Levels of dog control and dog fouling in a large public park: methods issues and survey results

Nick Wilson

Companion dog ownership is a highly valued aspect of human society and one that is likely to provide both mental health benefits (with the latter likely driven by increased walking levels by dog owners). Although these benefits probably substantially outweigh the downsides of dog ownership, those problems can still be significant. For example, one estimate is that there are 240 hospitalisations per year from dog bite injuries in New Zealand, with occasional deaths.

One New Zealand study reported that the most common location for humans being bitten by dogs was public streets/walkways at 26% of the total, followed by various private settings (other locations were 4% in parks and 6% in other public areas).

Other problems with dogs include: nuisance and anxiety when unleashed dogs approach people; nuisance impacts from barking and howling; disturbance of wildlife; and nuisance and disease risk from fouling with faecal material in public places. The relevant zoonotic diseases that could occur from contact with dog faeces include: campylobacteriosis, salmonellosis, cryptosporidiosis, E. coli infection, and toxocariasis (albeit with limited risk information in the NZ setting for some of these, such as for toxocariasis).

Various observational studies have provided data on dog-related issues in public places (e.g., in the UK and France), but no study of dogs in New Zealand parks appears to have been published to date. Therefore, this study aimed to start addressing this knowledge gap.

Methods: Observations of park users walking their dogs were conducted in a single large urban park (Karori Park) in the suburb of Karori in Wellington City. The visits were all part of convenience visits to the park as part of routine fitness activities by the observers during weekends and evenings in the five months of May to September 2014. This park has sports fields, a children’s play area, a defined dog exercise area, and a paved perimeter walking track. Observations were conducted with discretion (with a distance of at least 20 metres being typically maintained between the researcher/s and the people/dogs), so that dog walker behaviour would not change due to a sense of being observed. Data were entered into a smartphone in the field which contributed to the normalcy of the research process, given how common smartphone use is. This study had ethical review and approval (University of Otago process).

Results: The method of this observational study was found to be feasible in this New Zealand setting. It involved a total of 17.3 hours of observer time for 60 park visits on 35 separate days (i.e., averaging 14.5 different dogs observed per hour). Dogs were present on most park visits (80%) and were in view 58% of the time on average. There was no evidence that any park users were aware that the observational data were being collected and observers felt safe at all times.

Of the 250 dogs observed, the majority (90%) were kept on a leash, as required by the City Council bylaws (Table 1). However, bylaws were broken when dogs were off the leash (10% of dogs), when dogs were on the sports fields (8%), and when in the children’s play area (5%). Dog defecation was observed on 23 occasions (Table 1). Faeces were picked up and removed, as required by the bylaw, the majority of the time (87%).
Table 1. Observed dog behaviours, and human dog-walker behaviours in a large public park (Karori Park, Wellington 2014, n=250 dogs unless otherwise stated)

<table>
<thead>
<tr>
<th>Dog behaviours and related human behaviours around dog management</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dog always on a lead (when outside the designated dog exercise area)</td>
<td>225</td>
<td>90.0</td>
</tr>
<tr>
<td>Dog off lead at least for some of the time (contrary to the bylaw)</td>
<td>25</td>
<td>10.0</td>
</tr>
<tr>
<td>Dog on the sports field (contrary to the bylaw)</td>
<td>20</td>
<td>8.0</td>
</tr>
<tr>
<td>Dog in the children’s play area (contrary to the bylaw)</td>
<td>12</td>
<td>4.8</td>
</tr>
<tr>
<td>Dog observed to defecate</td>
<td>23</td>
<td>9.2</td>
</tr>
<tr>
<td>Dog faeces removed</td>
<td>20/23</td>
<td>87.0</td>
</tr>
<tr>
<td>Dog faeces not removed*</td>
<td>3/23</td>
<td>13.0</td>
</tr>
</tbody>
</table>

*Includes a case where the person with the dog attempted to push the faeces off the grass and under a fenced tree. In contrast one dog owner followed their dog into a shrubbery area to remove the faeces.

Discussion: This study suggests it is feasible to do such observational studies of dog and human behaviour in at least some public parks in New Zealand. But as it was a convenience sample (fitting with observer preferences for outdoor exercise times), the data collection could probably have been more efficiently collected if times of high park use only were studied (e.g., only weekend afternoons on fine weather days). Yet a problem with focusing on popular park use times is that this would probably further bias the results towards detecting more law-abiding behaviours due to social pressures of more other people being around at such times.

The small size of this study and focus on just one (albeit large and popular) park means that it has limited generalisability, so ideally, further studies in a range of New Zealand parks seems desirable. Nevertheless, it does provide some limited evidence to suggest that people walking dogs are typically responsible and follow dog control bylaws. Indeed, these results for leash use and removing dog faeces were generally higher than those found in studies elsewhere (e.g., results for cleaning up faeces elsewhere were: 54% in a UK study; 43% in a French study and 56% and 63% in two other studies as cited by Gaunet et al).

Yet it is still desirable that there is improved compliance with bylaws in the New Zealand setting to further minimise injury risk from bites from unleashed dogs and to reduce the risk of zoonotic disease transmission from dog faeces. Options for city councils might include:

Installing larger signage at park entrances – with the signs mentioning the word “bylaw” and possibly the size of the fine and the reasons for it (“dog fouling can spread disease”; “unleashed dogs can cause nuisance and injury to other park users”; “follow nearly all other dog owners in cleaning up after your dog”).

Occasionally enhancing enforcement efforts with actual prosecution of offenders. Media publicity of prosecutions might also generate compliance improvements.

Possibly expand the provision of free dog waste bags at park entrances (along with dog-shaped waste receptacles that are used in some New Zealand parks).

But given the public health benefits of dog ownership (see Introduction), there may also be a case for expanding urban access to dog exercise areas in parks along with other interventions to promote dog walking in urban areas. These could include improved quality of street connecting walkways and improved night-time lighting of park walkways to facilitate dog walking in the evenings.

Competing interests: Nil. (The author has enjoyed having pet dogs previously but is not a current dog owner. There was no funding for this study.)
Author information: Nick Wilson, Department of Public Health, University of Otago, Wellington, New Zealand. nick.wilson@otago.ac.nz

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References


