Foster Care Improves Shelter Dog Behavior and Well-Being
Sheila (D’Argino) Segurson, DVM, DACVB Director of Research, Maddie’s Fund

• Five shelters
• Cortisol levels decrease while out of the shelter
• Behaviorally, dogs less frantic, more relaxed and less apathetic

Six organizations participated

Inclusion criteria were:

• Dogs
• At least 12 months old
• Between 40-100 pounds
• Apparently healthy
• Length of stay of 21 days or more

178 dogs in study with full data

Special Thanks to Los Angeles Animal Services, Ventura County Animal Services, Pima Animal Care Center, Austin Animal Center, KC Pet Project, and Animal Care Centers of New York!
Morale Survey (staff and volunteers)
Survey (about dogs)
CBARQ (about dogs)
After assessing all sampled pets, the assessor will take a few seconds to describe the shelter, using Visual Analog Scales (VAS), quantifying how much an adjective represents the animals focused on in that shelter. The adjectives are the following:

- Playful
- Content, pleased, not ready to stay
- Friendly to people
- Friendly to dogs
- Confident, assertive, handles stress well, fearless
- Relaxed calm, without worries, easy-going, settled in their environment
- Has more good days than bad days
- Nervous/unsure, apprehensive, shows fast cardiac, unsettled
- Unsure insecure, doubtful, hesitant, shows conflicted behavior
- Abused/unsure, terrified,febile, shows extreme stress
- Rescued/unsure, anxious, consumes food poorly, shows extreme stress
- Unsure insecure, doubtful, hesitant, shows conflicted behavior
- Terrified/unsure, anxious, consumes food poorly, shows extreme stress
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- Unsure insecure, doubtful, hesitant, shows conflicted behavior
- Terrified/unsure, anxious, consumes food poorly, shows extreme stress
- Unresilient/unsure, hopeless, needs a lot of care and patience, in severe stress
- Rescued/unsure, anxious, consumes food poorly, shows extreme stress
- Unresilient/unsure, hopeless, needs a lot of care and patience, in severe stress
• Between group comparison
  • Mann-Whitney U test (p < 0.05)
• Within group comparison (foster)
  • Friedman test (p < 0.05)
  • Post hoc analysis w/ Wilcoxon signed-rank test w/ Bonferroni correction (p < 0.017)
• Within group comparison (shelter)
  • Wilcoxon signed-rank test (p < 0.05)

Foster Group Versus Shelter Group After 1-2 Weeks

- Improved
  1. Playful cheerful
  2. Happy content
  3. Friendly to people
  4. Confident sure
  5. Relaxed calm
  6. Has more good days than bad days
  7. Anxious worried
  8. Poor self care
  9. Fur is greasy
  10. Panting
  11. Shakes or trembles
  12. Shows repetitive behavior
  13. Fearful hides
  14. Aggressive threatens

- Didn’t Improve
  1. Friendly to dogs
  2. Nervous uneasy
  3. Unsure insecure
  4. Boisterous noisy
  5. Alert vigilant
  6. Attention-seeking
  7. Barking

Behavior Change at Different Time Points, Shelter versus Foster

- Control Group
<table>
<thead>
<tr>
<th>4. Please rate the dog, using a 1 to 5 scale where 1 = Not at all and 5 = Very all the time.</th>
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</thead>
<tbody>
<tr>
<td><strong>Scale</strong></td>
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<tr>
<td>Playful, cheerful, high spirits, looks, shows play-related behavior, reacts well to play</td>
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<tr>
<td>Annoyed, irritable, not easily upset, crosses its body</td>
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<td>Friendly to people: sociable toward people, seeks attention, shows greeting behavior</td>
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<tr>
<td>Intimidates other dogs toward other dogs, seeks attention, shows greeting behavior</td>
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<tr>
<td>Calm, quiet, relaxed, handles stress well, knows</td>
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<td>Relaxed, calm, weight loss, walks well, settled in their environment</td>
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<td>Has more good days than bad ones</td>
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<tr>
<td>Nervous, uneasy, apprehensive, shows fast arousal, startled</td>
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<td>Unsure, insecure, hesitant, shows conflict behavior</td>
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<table>
<thead>
<tr>
<th>Behavior noted. Observations with rating in hope, with (that) environment, signs of distress (e.g., trembling, pacing, etc.)</th>
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<tbody>
<tr>
<td>Alert, vigilant, inquisitive, attentive to outside stimulus</td>
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<td>Attention seeking: attracts the attention of people, seems interaction with people, looks for attention</td>
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<td>Self-grooming: Poor self-care grooming: small licks, poor grooming or hair puller</td>
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<td>Fat is greasy, matted, rough looking</td>
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<td>Panting</td>
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<td>Shakes or trembles</td>
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<td>Shows repetitive behavior: circling, lip licking, pawing</td>
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<td>Fearful: dog moves away from people, avoids interaction, rests back, looks at self</td>
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<tr>
<td>Aggressive threats: growls, shows teeth, barks, snaps, or bites</td>
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### 4. Please evaluate the dog, using a 1 to 5 scale where 1 = Not at all/never and 5 = Very/all the time:

<table>
<thead>
<tr>
<th>Behavior</th>
<th>1</th>
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<th>4</th>
<th>5</th>
<th>Not at all/never</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very/all the time</th>
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<tbody>
<tr>
<td>Playful, cheerful, high spirits, tail, shows play-related behavior</td>
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<td>Shy, fearful, low spirits, tail, shows fear-related behavior</td>
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<td>Happy, content, friendly, not easily upset, expects love</td>
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<td>Friendly to people, submits toward people, seeks contact interaction, shows greeting behavior</td>
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<td>Confident, assertive, handles stress well, fearless</td>
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<td>Relaxed, calm, well-socialized, easy going, submits to their environment</td>
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<td>Nervous, anxious, apprehensive, shows fear, unstable</td>
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**Additional notes:**
- Avoiding, challenging, self-motion or jumping with their environment, range of emotions (e.g., excitement, yawning, pacing)
- Suckling, agitation, inappropriate attention to outside stimuli
- Tail wagging, bowing, seeks attention, unrestrained, excessive barking
- Attention-seeking behavior, distracting people, seeks interaction with people, barks for attention
- Barking
- Poor self-care grooming, smells like urine, poor grooming or taste/odor in behavior
- Hot or greasy, melted, rough coat
- Panting
- shakes or trembles
- Shakes repetitive behavior (chirping, jumping, pacing)
- Fearful, fledgling, moves away from people, avoids interaction, acts tense, tucked tail
  - p=0.017
- Aggressive, threats, growls, shows teeth, lunges, snaps, or bites.
- Compliance
- Subjective rating scale
- Foster group more challenged at baseline
- No physiologic measures
Acknowledgements: Thank you to Kristen Auerbach Hassen, Anastasia Shabelansky, Kelly Duer, the participating shelters, shelter staff, foster caregivers and Maddie’s Fund for supporting this project.

Thank You and #ThanksToMaddie

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