept strictly confidential. All documents will be identified by code only and kept secure. You will not be identified by name in any reports of the completed study. Computer data records relating to your responses will not contain any identifying information.

**Who can I contact if I have questions about the study?** If you have any questions or desire further information with respect to this study, you may contact one of the UBC staff at the number listed above.

**Who can I contact if I have concerns about the study?** If you have any concerns about your rights or your experiences while participating in this study, please contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or toll free 1-877-822-8598.

**Consent:** Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time. You do not have to answer any question if you do not feel comfortable answering it. If the questionnaire is completed it will be assumed that consent has been given.

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## 7. Survey debriefing form



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Principle Investigator: Katherine White, Marketing Department, Sauder School of Business, UBC, Vancouver, V6T 1Z2. Telephone: (604) 827-3711.

### **Debriefing Form:**

Thank you once again for participating in this research study being carried out by UBC, and funded by a Mitacs research grant in partnership with the BC SPCA.

The purpose of the research is to understand what makes people decide to spay/neuter their cats, and how different types of campaign messaging appeals, combined with the cost of action, impact how likely people are to carry out the procedure. To investigate this, we have distributed information flyers, encouraging pet owners to book their cat in to be spayed/neutered, across two communities with two different versions of appeal wording on them. One version discusses what benefits spay/neutering brings to owners themselves, the other version discusses what benefits are brought to the community at large. This research is being carried out in two areas, one of which has a grant that provides for free spay/neuter procedures, and one that does not. This allows us to assess how much the cost also impacts take-up. Our research prediction is that the cost of the procedure, and the wording of the appeal promoting it, will act together to encourage people to spay/neuter their cat, with more people paying at cost to themselves to spay/neuter when they see a community benefit, and more people taking-up the free spay neuters when they are aware of the personal benefit to themselves.

Your time contributing to this research is greatly appreciated. It will add to academic understanding of why people are motivated to behave in certain ways regarding pet ownership. The final research findings will also enable the BC SPCA and other not-for-profit organizations, as well as local municipalities involved in animal control, to better understand attitudes regarding cat overpopulation issues and cat spay/neuter initiatives.

**Confidentiality:** Please note that any information you gave will be kept strictly confidential and will remain securely held in an academic research storage facility until such time as it may be securely destroyed. No personal information will leave the academic facility or become part of any final report.

If you have any questions about the study or would like to find out more about the results of the research please contact the Principal Investigator, Dr. Katherine White, Sauder School of Business, Tel. (604) 827-3711.

If you have concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or long distance e-mail [RSIL@ors.ubc.ca](mailto:RSIL@ors.ubc.ca) or call toll free 1-877-822-8598 (Toll Free: 1-877-822-8598)