BEHAVIORAL IMPACT OF PUPPY MILL AND HOARDING ENVIRONMENTS
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Ontario Shelter Medicine Association CE Day
Nov. 17, 2018

Outline

- What is a puppy mill?
- Hoarding?
- Behavior of pets from puppy mills
- Environmental effects on behavioral development
- Management/ Treatment
- Prognosis

What is a Puppy Mill?

- What is a puppy mill?
  - Commercial breeding establishment (CBE)
    - Professional breeding kennels, High-volume breeders, Large-scale breeders
    - Puppy mill, Puppy farm
  - Large volume of puppy production for resale
    - Pet stores, internet sales
  - Production process
    - Dogs treated like livestock

Variations between establishments

- Cleanliness
- Housing systems
- Group or singly housed?

Common factors between establishments:

- Large numbers of dogs
- High density housing
  - At or near legal minimum space requirements
- Housing breeding dogs for entire reproductive lives in cages or runs
  - Years
- No enrichment
  - Rare opportunity to exercise or play outside enclosure
  - Minimal to no positive human interaction
  - Minimal to no health care

Misguided Love

Hoarding

- Mostly older single women
- Sometimes > 100 animals
- ~80% cases, dead or seriously ill animals
- 700-2000 cases annually in US
- Psychiatric disease; obsessive-compulsive disorder, attachment disorder?

A.U. Luescher
Hoarding
- Cats, dogs or other species in hoarding situations
- Unlikely to find cats from CBEs

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- What is a puppy mill?
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  - What do we see?
  - Environmental effects on behavioral development
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  - Prognosis

Adults/ Breeding Animals
- Owner completed survey
  - Adult dogs adopted from puppy mill
  - Assume most were former breeding stock
- Extensive, long-lasting psychological scars
- Altered mental functioning
- Possible learning deficits
  - Lower trainability
  - Difficulty coping successfully with normal existence

Adults/ Breeding Animals
- Physical health
  - Significantly higher rates of physical health problems

Adults/ Breeding Animals
- Mental health
  - Significantly higher rates of extreme & persistent fears/ phobias
    - Unfamiliar people
    - Other dogs
    - Noises and motions
  - House-soiling
  - Compulsive/ abnormal repetitive behaviors
    - Circling and pacing
  - Staring blankly into space
    - “dazed,” “zoned out,” “spaced out”
    - Learned helplessness
  - Significantly lower rates of trainability and energy

McMillan et al. 2011
Adults/ Breeding Animals

- Mental health (contd.)
  - ~50% lower level of aggression than control pet dogs
    - Unfamiliar people
    - Other dogs
    - Owners
  - Due to overwhelmingly high levels of fear
    - Suppresses normal aggressive behavior
    - Remember this population were only those successfully placed in a home

McMillan et al. 2011

Puppies

- Pet store puppies from pet stores compared to breeder obtained
  - Significantly greater aggression
    - Owners
    - Unfamiliar people
    - Other dogs
  - Fear of other dogs and nonsocial stimuli
  - Separation-related problems
  - House-soiling

McMillan et al. 2013

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  - Why do they behave this way?
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Behavioral Development

- Genetics
- Ontogeny (development)
  - Adaptation
  - Learning
- Nature vs. Nurture
  - Nature AND Nurture
  - Epigenetic control of gene expression
Genetics

- Gene → Abnormality → Behavior Change
  - Altered neurotransmitter level/ receptors
    - Noise sensitivity in dogs
  - Change in physical structure (phenotype)
    - Blue merle coat pattern and circling
  - Physiologic alteration
    - Neuronal storage disease

Ontogeny

- Behavioral Development
  - Interactive process between genetics and environments to create individual’s behavioral repertoire
  - Environmental signals turn different genes on or off
    - Epi-genetics
  - Come together to create phenotype and resultant proximate mechanisms for behavior
    - Bird songs

Socialization

- Socialization Period: 3-12 (4-14) weeks
  - Fear period: 8-10 (12) weeks
    - *Socialization should continue through adolescence for well adjusted dog
  - Expose to various things will encounter during life, paired with positive experience
  - Species exposed to at this time
    - Viewed as social partner
    - Lack of exposure during this time
      - Fear
        - Fight or Flight
        - Predatory behavior

Abnormal Behavioral Development

- Maternal stress/ Prenatal stress
  - Alterations to fetal hypothalamic-pituitary-adrenal
- See effect in puppy/ adult
  - Impaired ability to cope with stress
  - Abnormal social behavior
  - Increased emotionality
  - Increased fear

- Puppies
  - Transport stress during fear period
    - Most puppies shipped ~ 8 weeks of age
  - Inadequate positive exposure during socialization period
    - To people, environments, objects, other animals
      - Not occurring at breeding facility
      - Not occurring appropriately at pet store

McMillan et al. 2011

McMillan et al. 2013
Outline

- What is a puppy mill?
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  - What can we do?
  - Prognosis

Treatment Plan

- Five Steps to Any Treatment Plan
  - Avoidance
  - Relationship building
  - Behavior Modification
  - Tools
  - Pharmaceuticals/ Adjunctive treatments
- The Three Ms
  - Management
  - Motivation
  - Modification

In the Shelter

- No punishment or aversive tools
- Martingale collars
- Humane well fitted harness
- Double leash to prevent escapes
- High priority for foster home
- Quiet low traffic housing area

Counter Conditioning

- In Foster
  - High priority for foster
    - Preferably with another dog
  - Secure fenced-in yard
    - Control environmental exposure
  - Walk though doorways on leash
    - In and out of house to yard
      - Thresholds are frightening
    - Drag long light leash in yard
      - Facilitate bringing inside without grabbing collar or cornering
In Foster

- **Daily routine**
  - Consistent and predictable daily routine
  - Know what to expect during the day decreases anxiety
  - Level of control over environment

- **Safe Spots**
  - Start small
  - Several through home
  - Pet can retreat but still feel safe as ventures out
  - Out of high traffic areas
  - Don’t approach when in safe spot

In Foster

- **Neutral interactions**
  - Previous interactions with people approaching perceived as not safe
  - Learned helplessness
  - Initially avoid approaching when retreated or hiding
  - Unless need to eliminate or is meal time
  - Do not pet, hug, kiss, carry or otherwise force interactions
  - Advocate for pet
  - Do not allow guests, friends, or passersby on walks to do this either

In Foster

- **Counter conditioning**
  - If ventures out, drop a treat on ground nearby
  - Might need to walk out of room initially for pet to feel safe enough to take it
  - Do not look at, talk, to or approach pet

In Foster or Shelter

- **1 Second 1 Hand Rule for Interactions**
  - Once pet begins to approach to solicit interaction
  - If showing relaxed social body language
    - Pet under chest (dog) around head/ chin/ ears (cat)
    - 1 second using 1 hand
  - Pause and wait to see what pet does next
    - If shows that wants to continue interaction, can do so for another 1 second with 1 hand
    - If does not solicit more attention or walks, moves, or looks away, then end interaction
  - Example
    - [http://www.youtube.com/watch?v=cGDYI-s-cQ](http://www.youtube.com/watch?v=cGDYI-s-cQ)
    - Dog body language- say yes or no to petting

In Foster or Shelter

- **Positive reinforcement training**
  - Capturing method least frightening
  - Target training
  - Often called “touch” where pet touches hand (or target stick) with nose

- **Additional resources:**
  - Fearful Dog website by Debbie Jacobs
    - [http://fearfuldogs.com/](http://fearfuldogs.com/)

Medication

- **Often needed**
  - Cannot manage and avoid all triggers for fear
  - Must address immediate welfare emergency and quality of life concerns
  - Often permanent neurochemical imbalance present from abnormal development secondary to barren environments

- **Consider**
  - Cost
  - Frequency of dosing
  - Time to effect
  - Side effects/ monitoring needs
Medication

Fast acting anxiolytic used immediately to try to reduce current anxiety and stress
- Trazodone
  - Inexpensive
  - Twice daily dosing
- Benzodiazepines
  - Inexpensive
  - Dose 3-4 times daily
  - Controlled drug/ Risk for diversion
- Gabapentin
  - Relatively inexpensive
  - Dose 2-3 times daily
  - Controlled in some states
- Clonidine
  - Inexpensive
  - Dose q 6-8 hrs or PRN

Chronic baseline anxiety control often needed to manage long lasting psychological damage
- SSRIs
  - Fluoxetine (Reconcile, Prozac)
- TCAs
  - Clomipramine (Clomicalm, Anafranil)
- Azapirone
  - Buspirone (Buspar)

Puppy Mill Follow Up Visit

Outline

- What is a puppy mill?
- Hoarding?
- Behavior of pets from puppy mills
- Environmental effects on behavioral development
- Management/ Treatment
- Prognosis
  - A realistic expectation

Prognosis

- Poor to Guarded
  - Level of fear and avoidance are profound
    - Significant concern for quality of life
      - Poor emotional wellbeing
    - Likely always be very fearful
      - Careful lifelong management required
        - To remain safe
        - To have reasonable quality of life
  - Improvement in fear will likely be a very slow process
    - Expect 1-2 years before any appreciable improvement
  - Any interested adopters must be made aware of commitment to patience and management required
What Lies Ahead…

- By the time the puppies and dogs get to the shelter/rescue, much of the damage is already done
  - Shutting down puppy mills and hoarding is not enough
- If make commitment to take in puppies in shelter setting, must be prepared to offer what they need to develop normally
  - Behavior pathology can occur secondary to sheltered setting too

Conclusions

- Dogs from puppy mills often have permanent neurodevelopmental and neurochemical changes secondary to barren environment, lack of appropriate socialization
- Common constellation of behavior problems associated with puppy mill history
  - Consistent with high stress during pregnancy and early development
- Prognosis poor for normal behavior
  - Long term commitment to management and behavior modification if any chance to lead acceptable quality of life

Thank You for Your Time!

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References

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