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Public Perceptions of Australian Assistance Dogs: Happier and Better Used Than Companion

Dogs

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**Conflict of Interest Statement**

The authors declare no conflicts of interest

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## **Abstract**

Previous studies have revealed cultural differences in perceptions of assistance dogs, but this has not been investigated in almost 20 years. This study aimed to develop an understanding of the Australian public's perceptions toward both assistance and companion dogs.

A questionnaire was completed by 258 Australians asking about their interest in, attitudes towards, and perceived happiness of the two types of dogs. Results revealed participants were equally interested in them, but more supportive of the use of assistance dogs, and perceived them as happier. Qualitative analyses revealed participants commonly endorsed the practical benefits of assistance dogs and the emotional benefits of companion dogs. Differences in happiness ratings can potentially be explained by the common endorsement that companion dogs are sometimes neglected while assistance dogs enjoy working and constant companionship with their handler. However, several participants expressed concern regarding the restrictive nature of the assistance work. There was an increase in concerns raised for the welfare of both dogs as compared to previous studies, suggesting a rise in concern about dog welfare and the ethics of keeping dogs for human benefits.

**Keywords: attitudes, working dogs, animal welfare, sustainability**

38 Domestic dogs take on a wide range of roles in human lives, and while the majority of people  
39 agree that dog welfare is important, Cobb et al., (2020) has revealed that not all dog's welfare  
40 status' are perceived as equal. Of 18 contexts, Guide/Seeing Eye Dogs welfare was rated  
41 highly, second only to one's own pet (i.e. companion) dog. In contrast, feral and stray dogs'  
42 perceived welfare ratings were extremely low, suggesting that humans' perceived welfare of  
43 dogs may be associated with the importance of the role they play in our lives. This is in line  
44 with Taylor and Signal's (2009) 'Pet, Pest, Profit' concept whereby pest animals receive the  
45 lowest value ratings, followed by utility animals, then pets. However, forming perceptions  
46 around only what works best for us as a species can lead to the normalization of 'speciesist'  
47 attitudes and a general social acceptance of human dominance and exploitation over other  
48 animals.

49

50 The benefits of assistance dogs are undeniable to humans. For example, Audrestch et al.,  
51 (2015) found that service dogs facilitate social interaction and help their handlers to feel safer  
52 and more independent. However, public perceptions of working animal welfare are important  
53 to their ongoing sustainability as human attitudes can influence industry regulations and  
54 standards, as well as the lives of the owners, and the dogs themselves (Bremhorst et al., 2018;  
55 Cobb et al., 2015). Roomey et al. (2009) highlighted that as public concerns of animal  
56 welfare increase, researchers must be proactive in understanding what these concerns are and  
57 how the industry can best address them. However, welfare perceptions relating to assistance  
58 dogs have not been published on in almost 20 years, and, to the best of our knowledge, has  
59 not been investigated in Australia. In their 2002 study, Miura et al. surveyed students in the  
60 UK and Japan, and their results revealed that students in both countries expressed admiration  
61 for the work of the dogs. However, while British students predominately described the  
62 benefits to the owners, Japanese students reflected more on the bond between the dog and

63 owner. Furthermore, Japanese students were sympathetic to the assistance dogs being strictly  
64 trained to serve humans. Miura et al. (2002) concluded that the British students' opinions  
65 were "more well informed and considered" (p.240). However, considering their comparative  
66 high utility in the UK at the time, this might reflect a perception born out of the 'profit' value  
67 of these dogs (i.e. their working status means they are able to "give back" more to humans  
68 than companion dogs).

69

70 It is also important to understand the views the public has towards companion dogs, not only  
71 for comparative purposes with working dogs but as an industry in its own right, with  
72 companion dogs being part of an estimated 39.9% of Australian households (Animal  
73 Medicines Australia, 2019). Again, we refer to findings from Miura et al. (2002) who  
74 revealed British students thought assistance dogs were no more or less happy than pet dogs,  
75 while Japanese students were divided; 30% reported that pet dogs were happier, 41%  
76 reported that assistance dogs were happier, and 29% reported that neither were happier than  
77 one another. Reasons for reporting greater happiness in pet dogs included the strict training  
78 and lives of assistance dogs, and questioning whether the dog enjoyed working. They also  
79 endorsed the idea that their happiness depended on the owner. Conversely, reasons for  
80 reporting that assistance dogs were happier included negative aspects of pet keeping such as  
81 being neglected or abandoned, or not well treated, because unlike assistance dog owners,  
82 companion animal's owners do not rely on their dog for daily functioning. Indeed, Branson,  
83 et al. (2010) support that the 'profit' value of working dogs means they receive more regular  
84 check-ups and more comprehensive veterinary care.

85

86 Dog owners have a duty of care, both legal and moral to ensure their dogs have a high level  
87 of welfare, whether they are kept as companions or assistance dogs (Broom, 2010). A rise in

88 awareness of animal use and management has meant the public has increased expectations  
89 and lower tolerance levels for inadequate working conditions (Cobb et al., 2015). These kind  
90 of “community standards” are known as a “social license to operate” with animal welfare  
91 now considered the most crucial contributor for Australian animal use indicators (Hampton et  
92 al., 2020). Hence, the future sustainability of assistance and companion dogs is dependant on  
93 the public’s belief that these animals are looked after and experience proper welfare. Social  
94 licenses to operate are highly influential and can impact government and industry regulations  
95 for acceptable standards of care, as has been seen with greyhound racing, horse racing, live  
96 animal export, and sheep and dairy farming contexts in Australia (Cobb et al., 2015;  
97 Hampton et al., 2020).

98

99 The aim of this study was to understand the Australian public’s perceptions of assistance and  
100 companion animals. For the purposes of this study, and in line with Miura et al. (2002)  
101 assistance dogs were defined as a diverse subgroup of working dogs that have undertaken  
102 training to assist humans with different types of disabilities including dog guides for the  
103 visually impaired, hearing dogs for the hearing impaired, service dogs for those with mobility  
104 impairments, as well as medical alert dogs which respond to medical issues such as diabetes  
105 and epilepsy. While these dogs often reside at home with a family, they are different from  
106 companion dogs, or pets, which are not specifically trained nor do any ‘work’, but rather  
107 provide companionship to the individual or family. Specifically, we aimed to compare the  
108 public’s i) interest and impressions of dogs ii) attitudes towards using/keeping dogs, and iii)  
109 perceived happiness of dogs. We hypothesized that our participants would demonstrate equal  
110 interest towards assistance and companion dogs. We also hypothesized respondents would be  
111 more supportive of the keeping of companion dogs versus assistance dogs, in line with  
112 findings from Taylor and Signal (2009) demonstrating higher value rating for pets, also

113 shown to have the highest welfare ratings in Cobb et al., (2020). We also expected to see  
114 higher happiness ratings for companion dogs for the same reasons, despite Miura, et al.,  
115 (2002) observing higher happiness ratings for assistance dogs.

116

## 117 **Method**

### 118 **Participants**

119 The current study included 258 participants (230 females, 21 males, 7 non-binary).  
120 Participants age ranged between 18 and 88 ( $M = 46.4$ ,  $SD = 15.6$ ). Sixty-three individuals did  
121 not provide their age. Participants were drawn from the general Australian population who  
122 self-described as being 18 years or older and Australian residents. A convenience sample was  
123 recruited by sharing the survey link with personal contacts and Facebook advertising.  
124 Participants were offered the chance to enter a draw for a \$50 gift card once their  
125 participation was complete.

126

### 127 **Materials**

128 **Assistance & Companion Dogs Questionnaire.** This measure is a modified version of  
129 Miura et al's (2002) Assistance Dog Questionnaire, designed to meet the specific purposes of  
130 this study. This involved expanding Likert scales in order to increase the chance of finding  
131 differences between opinions on assistance and companion dogs.

132 The questionnaire consisted of 22 items, which included a mix of open-ended as well as  
133 fixed-choice questions. In part one, participants answered several demographic questions. In  
134 part two, participants were provided an explanation for both types of dog roles. To assess  
135 participants' interest in the dogs, they were asked to rate the following questions on a 5-point  
136 Likert scale: *To what extent are you interested in television programs and articles on*  
137 *companion dogs?* and: *To what extent are you interested in television programs and articles*

138 *on assistance dogs?* Ratings were from ‘never interested’ to ‘always interested’. Below each  
139 question they were asked: *If you have you seen (including on television or in articles), or*  
140 *interacted with, any kind of assistance/companion dog, what did you think about then?*  
141 *Please describe what you felt. You can describe anything. For example, about the dog, the*  
142 *owner, or the people around them, etc.* Next, participants were asked to indicate their attitude  
143 towards the use of dogs by expressing the extent to which they thought the following was a  
144 good or bad idea on a 7 point Likert scale from ‘very bad’ to ‘very good’: Below each  
145 question they were asked: *What do you think about using dogs for people with disabilities?*,  
146 and *What do you think about keeping dogs as companion animals?*. Similarly, participants  
147 were asked to rate the happiness of the two cohorts of dogs on a 7 point Likert scale from  
148 ‘very unhappy’ to ‘very happy’, and then asked: *What factors may influence their happiness?*  
149

## 150 **Procedure**

151 Before the commencement of the study, ethical approval was obtained by the Monash  
152 University Human Research Ethics Committee. Participants followed the Qualtrics link in the  
153 recruitment message to the survey. This began with the explanatory statement which detailed  
154 the aim of the study, the inclusion criteria, and the right to withdraw at any time. Participants’  
155 consent was implied by completion of the survey. Data was collected during January and  
156 February 2020. The survey took approximately 15 minutes to complete and could be  
157 completed at any time.

158

## 159 **Data Analysis**

160 Mean scores comparing interest, attitude towards use, and happiness ratings between the two  
161 cohorts of dogs were assessed using paired sample t-tests. Due to their potential to be overly  
162 influential on the model, it was decided *a priori* that cases with z-score differences scores



163  $\geq 3.29$  would be removed before the t-test was run. This resulted in the removal of two cases  
164 for the interest variable, six cases for the attitude towards use variable, and four cases for the  
165 perceived happiness variable. Visual inspection of histograms and P-P plots of the difference  
166 score data revealed that it was normally distributed on all variables.

167 Qualitative free-hand responses were analyzed using thematic content analyses, starting with  
168 a deductive method using pre-determined themes observed by Miura et al., (2002). However,  
169 the theme names used by Miura et al. were not clearly defined and so new themes were  
170 allowed to emerge inductively. This occurred through a process whereby the two authors of  
171 this paper (PG and JO) independently coded the participant responses in blocks of 10 per  
172 question. They then met and compared coding and resolved any discrepancies through  
173 discussion. Through this process theme names evolved and/or dissolved where redundancies  
174 were noted, ensuring responses would fit under only one option. This process continued until  
175 inter-rater reliability of  $\geq 80\%$  was achieved for each question. Once achieved, PG completed  
176 the coding independently which was then reviewed by JO for quality assurance. Frequencies  
177 were then counted as the number of participants who endorsed a theme and percentages were  
178 rounded to the nearest whole number. Participants could endorse more than one theme with  
179 separate segments of their response. Only themes endorsed by  $\geq 5\%$  of the sample were  
180 retained for each question. The sample size for each question included participants who  
181 provided responses that loaded on main themes, as well as responses that did not load on  
182 these main themes but that still provided an appropriate response to the question. Participants  
183 who did not provide a response or who provide a response that did not adequately address the  
184 question were not included.

185

186

## **Results and Discussion**

187 Participant responses were downloaded directly from Qualtrics and imported into SPSS for  
188 data cleaning and analysis (Version 26; IBM, 2019). Missing data analysis revealed one  
189 missing data point for happiness rating for companion dogs and was left as missing. There  
190 were no other missing data points, apart from instances where opportunities to provide  
191 freehand responses were left blank.

192

### 193 **Sample Frequencies & Descriptives**

194 The sample expressed a strong like for dogs, with 96% endorsing the ‘like somewhat’ or ‘like  
195 dogs very much’ options. Roughly three-quarters of participants (71%) reported owning a pet  
196 dog in the past or present and a similar number had not owned or raised any type of  
197 assistance dog (79%). All frequencies are presented in Table 1.

198

### 199 **Interest in Assistance/Companion Dogs**

200 The majority of our sample had some interest in consuming media relating to both assistance  
201 dogs and companion dogs. On the Likert scale rated from 1-5 the mean for assistance dogs  
202 was 3.81 ( $\pm 1.01$ ) and 3.75 ( $\pm 0.98$ ) for companion dogs, which corresponds to an average  
203 between ‘sometimes interested’ and ‘most of the time interested’ for both cohorts. All  
204 frequencies and percentages are presented in Table 2.

205

206 The t-test revealed that there were no significant differences between interest in assistance  
207 dogs and interest in companion dogs,  $M_{diff} = 0.065$  ( $\pm 0.67$ ),  $CI [-.019, .15]$ ,  $t(245) = 1.53$ ,  $p$   
208  $= .127$ . Hence, while our sample had a high interest in dogs in general, there was no  
209 significant difference in their interest in the two cohorts, which is important because it shows  
210 that they were not biased towards one cohort.

211

212

213 To further understand what people find interesting about these two dog populations, a  
214 thematic analysis of qualitative data was conducted on participant responses about their  
215 opinions about each population. Table 3 and Table 4 summarizes the themes that emerged.

216

217 The majority of participants in our sample stated that they ‘liked dogs very much’ (see Table  
218 1). In addition, 60% of participants said that they were ‘most of the time’ or ‘always or  
219 almost always’ interested in television programs and articles on assistance dogs, and 59% for  
220 companion dogs (see Table 2).

221

222 Qualitative findings supporting ‘*Positive perceptions and sensations*’ as the most commonly  
223 endorsed theme are consistent with the high interest ratings reported in Table 2. Interestingly,  
224 the next most endorsed theme in both cohorts related to the irresponsible behaviours of  
225 humans. For companion dogs, this related to irresponsible ownership leading to uncontrolled  
226 and poorly trained dogs, and frustration at being approached by such dogs, and fear for  
227 themselves, others, and other dogs. We can see that behavior influences the way the public  
228 views these animals, which isn’t surprising given that Australia’s management of dogs in  
229 public spaces is one of the most regulated in the Western world (Instone & Sweeney, 2014)  
230 reflecting clear expectations from the public about pet dogs and pet dog ownership. In  
231 contrast, for assistance dogs, this was in relation to inappropriate touching of the dogs by the  
232 general public. It is noteworthy however, that participant’s endorsing this theme understood  
233 that they should not interact with an assistance dog while it’s working, even though many  
234 expressed a desire to do so, for example: “*Most of the time I see an assistance dog and want  
235 to pat it, but I just smile at it instead.*”. This theme was not endorsed by participant’s in Miura  
236 et al’s (2002) study and may reflect an increase in education and awareness of assistance

237 dogs, their rise in prevalence, or cultural differences in behavior towards working dogs in the  
238 UK, Japan, and Australia.

239

240 Owner benefits and the close relationship between the owner and their dog were identified in  
241 both cohorts, as in Miura et al.'s (2002) paper. However, welfare concerns about the  
242 assistance dog industry were also raised, including concerns that the dogs might not be  
243 benefitting from the working role. Sympathy towards assistance dogs for the intense work  
244 and training they go through was reminiscent of the Japanese sample of Miura et al.'s study  
245 with disapproval of the use of dogs for utilitarian purposes.

246

#### 247 **Use of Assistance/Companion Dogs**

248 The majority of our sample were supportive of the use of both assistance dogs and  
249 companion dogs. On the Likert scale rated from 1-7, the mean rating for whether using  
250 assistance dogs was considered a good or bad idea was 6.76 ( $\pm 0.75$ ) and was 6.67 ( $\pm 0.83$ ) for  
251 keeping companion dogs. This corresponds to an average of between moderately good and  
252 very good for both cohorts. No respondents endorsed the use of either assistance or  
253 companion dogs as very bad. Frequencies and percentages are presented in Table 5.

254

255 The t-test revealed that participants were significantly more supportive of using assistance  
256 dogs for disabilities than companion purposes,  $M_{diff} = 0.11 (\pm 0.66)$ ,  $CI [0.026, 0.19]$ ,  $t(245)$   
257  $= 2.59$ ,  $p = .010$ ,  $d = 0.17$ , although the effect size was very small and both were rated highly.

258

259 To further understand the reason behind why people think using dogs for these different  
260 purposes is a good or bad idea a thematic analysis was conducted on their responses to this  
261 question. Table 6 and Table 7 summarizes the themes that emerged.

262

263 The most commonly endorsed response related to the '*Practical benefits*' they offer to their  
264 owners (refer to Table 6), whereas when asked about keeping dogs as companion animals,  
265 the most commonly endorsed theme related to the '*Emotional benefits*' they offer to their  
266 owners (refer to Table 7). '*Emotional benefits*' was a close second for assistance dogs and  
267 while '*Practical benefits*' were also seen in relation to companion dogs these were more  
268 around teaching children responsibility and increasing physical activity than assisting a  
269 person with day-to-day living/tasks. A small sample of participants endorsed the belief that  
270 the relationship was '*Mutually beneficial*' in both companion (11%) and assistance (5%)  
271 roles.

272

273 Findings also revealed a belief that assistance dogs were capable in their working role (14%)  
274 and enjoyed their job (13%), which was often associated with words such as 'pride' and  
275 'purpose'. In Miura et al. (2002) there was also some endorsement from both British and  
276 Japanese participants that the dogs enjoy working. People commonly attribute human  
277 emotions to things which are non-human, such as animals. This is known as  
278 anthropomorphism, and is an almost universal trait among animal owners (Serpell, 2003).  
279 These include basic emotions such as anger, joy, happiness, fear, surprise, disgust, and  
280 sadness, as well as complex emotions such as guilt, shame, jealousy, disappointment, pride,  
281 and compassion/empathy (Martens et al., 2016; Morris et al., 2008) that research is yet to  
282 establish if dogs possess. While absence of evidence does not mean evidence of absence,  
283 research has not yet been able to show that dogs can feel complex emotions such as pride or  
284 have the social cognitive awareness to feel purpose. We certainly do not suggest that we  
285 should base our conclusions on what animals think and feel on our ability to identify said  
286 thoughts and emotions, however, it is worth considering that many of our participants may be

287 engaging in anthropomorphism, rather than accurately reading the emotion of the dog. This is  
288 particularly important considering Horowitz' (2009) study which found no support that  
289 owners are able to identify the complex emotion, guilt, in their pet dogs, using a blinded  
290 experimental design. Our sample of participants predominantly identified as having never  
291 owned or raised any type of assistance dog, yet commonly endorsed the idea that they were  
292 proud of themselves for their work. It is therefore reasonable to assume that if they  
293 themselves are impressed by the work of the dog, as many participants expressed that they  
294 were, they may be projecting their own feelings of pride onto what they see and believe the  
295 dog to feel. Indeed, Oliva et al.'s (2019) study demonstrated that assistance dogs were more  
296 likely than companion dogs to attempt a cognitive task, but weren't any more likely to be  
297 correct. This suggests that assistance dogs work or perform tasks because they are trained to  
298 do so. They may not want to work or know what they are doing and this goes against the  
299 belief that assistance dogs enjoy working or feel pride in what they do.

300

301 In addition to the belief that dogs enjoy working, a minority of participants (7%) raised  
302 concerns regarding the toughness of the training and the stressful and restrictive nature of  
303 their work, altering the way the dogs naturally respond or function. This demonstration of  
304 greater behavioral control has been associated with physiological signatures of distress in a  
305 Guide Dog population (Fallani et al., 2007), and potential blood biomarkers of anxiety in  
306 trainee assistance dogs (Oliva et al., 2019). These findings suggest that assistance dogs' strict  
307 training may result in the dogs having a lack agency over their own actions, which may be at  
308 the detriment of their wellbeing. A minority sample (5%) also raised concerns about wider  
309 issues relating to companion dogs, including poor breeding practices and overbreeding, high  
310 numbers of dogs in shelters, poor training, and again a questioning about whether dogs enjoy  
311 being kept as companion dogs. According to Cobb et al.'s (2020) study, humans perceive

312 companion and assistance dogs under tight management and/or training restrictions to have  
313 higher welfare than those that are unowned and free roaming and could arguably be  
314 considered, at least from a human's perspective, as 'pests'. However, it is worth considering  
315 how convenience and anthropomorphic tendencies plays into those perceptions.

316

### 317 **Happiness of Assistance/Companion Dogs**

318 The majority of our sample rated the happiness of both assistance dogs and companion dogs  
319 highly. On the Likert scale rated from 1-7, the mean for assistance dogs was 6.34 ( $\pm 1.09$ ) and  
320 6.21 ( $\pm 1.00$ ) for companion dogs, which corresponds to an average of between moderately  
321 happy and extremely good for both cohorts. Frequencies and percentages are presented in  
322 Table 8.

323

324 The t-test revealed that participants believed that assistance dogs were significantly happier  
325 than companion dogs,  $M_{diff} = 0.19$  ( $\pm 0.97$ ),  $CI [0.065, 0.31]$ ,  $t(244) = 3.02$ ,  $p = .003$ ,  $d =$   
326  $0.19$ . This is in contrast to Miura et al. (2002), whose majority of participants responded that  
327 neither of the dogs were happier than the other, however, we may have been able to find this  
328 difference after expanding response options for this question from a 3-point scale to a 7-point  
329 scale in order to increase sensitivity. It is again worth noting that the effect size for the  
330 difference is small.

331

332 To further understand the reason behind why people believe the dogs are happy or unhappy,  
333 and what factors contribute to this, a qualitative thematic analysis was conducted on their  
334 responses. Table 9 and Table 10 summarizes the themes that emerged

335

336 Participants believed that for both assistance and companion dogs, the quality of love and  
337 treatment they receive had the greatest influence on their happiness. Similar to the Japanese  
338 participants in Miura et al. (2002), this theme included concern about abandonment or neglect  
339 for companion animals, but not for assistance dogs. Although some participants were  
340 concerned about the ability of owners with disability to care for their dogs, others believed  
341 that assistance dogs receive greater care due to their dependence on them, with participants  
342 stating, for example: “*Assistance dogs are highly valued by their owners and treated*  
343 *accordingly*.” This aligns with thinking that the value of working dogs means they receive  
344 more regular check ups and more comprehensive veterinary care (Branson et al., 2010).  
345 Perceived happiness of assistance dogs was also believed to be influenced by the time spent  
346 with their handler; both the quantity, respondents mentioning the stimulation benefits from  
347 constant companionship, and the quality, suggesting the strong bond between owner and dog  
348 increases their happiness. This finding was also reflected in Miura et al. (2002), but  
349 significantly more by the British sample. Perceived companion dog happiness varied on the  
350 level of time spent with owners, and that increased time with their family or pack lead to  
351 greater happiness, and unhappy pets were left alone, or left outside.

352

353 Forty percent of participants also endorsed that assistance dog happiness was dependent on  
354 enjoying their job, with most who endorsed this theme believing that their work did give  
355 them purpose and joy. Conversely, a similar percentage (34%) believed their happiness may  
356 be lower due to the potentially stressful or restrictive nature of working, not having sufficient  
357 ‘down time’, and difficult training and tasks. This is similar to twenty-six percent of the  
358 Japanese sample of Miura et al.,’s 2002 study expressed sympathy for assistance dogs for this  
359 reason, supporting similarities between the Japanese students of twenty years ago and the  
360 Australian public of today for whom animal welfare is clearly an important consideration. It



361 also goes against the conclusions drawn by Miura et al. that the British students, of whom  
362 none expressed sympathy, were “more well informed and considered” (p.240).

363

### 364 **Strengths, Limitations, and Future Directions**

365 The current study is novel in that it is the first time that the Australian public’s perceptions of  
366 assistance animals and companion dogs have been compared. However, there may be some  
367 biases in our sample. Unsurprisingly, the people who completed our study were highly  
368 positive towards dogs, with the majority stating they like dogs very much. However, this may  
369 be balanced as they were not significantly different in their interest in either type of dog. The  
370 majority of our sample were also pet owners, and research has suggested that a person’s  
371 positive relationship with an animal can influence their perception of that animal’s inner  
372 experiences (Howell et al., 2013). Further research with participants with a more neutral view  
373 on dogs may be useful to get a broader understanding of the public’s views (refer to Table 1).  
374 There was also a gender bias, our sample was nearly 90% female, and was also  
375 overwhelmingly Caucasian with largely liberal political views. As the male gender and  
376 conservatism have been associated with higher species attitudes (Caviola et al., 2019),  
377 results may differ in a male-dominant and/or conservative sample, particularly about the use  
378 of dogs for working roles.

379

380 A limitation of our study included the recording of many inappropriate responses to our  
381 qualitative questions, due to apparent confusion around the term ‘companion dog’. Despite  
382 providing a description of what we meant by this prior to the presentation of the questions,  
383 several responders clearly based their responses on emotional support dogs and therapy dogs,  
384 as opposed to pet dogs. Hence, further education or delineation around these terms would be  
385 advantageous. Additionally, while we did find significant differences in opinions on the use

386 and happiness of assistance and companion dogs they were small differences, thus multi-item  
387 measures could be developed to be more sensitive. Research could also be done comparing  
388 other kinds of working dogs. Finally, research should strive to determine the actual happiness  
389 of assistance dogs, as well as monitoring for signs of stress and anxiety, to see how it aligns  
390 with the high happiness ratings that our participants endorsed. Further controlled research  
391 studies should also be conducted into whether humans have the capacity to accurately  
392 identify the emotions of dogs and other animals, bearing in mind that just because we might  
393 not be able to correctly identify it, does not mean that the animal does not possess the ability  
394 to feel it.

395

### 396 **Conclusion**

397 We have identified that our sample of the Australian public are highly supportive of the use  
398 of both assistance and companion dogs. There was greater endorsement for assistance dogs,  
399 suggesting that our sample perceives assistance dog life as better than living as a  
400 companion/pet dog. There were some welfare concerns raised for both kinds of dogs, and  
401 these seemed to have increased since Miura et al.'s (2002) study. These were for the stressful  
402 or restrictive nature of assistance dog work and ensuring that disabled owners were properly  
403 able to care for the dog. Concerns for companion dogs were for the care, training, and  
404 stimulation of the dog, as well as issues with breeding practices, and dog abandonment. The  
405 ongoing sustainability of assistance and companion dogs is dependent on the public's belief  
406 that the dogs are looked after and experience proper welfare. According to our sample, both  
407 the assistance and companion dog industries are currently well accepted, but further public  
408 education and awareness about the lives of assistance dogs in particular may be beneficial to  
409 its ongoing support.

410

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462 **Table 1.**  
463 *Participant Demographics*

	<b>Frequency (%)</b>
<b>Highest Education Level</b>	
High School	77 (29.8%)
Diploma	46 (17.8%)
Bachelor's Degree	99 (38.4%)
Master's Degree	28 (10.9%)
Doctoral Degree	8 (3.1%)
<b>Ethnicity</b>	
White or Caucasian	235 (91.1%)
Aboriginal or Torres Strait Islander	4 (1.6%)
Asian	11 (4.3%)
Hispanic or Latino	3 (1.2%)
Mixed	5 (1.9%)
<b>Political Orientation</b>	
Strongly Conservative	1 (0.3%)
Mostly Conservative	6 (2.3%)
Somewhat Conservative	13 (5.0%)
Neutral	94 (36.4%)
Somewhat Liberal	29 (11.2%)
Mostly Liberal	64 (24.8%)
Strongly Liberal	51 (19.8%)
<b>Like of Dogs</b>	
Don't like dogs at all	1 (0.3%)
Dislike somewhat	2 (0.8%)
Neither like nor dislike	6 (2.3%)
Like somewhat	24 (9.3%)
Like dogs very much	225 (87.2%)
<b>Ownership of Companion Dogs</b>	
I currently, or have previously owned a companion dog as the primary care-giver	108 (41.9%)
I currently, or have previously owned a companion dog but not as the primary care-giver	30 (11.6%)
Both of the above	45 (17.4%)
None of the above	75 (29.1%)
<b>Ownership of Assistance Dogs</b>	
Owned an assistance dog as the person with the disability	15 (5.8%)
Owned an assistance dog but not as the person with the disability	2 (0.8%)
Owned some other type of working dog	22 (8.5%)
Cared for/raised a puppy destined to work as an assistance dog	13 (5.0%)
Cared for/raised a puppy destined to work in some other working role	2 (0.8%)
None of the above	204 (79.1%)

464 *N* = 258

465

466 **Table 2.**  
 467 *Frequency of Participant Interest in Assistance versus Companion Dogs*

	Frequency
<b>Interest in television programs and articles on Assistance Dogs</b>	
Never Interested	4
Rarely interested	18
Sometimes interested	82
Most of the time interested	74
Always or almost always interested	80
<b>Interest in television programs and articles on Companion Dogs</b>	
Never Interested	5
Rarely interested	16
Sometimes interested	86
Most of the time interested	82
Always or almost always interested	69

468  $N = 258$

469

470 **Table 3.**  
471 *Qualitative Themes Relating to Interest in Assistance Dogs*

<b>Theme</b>	<b>Definition</b>	<b>Example</b>	<b>Frequency (%) n = 231</b>
<b>Positive perceptions and sensations</b>	Expresses positive feelings towards assistance dogs themselves, experiences with assistance dogs, and programs about assistance dogs. Feelings include love, happiness, interest, admiration	<ul style="list-style-type: none"> <li>• I respect and admire an assistance dog for its ability to assist its owner to navigate life</li> </ul>	125 (54%)
<b>No interaction when working</b>	Expresses an understanding that they cannot interact with assistance dogs when they are working, even though they may have the desire to do so. Also expresses frustration at others who do interrupt the dogs while working	<ul style="list-style-type: none"> <li>• I felt that those around them trying to pet it were ignorant</li> </ul>	45 (19%)
<b>Admiration for trainers and training</b>	Expresses an admiration for the trainers and training of assistance dogs	<ul style="list-style-type: none"> <li>• I think they're wonderful and it's amazing that they can be trained for such work!</li> </ul>	29 (13%)
<b>Owners practical benefit</b>	States that assistance dogs provide practical benefits to the owner, including physical benefits and increasing independence	<ul style="list-style-type: none"> <li>• I see a blind man with his guide dog on my way to work. I feel happy because I can see how the dog helps him have freedom</li> </ul>	28 (12%)
<b>Dog not benefiting</b>	Expresses concern about the use of assistance dogs e.g. the potential stress or restrictiveness of being a working dog	<ul style="list-style-type: none"> <li>• How confusing it could be for a dog when it wants to be a fur baby but is a worker</li> </ul>	19 (8%)
<b>Close relationship between owner and the dog</b>	Belief in close bond between the owner and their assistance dogs	<ul style="list-style-type: none"> <li>• I recognized the strong relationship between the dog and its owner. The bond is beautiful</li> </ul>	16 (7%)

472 Frequencies were calculated by summing the number of participants who endorsed a theme. Individual  
473 participants were only able to endorse a theme once but could endorse more than one theme.

474



475 **Table 4.**  
476 *Qualitative Themes Relating to Interest in Companion Dogs*

Theme	Definition	Example	Frequency (%) n = 162
<b>Positive perceptions and sensations</b>	Expresses positive feelings towards companion dogs themselves, companion dog ownership, experiences with companion dogs, and programs about companion dogs. Feelings include love, happiness, interest, admiration	<ul style="list-style-type: none"> <li>Absolutely love dogs, and spend a fair amount of time watching social media dog account videos + stories</li> </ul>	76 (47%)
<b>Irresponsible owners</b>	Expresses disapproval at owners' care or control their companion dogs	<ul style="list-style-type: none"> <li>See a few people walk their dogs with no lead, putting that and other dogs in danger, not to mention children</li> </ul>	40 (25%)
<b>Owners emotional benefit</b>	Expresses a belief that companion dogs provide emotional support to their owners, particularly increasing positive emotions and/or appeasing negative emotions, providing companionship, and improving quality of life	<ul style="list-style-type: none"> <li>Dogs can provide great support for people who are lonely or need love and companionship in their lives</li> </ul>	28 (17%)
<b>Close relationship between owner and the dog</b>	Expresses a belief in a close bond between the owner and their companion dogs, including being part of the family	<ul style="list-style-type: none"> <li>You can see the bond between dog and human so clearly</li> </ul>	17 (10%)

477 Frequencies were calculated by summing the number of participants who endorsed a theme. Individual  
478 participants were only able to endorse a theme once but could endorse more than one theme.

479

480

481 **Table 5.**  
 482 *Frequency of Participant Use of Assistance versus Companion Dogs*

	Frequency
<b>The degree to which using dogs for people with disabilities is a good or bad idea.</b>	
Very bad	0
Moderately bad	3
Slightly bad	0
Neither good nor bad	5
Slightly good	3
Moderately good	27
Very good	220
<b>The degree to which keeping dogs as companion animals is a good or bad idea.</b>	
Very bad	0
Moderately bad	2
Slightly bad	2
Neither good nor bad	6
Slightly good	9
Moderately good	32
Very good	207

483  $N = 258$

484

485 **Table 6.**  
486 *Qualitative Themes Relating to Use of Assistance Dogs*

<b>Theme</b>	<b>Definition</b>	<b>Example</b>	<b>Frequency (%)</b> <b>n = 219</b>
<b>Owners practical benefit</b>	States that assistance dogs provide practical benefits to the owner, including physical benefits and increasing independence	<ul style="list-style-type: none"> <li>Assistance dogs give disabled people freedom that they may have never been able to achieve with a different medical device</li> </ul>	125 (57%)
<b>Owners emotional benefit</b>	Expresses a belief that assistance dogs provide emotional support to their owners, particularly increasing positive emotions and/or appeasing negative emotions, providing companionship, and improving quality of life	<ul style="list-style-type: none"> <li>An assistance dog can contribute immeasurably to the happiness of a person with a disability</li> </ul>	84 (38%)
<b>Dogs are capable</b>	Expresses that dogs are trainable and skilled in assisting humans	<ul style="list-style-type: none"> <li>They are incredibly intelligent animals who can be extremely reliable when trained properly</li> </ul>	30 (14%)
<b>Dogs enjoy working</b>	Expresses a belief that assistance dogs enjoy their working role	<ul style="list-style-type: none"> <li>I think the animals are happy to do this important job</li> </ul>	29 (13%)
<b>Dogs should be loved and well treated</b>	States that assistance dogs should be appreciated and well taken care of by their owners. Encompasses ability to provide proper care including appropriate training, environment, and adequate time. May also state that it depends on the owner and that some people are not fit to be owners	<ul style="list-style-type: none"> <li>These dogs get loved, fed, looked after, and appreciated. They just have that added role of helping their owner with their disabilities</li> </ul>	18 (8%)
<b>Dogs not benefiting</b>	Expresses concerns about the use of assistance dogs e.g. the potential stress or restrictiveness of being a working dog	<ul style="list-style-type: none"> <li>The dog doesn't get a choice in it, I feel like it's being used</li> </ul>	15 (7%)
<b>Mutually beneficial relationship</b>	States that both the owner and assistance dog benefits from the relationship	<ul style="list-style-type: none"> <li>A win win as long as the animal is loved and cared for</li> </ul>	12 (5%)

487 Frequencies were calculated by summing the number of participants who endorsed a theme. Individual  
488 participants were only able to endorse a theme once but could endorse more than one theme.  
489

490 **Table 7.**  
 491 *Qualitative Themes Relating to Keeping of Companion Dogs*

<b>Theme</b>	<b>Definition</b>	<b>Example</b>	<b>Frequency (%)</b> <b>n = 206</b>
<b>Owners emotional benefit</b>	Expresses that companion dogs provide emotional support to their owners, particularly increasing positive emotions and/or appeasing negative emotions, providing companionship, and improving quality of life	<ul style="list-style-type: none"> <li>• It's a great thing. To come home from work or a stressful situation and be able to sit with a dog.</li> </ul>	147 (71%)
<b>Dogs should be loved and well treated</b>	States that companion dogs should be appreciated and well taken care of by their owners. Encompasses ability to provide proper care including appropriate training, environment, and adequate time. Raises concerns that dogs would be abandoned or not well cared for. May also state that it depends on the owner and that some people are not fit to be owners	<ul style="list-style-type: none"> <li>• Dogs are fantastic companions but a lot of people are not prepared to invest the time and effort required to care for them well</li> </ul>	36 (18%)
<b>Owners practical benefit</b>	States that companion dogs provide practical benefits to the owner, including physical and educational benefits	<ul style="list-style-type: none"> <li>• If you have children, it helps teach them to be gentle and considerate of others.</li> </ul>	34 (17%)
<b>Mutually beneficial relationship</b>	States that both the owner and companion dog benefits from the relationship	<ul style="list-style-type: none"> <li>• It gives companionship to people and dogs, which is good for both</li> </ul>	23 (11%)
<b>Dogs not benefiting</b>	Expresses concerns about the dog ownership industry in general e.g. issues regarding breeding and ethics of dog-keeping	<ul style="list-style-type: none"> <li>• Dogs are great, but I wonder if it's ethical to 'own' them</li> </ul>	10 (5%)

492 Frequencies were calculated by summing the number of participants who endorsed a theme. Individual  
 493 participants were only able to endorse a theme once but could endorse more than one theme.

494

495 **Table 8.**  
 496 *Frequency of Participant Happiness Ratings for Assistance versus Companion Dogs*

	Frequency
<b>Perceived happiness of Assistance Dogs</b>	
Very unhappy	3
Moderately unhappy	1
Slightly unhappy	4
Neither happy nor unhappy	13
Slightly happy	5
Moderately happy	81
Extremely happy	151
<b>Perceived happiness of Companion Dogs</b>	
Very unhappy	0
Moderately unhappy	3
Slightly unhappy	1
Neither happy nor unhappy	20
Slightly happy	10
Moderately happy	104
Extremely happy	119

497 N = 258 for assistance dogs and 257 for companion dogs

498

499 **Table 9.**  
500 *Qualitative Themes Relating to Happiness of Assistance Dogs*

<b>Theme</b>	<b>Definition</b>	<b>Example</b>	<b>Frequency (%)</b> <b>n = 224</b>
<b>Being loved and well treated</b>	States that assistance dogs' happiness is dependent on being appreciated and well taken care of by their owners. Stipulates that assistance dogs should be receiving love, proper care, and live in a good environment. It may also raise concerns over ability of the owner to properly care for the dog	<ul style="list-style-type: none"> <li>• I suspect service dogs get good care as they are of great value to the owners</li> </ul>	111 (50%)
<b>Must enjoy working</b>	Endorses that assistance dogs' happiness is dependent on enjoying the work they do. States that working should make them happy	<ul style="list-style-type: none"> <li>• Dogs like to have a job to do, and I believe assistance dogs get a sense of fulfilment from their job</li> </ul>	90 (40%)
<b>Having a potentially stressful/restrictive training/working life</b>	Reflects that the strict training or working life may be potentially stressful to the dog, and therefore impacts their happiness	<ul style="list-style-type: none"> <li>• Not being able to play and sleep as much as companion dogs, and being constantly on alert and ready to respond to a cue from their owner</li> </ul>	76 (34%)
<b>Having constant companionship with owner</b>	States that assistance dogs are happy due to spending constant time with their owner. This provides physical and mental stimulation	<ul style="list-style-type: none"> <li>• They get lots of attention from their owner and get to go out with them regularly</li> </ul>	47 (21%)
<b>Having a good relationship with owner</b>	Indicates a close and meaningful bond between assistance dog and owner is important for their happiness	<ul style="list-style-type: none"> <li>• The extent of the bond. The way they are rewarded. The affection coming from the human</li> </ul>	36 (16%)

501 Frequencies were calculated by summing the number of participants who endorsed a theme. Individual  
502 participants were only able to endorse a theme once but could endorse more than one theme.  
503

504 **Table 10.**  
505 *Qualitative Themes Relating to Happiness of Companion Dogs*

<b>Theme</b>	<b>Definition</b>	<b>Example</b>	<b>Frequency (%)</b> <b>n = 201</b>
<b>Being loved and well treated</b>	States that companion dogs' happiness is dependent on being appreciated and well taken care of by their owners. Stipulates that companion dogs should be receiving love, proper care, and live in a good environment. It also raises concerns for dogs that are abandoned and not well cared for. It may also state that it depends on the owner	<ul style="list-style-type: none"> <li>• Receiving lots of love from their owner, lots of care and attention</li> </ul>	167 (83%)
<b>Having sufficient time with owners</b>	States that companion dogs' happiness varies on the level of time spent with owners. Happiness is increased by being with their family or pack	<ul style="list-style-type: none"> <li>• Dogs are always happy to be with their humans and get lots of attention. They love to please us.</li> </ul>	69 (35%)
<b>Getting physical and mental stimulation</b>	States that companion dog happiness is dependent on being physically and mentally stimulated	<ul style="list-style-type: none"> <li>• Many people don't pay attention to their mental needs, I worry they are bored or agitated</li> </ul>	68 (34%)
<b>Living inside</b>	Indicates that a dog who gets to live inside is happier than a dog who isn't allowed inside	<ul style="list-style-type: none"> <li>• Can't stand them being only an outside dog 😞</li> </ul>	14 (7%)

506 Frequencies were calculated by summing the number of participants who endorsed a theme. Individual  
507 participants were only able to endorse a theme once but could endorse more than one theme.

508