Earth Buddy

Pet Calming

Pathfinder Report

September 2022

Provided by

MoreBetter

Creators of

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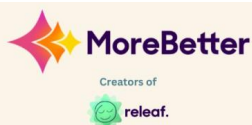
Overview

This was a 26 day campaign with new and existing Earth Buddy customers. The goal of the Calming Pathfinder was to determine the impact and efficacy of three unique Earth Buddy products in helping "calm" pets. Specifically, dogs.

The products included in Earth Buddy's Calming Pathfinder include:

- Earth Buddy Hemp Extract Tincture
- Earth Buddy Hemp Hearts (regular and extra strength)
- Earth Buddy Quick Calm
  The design of Earth Buddy's Calming Pathfinder was as follows:
- Day 0 = Enrollment and Baseline
- Day 1-5 = Daily no product questions and 2nd Baseline
- Day 6-25 = Daily Earth Buddy product questions
  Day 26 = Final Baseline assessment

Anxiety Score

Answer: Earth Buddy's products were **statistically significant at reducing Anxiety scores of pets**. Across all Earth Buddy products the **Mean Anxiety Score at Enrollment was 9.53 and significantly decreased to 6.02 on Day 26 after using Earth Buddy products**. (*N=49*)

Although not statistically significant, the per product decrease is as follows:

- Tincture: 10.00 (Day 0), to 8.34 (Day 5), to 5.65 (Day 26) o *N=23*
- Treat: 8.57 (Day 0), to 7.50 (Day 5), to 4.79 (Day 26) o *N=14*
- Spray: 9.75 (d0) to 9.50 (d5) to 8.17 (d26) o *N=12*
  Analysis Details: A two-way mixed ANOVA showed a significant main effect of time (day 0, 5, or 26) on Baseline Anxiety Score ($F_{(2, 92)} = 14.160$, $p < 0.0001$). There was no main effect of

treatment type (tincture, treat, or spray) ($F_{(2, 46)} = 1.534$, $p = 0.226$) or treatment x time interaction ($F_{(4,92)} = 0.890$, $p = 0.473$).

- A Shapiro-Wilk's test and a normal QQ plot confirmed that the data was normal.
- Approximate homogeneity of variances was confirmed using Levene's test and homogeneity of covariances was confirmed using Box's M-test.
- There were no extreme outliers.

  Analysis Details: Pairwise t-tests showed no significant difference between the two baseline measurements without treatment (days 0 and 5) (adjusted p = 0.162), and significant differences both between the initial baseline (day 0) and post-treatment assessment (day 26) (adjusted p < 0.0001) and between the second baseline (day 5) and post-treatment assessment (day 26) (adjusted p < 0.0001).

Anxiety Severity (0-10)

Question: Did Pet Owners report the severity of their pet's Anxiety decreased after using an Earth Buddy product?

Answer: Yes, **there was a significant decrease in score between baseline measurements and before vs after treatment.** *(N=49)*

No significant differences between treatments, and no significant interaction between measurement time point and treatment type.

On average, **Earth Buddy products reduced Pet Anxiety Levels from 6.06 (Day 0), to 4.29 (Day 26)**. Per Earth Buddy product:

- Tincture: 6.04 (Day 0), to 5.17 (Day 5), to 3.87 (Day 26) o *N=23*
- Treat: 5.64 (Day 0), to 5.21 (Day 5), to 4.00 (Day 26) o *N=14*
- Spray: 6.58 (Day 0), to 5.17 (Day 5), to 3.87 (Day 26) o *N=12*

  Analysis Details: A two-way mixed ANOVA showed a significant main effect of time (day 0, 5, or 26) on Anxiety severity ($F_{(2, 92)}$ = 14.576, $p < 0.0001$). There was no main effect of treatment type (tincture, treat, or spray) ($F_{(2, 46)}$ = 0.730, $p = 0.488$) or treatment x time interaction ($F_{(4, 92)}$ = 1.380, $p = 0.247$).

- A Shapiro-Wilk's test and a normal QQ plot confirmed that the data was normal.
- Homogeneity of variances was confirmed using Levene's test and homogeneity of covariances was confirmed using Box's M-test.
- There were no extreme outliers.

Analysis Details: Pairwise t-tests showed a significant differences between the two baseline measurements without treatment (days 0 and 5) (adjusted p = 0.008), between

the initial baseline (day 0) and post-treatment assessment (day 26) (adjusted p < 0.0001), and between the second baseline (day 5) and post-treatment assessment (day 26) (adjusted p = 0.012).

Daily Anxiety Reduction

Question: Between Day 6-15 when Pet Owners reported using an Earth Buddy product, did they state they saw a reduction in their Pet's Anxiety?

Answer: Yes, **there was a significant increase in the overall proportion of Pet Owners who indicated a reduction in anxiety on Day 6 (62.16%) to Day 25 (91.89%).** *(N=37)*

Treats had the most immediate and overall highest proportion of "yes" responses. Per Earth Buddy product:

• Tincture: significant increase from 50.00% (n=18) to 86.36% (n=22). o X-squared = 4.6224, p-value = 0.5

• Treat: non-significant increase from 88.89% (n=9) to 100.00% (n=8). o note: low n values; X-squared approximation may be incorrect. o X-squared = 2.3883e-31, p-value = 0.02333

• Spray: non-significant increase from 50.00% (n=18) to 86.36% (n=22). o note: low n values; X-squared approximation may be incorrect. o X-squared = 1.7759, p-value = 0.09133