The study reports that pet dogs whose leaving routines changed most during the COVID-19 pandemic (i.e., their owners left them alone less frequently) would be at greater risk of developing separation-related behaviours following the lifting of pandemic restrictions. The authors gathered data (via owner surveys) about the same dogs before the pandemic, at the beginning of the pandemic and approx. 5 months later. The article is generally well-written, the topic is timely, important, and interesting from a dog welfare aspect. However, currently, the paper seems too long, and it goes into too much detail about how the pandemic took place in the UK. This information would have been interesting if data on the mood, stress level, general mental health of the owners had also been collected in connection with the pandemic and the links with dog behaviour have been investigated. But the questionnaire only asked how long the dogs had been alone and what they were doing during this time. Therefore, the detailed description of the pandemic is unnecessary and could be moved to the Supplemental material, together with Figure 1.

Thank you for your comments. The detail was provided to anchor the study in the background of what was occurring at the time, but we agree it is not necessary to the reader to see in the main text. These details and Figure 1 have been moved to the Supplementary material.

According to the authors, the main finding is that dogs whose leaving time reduced the most during the lockdown were most at risk of developing new SRBs. I think that according to the statistics, the strongest finding is that dogs who showed SRB in February or May had increased odds of having SRB during the subsequent measures which is not surprising. What is surprising though is that 55.7% of the dogs who were reported to show SRB in February (before the pandemic) were clear in October which is good news. However, the authors do not focus on this result and do not explain this finding.

We agree this was completely missed from the Discussion. It wasn’t intentional, we were just overly focussed on the results that related to the research hypothesis. Discussion around this has been added now to lines 524-544.

**Specific points requiring attention:**

L18-20 „Whether dogs showed SRBs or not changed considerably over the months of the study, and one in ten dogs were found to have developed new SRBs in October, that they didn’t show before the pandemic”

Overall, the percentage of dogs showing SRBs decreased during the study, and this should be clarified in the sentence above. What I see in Figure 4 and in the text is that approx. half of the dogs from the SRB group moved to the Clear group in October.

Agreed, we have altered this part of the simple summary and abstract and included discussion of this in lines 539-544 now as well as into the conclusions, thank you.

L22 and elsewhere: dogs’ “leaving time” or “leaving hours”

I think this expression is misleading because it is not the dogs that have left home, but the owners. But this is the opinion of a person using English as a second language.

Thank you! Leaving time has been changed throughout to ‘time left alone’

L33 10th instead of “10th”  
Thank you, we’ve corrected the typo.

L45 Separation behaviour, separation-related behaviour, separation distress, separation anxiety terms are used interchangeably throughout the text, although these terms do not necessarily describe the same behaviours. Please provide a clear definition of the behaviour aimed to study and stick to one term.

Thank you for pointing this out. We define SRB in the opening lines of the Introduction (45-50), however you are right that in places the terms can get confusing. Section 3.7.3. details behaviours owners reported as associated with separation, that are not what class as SRBs. Those were names ‘other’ separation behaviour but this has now been clarified, hopefully, by remaining the section ‘Other’ separation-linked behaviour, and then in the text it is now stated they are not SRBs. The term ‘separation anxiety’ was used in the introduction where it referenced a study that used that specific term. This has now been put into quote marks to be clear it is their term, not ours. The one mention of separation-distress has also now been changed.

L92 delete the comma after Bowen et al.’s.

Thank you, we’ve corrected the typo.

L92-92 28.5% of dogs reported to have SRPs – this is a much higher number than mentioned in previous studies and needs to be discussed.

This has now been discussed further in lines 98-100.

L118 Materials and Methods

This section (after the Ethics) should begin with the Subjects section. It is confusing to read about the surveys without knowing the sample sizes per survey and the demographics.

This has now been moved to the beginning of the methods section.

L127-137 The dates of data collections have been already mentioned in L121-126, so there is no need for repeating them. The whole section is not relevant to the main question.

Agreed, this has been amended and condensed, thank you.

L131-132 and elsewhere: (Error! Reference source not found.) This error occurs 7 times in the text, please correct.

Thank you, this seemed ok until the manuscript was uploaded but we’ve corrected it now.

L148 Please explain why a period of 7 days were asked to be reported

We asked about the dogs’ management and behaviour over the previous 7 days so as to limit recall bias and anchor the data to a specific snapshot of time, rather than being more general. This was first asked for the first survey which was specifically looking at changes in management and behaviour during the strict lockdown period, so needed to be time specific. Questions were then repeated in the follow-up survey. Wording has been added to lines 165-169 now to clarify this.

L165-167 Figure 1. This Figure should be moved to the Supplement material as it tells nothing about the dogs’ behaviour.

This has been done now.

L216-218 “The text was then coded by two researchers”

I could not find agreement data reported later.

Thank you for spotting this, we have updated both the methods (L243-247) and results section (L370-374) with further detail of inter-rater reliability checks.

L238 Do the authors have information about the Owner demographics? What was the proportion of females? Was there a relationship between age and leaving hours? Or explain why this information has not been used.

At the end of survey 1 there was the option for people to provide their demographic details, which not everyone did. This was done to conform to GDPR by asking only the most necessary questions. Given that the research question here is related to the dogs’ behaviour change over time versus leaving hours, it wasn’t deemed relevant to include analysis of the owner demographics.

L232-242 These sections should be moved to the Materials and Methods as a “Subjects” section

This has now been done.

L232 How many owners have filled in the questionnaire altogether? What was the proportion of owners who did not leave their dog at home before the pandemic? Why were they excluded? It is perfectly feasible that some owners did not leave their homes because they were for example, ill, but they did so during the pandemic.

What was the proportion of owners who indicated that they would like to participate in the follow-up study? Among them, what was the proportion of owners who has not responded to the request afterward?

For the purpose of this study it was required that we had baseline data on the dogs’ leaving behaviour so that we could classify them as SRB+ or – before the pandemic began. Owners of dogs who were not left alone in a typical week in February, were not asked about their dogs’ separation-related behaviour, so we did not have these data for them which is why they were excluded. New text has been added to the Subjects section of the methodology to explain how many owners answered the follow up questionnaire, the response rate and what percentage and number of dogs were not left home alone before the pandemic. The new section beginning at line 146 now reads: “A total of 2,425 people completed the follow-up survey for the same dog they scored in the original survey (a 51.9% response rate), of which 2,285 had previously provided data to indicate whether their dog was left alone or not in February 2020. Of these, 15.3% dogs (n=305) were not left alone at all in an average week in February, and as such, these dogs did not have baseline data for their behaviour when left so were excluded from further analysis.” Additionally, the number of people we emailed the invitation to (n=4,670) has been added to line 139.

L278-280 “There were 1,407 dogs who were clear of SRB at baseline in February 2020. When looking at SRB status in October, of 1,187 dogs who were left alone in October, 117 (9.9%) were reported to have shown at least one SRB”.

In other words, 1407/1807 (78%) of dogs were clear of SRB in February and 90.1% in October. This is good news, and it is unclear for me why is it reported as bad news.

The next section (l281-283) emphasizes that 55.7% of the dogs who were reported to show SRB in February were clear in October. This is a big improvement, I think.

For the 1407 dogs who were clear of SRB in February, they changed from being 100% clear to being 90.1% clear, with 1 in 10 of these dogs developing SRB they didn’t have previously. However, because of the dramatic improvement seen in the dogs that had SRB before the pandemic, the overall prevalence of SRB in the population decreased from 22% in February, to 17.2% in October (reported in the paragraph above). The numbers have been clarified in this section to help future readers, and additional discussion has been added around the overall decrease in SRB prevalence in both the abstract and in the discussion (lines 524-544).

L285 Figure 4. This is a great figure, thank you for including it. However, an explanation would be useful for those readers who are not familiar with this type of depicting.

Thank you, we’re glad you liked it! Further explanation to help interpret the figure has now been added.

L291 The odds ratio (OR) is 5.38 and not 4.38 in Table 1.

Thank you for spotting that!

L293-295 “The final variable associated with October SRB status was the difference in the number of days dogs were left alone for between the February baseline and lockdown”.

OR was 0.81 here. Please explain the relationship between the variables.

This was explained further down in the section on the multi-variable model, but I have now moved the explanation to here, where it’s first mentioned and added some additional text also.

L298 Table 1 legend: Add what bold indicates

Thank you, this has been added now.

L307 The odds ratio (OR) is 4.97 in Table 1 and not 3.60

Thank you! Looks like I read the z-value when I was typing. I promise this has been proof read, but it’s so easy to miss things, thank you so much!

L314 Table 2: bold is not used here although it was used in Table 1

Since there were no non-significant variables it wasn’t necessary to distinguish the results.

L333 table 3: same: bold is not used here

This has been corrected, thank you.

L382 Please refer to Flannigan and Dodman (2001) here (owner’s work schedule affects separation problems). Flannigan, G., & Dodman, N. H. (2001). Risk factors and behaviors associated with separation anxiety in dogs. Journal of the American Veterinary Medical Association, 219(4), 460-466.

Thank you for this, we were familiar with the paper but had missed that link. New text has been added here now to discuss this.

L395-397 “This value is likely to be an underestimate”

The underestimation has already occurred during the baseline.

Agreed, this has been explicitly stated here now.

I think that after the revision, the paper would make an interesting contribution to the journal. I hope this review helps – thank you for the opportunity.

Thank you so much for your time and these comments, they have really helped to strengthen the paper and we really appreciate it.