Structured Companionship and Indirect Correction in Puppy Emotional Regulation and Resilience

Introduction

Raising a well-adjusted puppy goes beyond teaching basic commands – it fundamentally involves shaping the puppy's emotional regulation and resilience through their social environment and guidance. Modern research in animal behavior underscores that early experiences and caregiver styles profoundly influence a young dog's confidence, stress tolerance, and behavior. For example, puppies raised in a calm home environment with plentiful human interaction tend to grow up more self-confident and less fearful-aggressive than puppies raised in isolated or chaotic settings. This insight parallels human child development, where supportive family dynamics and consistent parenting predict better emotional outcomes.

Just Behaving's mentorship philosophy builds on these principles by emphasizing *structured companionship* (guided, calm social interactions) and *indirect correction* (subtle, non-aversive guidance) as cornerstones of puppy raising. Rather than relying on high-energy play or harsh discipline, the mentorship approach positions human caregivers (and well-socialized adult dogs) as steady role models. In this framework, puppies learn how to behave and recover from excitement or stress by observing and mirroring calm mentors, much as children learn from trusted parents. By providing gentle structure and using body language or mild interrupters to correct misbehavior, owners create an environment of trust and clarity. Over time, the pup internalizes calmness as the "default" state, developing robust emotional resilience and focus.

This whitepaper presents a completed study examining how mentorship-based structured companionship vs. chaotic play, and indirect correction vs. permissive or aversive approaches, affect puppies' ability to regulate their emotions and cope with stress. We integrate narrative explanations, fictional case studies, and synthetic yet plausible data to illustrate the findings. Major sections include the theoretical background grounding our approach in attachment theory and social learning, the study methodology and design, definitions of behavioral and physiological metrics used, the quantitative results with data tables, qualitative case studies of representative puppies, and collaborative implications of our findings. Throughout, we highlight how a calmer, structured upbringing with subtle guidance leads to shorter recovery times, improved focus, greater trust, and overall more resilient pups compared to a chaotic or heavy-handed start in life. The goal is to bridge theory and practice – demonstrating how *how* we engage with puppies in everyday situations shapes the kind of companions they become, and offering insights for families, trainers, and canine professionals to foster emotional stability from the start.

Theoretical Background

Attachment as a Secure Base: Dogs form strong attachment bonds with their human caregivers that resemble the parent-infant relationship in many ways. A puppy that trusts its human "parent" to provide safety and guidance will use that person as a secure base – venturing out to explore but returning or checking in when uncertain. Consistent, responsive caregiving leads to a secure attachment, which in turn yields better emotional regulation and confidence in the puppy (much like a securely attached child tends to be more resilient). By contrast, an inconsistent or unresponsive environment can foster insecurity or anxiety. Just as human children thrive when parents offer stable routines and gentle support, puppies appear to thrive when their human "parents" act as anchors in the puppy's world – providing calm reassurance during stress and gentle boundaries during misbehavior. Attachment theory thus predicts that puppies raised with steady, calm leadership will develop into more secure, resilient dogs, whereas those raised amid unpredictability or neglect may become anxious or overly clingy. Our study builds on this concept by examining whether pups given a secure base (through structured companionship) handle stress better than those without this support.

Social Modeling and Mentorship: Young animals learn many of their behaviors by observing others. In natural canine settings, puppy development is guided by the mother dog and adult pack members through modeling and mild correction. For instance, mother dogs and polite adult dogs often *self-handicap* when playing with puppies – they tone down their strength and use soft mouthing – and deliver subtle corrections like a low growl or gentle body block to signal the limits of rough play. Through these interactions, puppies pick up crucial social skills: they learn bite inhibition, how to greet politely, how to settle after play, all without formal training drills. Social learning theory suggests that if suitable role models are present, puppies will naturally imitate behaviors and habits. In a household, this means a puppy exposed to calm, well-mannered adult dogs or humans is likely to mirror that calm behavior; whereas a puppy surrounded by high excitement, chaos, or inconsistency may adopt hyperactive or unruly habits. This dynamic is analogous to children mirroring caregivers' behavior. Indeed, studies indicate puppies look to humans for guidance much like toddlers do – if a new situation arises, they take cues from the owner's reactions. A relaxed, confident owner signals the puppy that all is well, whereas a tense or frantic owner might transmit that something is wrong. By structuring companionship (for example, scheduled calm play sessions with an older dog, supervised interactions with clear cues), the mentor (human or canine) provides a live demonstration of "how to behave." Our theoretical foundation posits that *mentorship-based interactions* – consistent routines, calm play, and gentle feedback – will lead to puppies with better

impulse control and social adeptness compared to puppies raised in free-for-all play environments.

Emotional Contagion and Regulation: Emotions are contagious, especially between species that share close bonds. A growing body of evidence shows that dogs can "catch" their owner's emotional states through subtle cues and even physiological synchronization. If the humans in a household are anxious or highly agitated, a sensitive puppy may absorb that anxiety – displaying agitation or stress behaviors with no obvious external trigger. Conversely, when owners remain calm and soothing, they provide an example the puppy can attune to, helping the pup learn to self-regulate. Scientific studies have found remarkable interconnections: for example, dogs' long-term cortisol levels often correlate with their owners' cortisol patterns, and a recent experiment demonstrated that a dog's heart rate variability can synchronize to its calm owner's during relaxation sessions. In practice, this means a family's tone of voice, body language, and emotional reactions set the emotional climate for the dog. A household that consistently projects calm confidence teaches a puppy that there is no cause for alarm, allowing the pup's nervous system to remain balanced even in novel situations. Ethological research also supports the importance of early emotional environments: infant animals raised by nurturing, attentive parents tend to handle stress better as adults. For instance, rat pups raised by mothers who provided high levels of licking/grooming (comforting contact) later showed lower stress reactivity and more exploration than pups with less nurturing mothers. In dogs, parallels are seen in breeding studies: one guide dog program found that mother dogs who imposed *a bit* of structure (e.g. making pups work slightly harder to nurse by standing up, rather than lying down all the time) produced puppies that were far more likely to succeed as adult service dogs, whereas overly indulgent mothers (always making things easy) had higher rates of pups that failed out of the program. These examples illustrate a key point: a balanced approach of warmth *and* structure early in life builds resilience. Too much chaos or unregulated excitement, on the other hand, can overwhelm a puppy's developing nervous system, potentially leading to poor self-control or heightened anxiety later on. Our study's hypothesis reflects this: puppies given structured, calm caregiving (both human and canine) will demonstrate healthier stress recovery and emotional control than those exposed to overstimulation or inconsistency.

Indirect vs. Direct Correction: How misbehaviors are addressed plays a significant role in a puppy's developing trust and emotional stability. Traditional training often swings between two extremes: permissiveness, where "they're just a puppy" excuses lead to few boundaries, and aversive discipline, where puppies are shouted at or physically corrected for mistakes. The Just Behaving approach advocates a middle path of *indirect correction* – using mild, instructive cues (such as body language, gentle touch or sound interrupters, or removal of attention) to guide the puppy away from unwanted

behavior without instilling fear. This is analogous to how a good parent might child-proof and guide a toddler, rather than either letting the child run wild or harshly scolding them for every mistake. Canine social groups also use indirect cues: a mother dog might simply get up and walk away when a pup bites too hard (negative punishment by removing play), or an older dog might stare and stand still to signal "that's enough," prompting the puppy to disengage. Indirect corrections are subtle but clear, allowing the puppy to *think* and self-adjust. In contrast, yelling "No!" or using physical punishment may stop the behavior immediately but at a cost: it can startle or frighten the puppy, elevate stress hormones, and chip away at the pup's trust in the handler. Studies on training methods have shown that dogs trained with aversive techniques (punishments and compulsion) tend to exhibit more stress-related behaviors and higher cortisol levels compared to dogs trained with gentler, positive methods psychologytoday.com psychologytoday.com. Moreover, heavy-handed approaches can lead to a pessimistic or anxious mood in the dog, even affecting their willingness to try new tasks due to fear of punishment psychologytoday.com. On the flip side, a completely permissive approach (never intervening or giving feedback) can leave a puppy without guidance, potentially reinforcing problematic behaviors and causing confusion about boundaries. The theoretical sweet spot – and the focus of our study – is that indirect correction techniques, embedded in a supportive mentorship relationship, will yield the best outcomes: puppies who understand limits and make good choices, but without the baggage of fear or distrust. We expected that pups raised with indirect corrections would recover from missteps quickly (minimal sulking or anxiety) and maintain focus, whereas pups experiencing harsh corrections might show signs of stress or avoidance, and pups with no corrections might exhibit impulsivity or slower learning of self-control.

In summary, our theoretical framework ties together attachment theory, social learning, emotional physiology, and humane training techniques. It suggests that a *structured companionship* environment (rich in calm interaction, routine, and mentorship) combined with *indirect, gentle correction* should produce emotionally resilient, well-adjusted puppies. These pups would likely demonstrate secure attachment behaviors, quick recovery from arousal or stress, strong focus on social cues, and trusting relationships. In contrast, environments characterized by chaotic play or inconsistent responses (whether overly lax or too harsh) are expected to result in more anxious, impulsive, or stress-prone puppies. The study described in the following sections was designed to test these propositions by observing and measuring puppies under different rearing styles.

Methodology

To investigate these concepts, we implemented a mixed-methods comparative study that combined quantitative behavioral/physiological measurements with qualitative observations and owner reports. The study was conducted over the course of each

puppy's early developmental period (from 8 weeks of age, around the time of weaning/adoption, through 20 weeks of age, a key social development window). We partnered with new puppy owners and our own breeding program participants to create two broad rearing conditions for comparison, while also tracking variations in correction style within each condition. All participants were thoroughly briefed on study procedures, and informed consent was obtained (for owners; no invasive procedures were used on puppies beyond gentle saliva collection and heart rate monitoring).

Overall Design: The study had a quasi-experimental cohort design. Puppies were not randomly assigned to completely different households (for ethical and practical reasons); instead, we recruited families who were naturally aligned with one of two approaches or were willing to follow a provided guideline. One cohort of puppies was raised under the *Just Behaving mentorship model* (structured companionship with indirect corrections) – these owners received coaching on maintaining calm routines, facilitating supervised play with mentor figures (either adult dogs or calm older children/adults), and using subtle intervention techniques for misbehavior. The second cohort was raised in a more *conventional manner*, which we operationally defined as allowing more *chaotic or free-form play* and using either permissive or typical corrective responses (like verbal scolding or inconsistent "timeouts"), reflecting common household puppy-rearing without the structured mentorship emphasis. We will refer to these as the Mentorship group and Conventional group for simplicity. We aimed for these groups to differ in environment and handling style, to test our hypotheses about structure and correction.

Participants (Puppies and Families): A total of 30 puppies (of various breeds, though predominantly family-friendly breeds like retrievers and doodles) were enrolled at ~8 weeks old. We ensured a roughly equal split: 15 puppies in the Mentorship condition and 15 in the Conventional condition. Within the Conventional group, we further noted each family's predominant correction style over time, which fell roughly into two sub-categories: *permissive* (7 families tended to rarely correct or only gently fuss at the pup) and *aversive* (8 families used more direct corrections such as loud "No!", leash tugs, or occasional yelling). This allowed us to also compare Indirect vs. Permissive vs. Aversive correction impacts. The puppies were balanced as much as possible for baseline temperament and demographics. All puppies underwent an initial temperament assessment at 7 weeks (including tests for human social attraction, startle recovery, and handling response), and we confirmed that the two main groups did not significantly differ in initial fearfulness or excitability scores. There was a mix of sexes (16 female, 14 male) and a variety of household compositions (some with kids, some without; some with other adult dogs present, some single-dog homes). We did not restrict participation by breed, but all were medium-sized family breeds to keep context somewhat consistent (breeds included Golden Retrievers, Labrador Retrievers, Goldendoodles, and a few

mixed-breed puppies of similar size). Socioeconomic backgrounds of owners varied, but all families were committed to providing a loving home; the key difference was in their approach and guidance style.

Procedure: Data collection spanned from Week 8 to Week 20 of the puppies' age, with several assessment points:

- At the start (8 weeks) we collected baseline measures in a calm state for physiology (cortisol, heart rate variability) and behavior (initial attachment/focus tests).
- We provided the Mentorship group families with guidelines and support (an initial 2-hour orientation on the Just Behaving philosophy, printed resources on structured play and indirect correction, and weekly check-ins). The Conventional group families continued with their own style (we gave only basic general puppy care tips so as not to influence their natural approach).
- **Weekly Observations:** Each week, a researcher either visited the home or reviewed video footage of at least one play session and one daily routine scenario (e.g., feeding time or a guest arriving) for each puppy. These sessions were coded for environmental structure (noise levels, number of toys/people creating stimuli), puppy behaviors, and how the owner or any adult dog responded to the puppy's behavior. We paid special attention to moments of high arousal (excited play, puppy zoomies) and any misbehavior (e.g., nipping, jumping up, inappropriate chewing) to record how it was handled.
- **Bi-weekly Assessments:** At ~12 weeks and ~20 weeks, we conducted standardized behavior tests for all puppies in a neutral setting. These included a brief *separation/reunion test* (to gauge attachment and stress), a *novel object test* (to see how the puppy recovers from a mild startle and whether they seek human guidance), and a *calming challenge* (where the puppy is engaged in play and then the handler attempts to calm them down). During these tests, we measured physiological responses (collecting saliva before and after for cortisol, and using a small wearable harness to record heart rate and variability during the test).
- **Owner Logs and Surveys:** Owners kept a simple daily log noting any significant events (outings, big scares, etc.), and rated their puppy's general mood and behavior each day (e.g., "calm/good day" vs "restless or difficult day"). They also answered weekly questionnaires about their own practices (e.g., how often they used certain correction methods, how confident they felt in managing the puppy's behavior, etc.). This qualitative input helped contextualize the quantitative measures.

The study design allowed us to capture both short-term reactions (like immediate post-play recovery) and longitudinal changes (how the puppy's behavior and stress responses evolved by 20 weeks). While not a perfectly controlled laboratory experiment (because families naturally differ), the blend of observational and experimental elements provided rich data. We employed multiple coders for behavior videos to ensure reliability, and lab analysis for cortisol was done blind to group. In summary, the methodology sought to emulate real-life puppy raising scenarios under two distinct philosophies and objectively document the outcomes in emotional regulation and resilience.

Study Population & Design

To clarify the groups and variables in our study, we define here the study population characteristics and experimental design structure:

- **Mentorship-Based Structured Companionship Group (JB Mentorship Group, n=15):** Puppies in this group were raised with a high degree of structure and guided companionship. Typically, these puppies had scheduled playtimes with either an adult mentor dog (if available) or controlled play with humans, rather than all-day free play. Play sessions in these homes were often short (10–15 minutes) and intentionally calm – for example, tug and fetch games were tempered with frequent pauses, and excitement was not allowed to escalate unchecked. Households maintained routines (regular feeding times, nap times, and training moments) to give the puppy predictability. Crucially, any corrections or discipline were done *indirectly*: owners used techniques like redirecting the pup to a toy when mouthing, saying "oops" in a gentle tone or simply standing up and turning away briefly if the puppy became too unruly. Physical punishment or yelling was strictly avoided in favor of body language and tone to communicate. Many of these homes also had older, well-behaved dogs; those mentors helped teach the puppies by example – e.g., an adult dog would calmly walk away when the puppy got too rough, or gently nudge the puppy to interrupt undesirable behavior. This group aligns with the Just Behaving philosophy pillars of Calmness, Mentorship, Structured Leadership, and Indirect Correction.
- **Conventional Chaotic Play Group (Conventional Care Group, n=15):** Puppies in this group experienced a more typical casual pet home environment without specific mentorship guidelines. These homes often allowed more **chaotic play** – puppies had frequent free play with children or other dogs that could become very excited or rough. There was less emphasis on routine; some puppies were allowed to zoom around the house or yard for long periods, and play might be unpredictably initiated or stopped. Correction styles in this group varied:

- *Permissive subset (n≈7):* Some families took a laissez-faire approach, rarely intervening in the puppy's antics ("boys will be boys" attitude). If the puppy jumped or nipped, they might laugh it off or gently say "No no, sweetie" but not enforce a change, effectively letting the puppy decide when to calm down. These puppies often led the interactions, and misbehaviors might only be addressed if they became extreme (like a hard bite causing a yelp).
- *Aversive subset (n≈8):* Other families did try to discipline misbehavior, but using more direct or harsh methods. Common responses included loud vocal corrections ("No!" sharply shouted), grabbing the puppy to physically stop it from jumping/chewing, using leash corrections (tugs) during walks, or in a few cases, punitive time-outs (puppy abruptly put in a crate as punishment). Not all interactions were harsh – these owners did play and cuddle their pups lovingly – but when frustration arose, their style of correction was more authoritarian than the Mentorship group's style. What unified this Conventional group was lower structure and higher arousal in daily life. Puppies often experienced overstimulation: for instance, kids running around the puppy, lots of toys and noises at once, or visits to busy dog parks early on. There were fewer calm role models consistently present. The puppies likely received mixed messages – sometimes no feedback for a behavior, other times a sudden reprimand. This reflects a fairly common scenario in many households where excitement is encouraged ("go wild, puppy!") until something goes wrong.

- **Developmental Stages:** We paid attention to the puppies' developmental stages across the study. The critical socialization window up to ~14 weeks is when puppies are most impressionable, and a secondary fear period can occur around ~16-20 weeks. By structuring our observations at 12 weeks (mid-socialization) and 20 weeks (approaching adolescence), we could see how early environment influenced the trajectory. We expected that differences between groups might start subtle at 12 weeks but become more pronounced by 20 weeks as habits solidify. Our design was thus longitudinal, tracking each puppy over time, not just a one-time measurement.
- **Outcome Measures and Analysis:** (Described in detail in the next section.) Briefly, we had a set of behavioral metrics (like recovery time, focus, etc.) and physiological metrics (cortisol, heart rate variability) for each puppy at each assessment. For analysis, we compared group averages (Mentorship vs Conventional, and Indirect vs Permissive vs Aversive where applicable) using appropriate statistical tests (t-tests or ANOVAs for group differences, and within-subject comparisons over time). We also looked at correlations between certain

variables (e.g., whether more structure in the home, as rated by observers, correlated with higher resilience scores). Given the sample size, statistics are interpreted cautiously, but clear trends emerged. Synthetic data representing these outcomes are presented in tables in the Results section to illustrate the magnitude of differences observed.

In summary, our study population consisted of two contrasting puppy-rearing styles, and our design allowed us to observe *in situ* the impacts of those styles. By structuring the population into Mentorship vs Conventional (and noting correction style differences), we can highlight how structured companionship versus chaotic play and indirect versus other corrections affect puppy development. Next, we detail the specific metrics we used to quantify "emotional regulation and resilience" in these puppies.

Behavioral & Physiological Metrics

We captured a range of behavioral and physiological metrics to assess puppies' emotional regulation, stress levels, and behavior patterns. These metrics were derived from direct observation, standardized tests, and biological samples. Below we define each major metric or index used in our analysis:

- **Emotional Recovery Score:** *Definition:* A composite score reflecting how quickly and effectively a puppy recovers from a stressor or high arousal event. This score combined several observations – primarily the time to calm down (in seconds) after a mild stress or intense play, and qualitative ratings of the puppy's demeanor post-event (e.g., whether the puppy appeared relaxed or remained anxious). We standardized the score on a 0–10 scale (10 = excellent rapid recovery with full calmness, 0 = very poor recovery, remaining highly aroused or panicked). *Measurement:* In the lab test at 12 and 20 weeks, after a controlled play session and after a sudden novel stimulus (like a dropped object making noise), observers timed how long it took for the puppy to sit or lie down calmly. They also noted behaviors like shaking off, yawning (stress-relief signals), or continued pacing/whining. These were factored into the scoring rubric.
- **Cortisol Levels (Stress Hormone):** *Definition:* Cortisol is a hormone associated with stress; elevated levels can indicate a stress response. *Measurement:* We collected salivary cortisol samples from each puppy at baseline (after a rest period) and after a mild stress challenge (a 3-minute separation from the owner, or after the novel object startle) during the 12-week and 20-week assessments. Cortisol was measured in micrograms per deciliter (µg/dL) via assay. We looked at baseline cortisol (to gauge overall stress tone in each group) and the cortisol

reactivity (the increase from baseline to post-challenge). Lower post-stress cortisol or quicker return to baseline was interpreted as better stress resilience.

- **Heart Rate Variability (HRV):** *Definition:* Heart rate variability is the variation in time between heartbeats; higher HRV generally reflects a relaxed state with strong parasympathetic (calming) influence, whereas low HRV can indicate stress or arousal. *Measurement:* Puppies wore a small heart monitor vest during portions of the assessment. We specifically measured HRV (using the RMSSD metric in milliseconds) during rest and during recovery from play. We then calculated the % change in HRV from resting to post-play: a smaller drop (or quicker rebound) in HRV suggests the puppy maintained calmer physiology. We also monitored heart rate itself, but HRV is more sensitive for emotional regulation. For example, a well-regulated puppy might show only a brief HRV dip when startled, then bounce back, whereas a poorly regulated puppy's HRV might plummet and stay low (indicating prolonged sympathetic activation).
- **Handler Focus Index:** *Definition:* A measure of the puppy's attentiveness and responsiveness to the human handler, even amid distractions. This reflects the pup's ability to maintain or return focus, an important aspect of impulse control and engagement. *Measurement:* During tests, we conducted a simple "Name Call and Eye Contact" task – while the puppy was mildly distracted by a toy or sniffing a new room, the owner would call the puppy's name once in an upbeat voice. We recorded whether the puppy oriented to the owner immediately, how many seconds it took to make eye contact, and whether the puppy approached the owner. We repeated this a few times with different distractions. From this, we derived an index (0–10) combining responsiveness (speed of response) and consistency (how often they responded on the first call). A high score (near 10) means the puppy almost always promptly looked at the owner when called, indicating good focus and a habit of checking in. Lower scores indicate the puppy frequently ignored the call or was too engrossed in the environment – possibly a sign of lower impulse control or weaker engagement with the handler.
- **Arousal Transition Metrics:** These metrics dealt with how the puppy transitions between states of arousal (excited, playful) and calm states. We looked at two related measures:
    - **Play-to-Calm Transition Success:** In the structured calming challenge, the owner tried to settle the puppy after a play bout by using a pre-taught calming cue (for Mentorship group, this might be a quiet "settle" cue combined with gentle petting, or an adult dog mentor stepping in to model lying down). We noted whether the puppy was able to disengage from play and calm down within 30 seconds of the cue. Success was binary

(yes/no) each attempt, and we looked at percentage of successful transitions out of attempts.

    - **Arousal Overshoot Frequency:** This was more observational – how often did the puppy "overshoot" in excitement such that it couldn't listen or calm at all. For instance, during home observations, did the puppy frequently get the "zoomies" or frenetically bite the leash when stimulated, and how easily could they be interrupted? We coded the number of episodes per week where the puppy's arousal went beyond a manageable threshold (needing an adult to physically intervene or the puppy crashing into things). Fewer episodes indicates better self-regulation.

- **Response to Correction:** Because a key interest was how puppies respond when given feedback for misbehavior, we measured:
    - **Compliance Rate to Correction:** When a correction (indirect or direct) was given during an observed misbehavior (like jumping up or mouthing), did the puppy comply/stop the behavior within 5 seconds? We tallied these during observations.
    - **Post-Correction Stress Behavior:** After a correction, we watched for any stress signals from the puppy – such as tail tuck, cowering, excessive lip licking, avoidance of the owner for a bit, etc. We created a simple count of stress indicators observed in the 1 minute following a correction. A well-adjusted puppy with gentle correction ideally shows minimal stress (maybe a brief pause and then resumes normal behavior happily), whereas a harshly corrected puppy might show multiple stress signs (ears down, avoiding eye contact, etc.). We averaged this count per pup across several correction instances.
- **Trust and Social Comfort Markers:** Finally, we included some qualitative ratings of the puppy's trust and confidence, as observed by evaluators at 20 weeks:
    - **Stranger Approach Test:** How confidently did the puppy approach a friendly stranger with the owner present? (Scored 1 = very fearful, hides; 5 = very confident, happy to greet; 3 = cautious but approaches with encouragement.)
    - **Secure Base Behavior:** During the novel environment exploration, did the puppy frequently check back or make eye contact with the owner (a sign of a secure base and healthy attachment), or did it either not care about the owner at all or become frantic if not right next to them? We rated this qualitatively.

- **Overall Confidence Rating:** Evaluators gave an overall impression score of each puppy's emotional stability (combining how they handled new experiences, recovery from startle, and their demeanor). This was more subjective but provided a "big picture" summary.

These metrics collectively paint a picture of a puppy's emotional regulation (through how quickly they recover and calm, physiological stress responses like cortisol/HRV, and behavioral regulation like focus and transitions) and resilience (through trust, confidence, and adaptability in new situations). By analyzing these, we can objectively compare the mentorship-based approach versus the chaotic play approach.

In the next section, we present the Results of our study, including data tables that summarize key findings such as recovery times, cortisol trends, focus indices, and more for the different groups. These results will be interpreted to understand how structured companionship and indirect correction influence puppy development.

Results

We analyzed the collected data to compare outcomes between the Mentorship (structured companionship with indirect correction) group and the Conventional (chaotic play with permissive/aversive correction) group. We also examined differences within the Conventional group to isolate the impact of correction style (indirect-like gentle vs. permissive vs. aversive). The findings strongly support the hypothesis that puppies raised with calm structure and subtle guidance develop better emotional regulation and resilience. Below, we break down the results by key outcome categories, accompanied by tables of synthetic data illustrating the differences.

Emotional Regulation Outcomes: Structured vs. Chaotic Environment

Overall Calmness and Recovery: Puppies in the Mentorship group were markedly more adept at calming themselves after excitement. By 20 weeks old, during the standardized play-to-calm test, nearly all structured pups could wind down within a minute of the calming cue, whereas many chaotic-environment pups remained wired for several minutes.

Table 1 compares some core metrics of emotional recovery and physiology between the two groups (averages ± standard deviation):

Table 1. Emotional Recovery and Stress Physiology – Mentorship vs. Conventional Groups (means)

Metric	Mentorship Group (Structured)	Conventional Group (Chaotic)

Time to Calm After Play (seconds)	**45 ± 15 s** (at 20 wks) 60 ± 20 s (at 12 wks)	**120 ± 30 s** (at 20 wks) 105 ± 25 s (at 12 wks)
Emotional Recovery Score (0–10)	8.5 ± 1.0 (high) *(improved from 7.0 ± 1.5 at 12 wks)*	6.0 ± 1.5 (moderate) *(was 5.5 ± 1.7 at 12 wks)*
Baseline Cortisol (µg/dL)	1.8 ± 0.4 (morning)	1.9 ± 0.5 (morning)
Post-Stress Cortisol (µg/dL)	3.0 ± 0.6 (after challenge)	4.5 ± 0.8 (after challenge)
Cortisol Reactivity (Δ from base)	+1.2 µg/dL	+2.6 µg/dL
HRV Reduction post-play (%)	–20% ± 10% *(small drop)*	–45% ± 15% *(large drop)*
HRV Recovery Time (to near baseline)	2 minutes	5 minutes

Table 1: Data indicates that structured mentorship pups calmed ~2.7 times faster on average after play by 20 weeks (45s vs 120s). Their Emotional Recovery Scores were higher, reflecting quicker, fuller recovery (many reaching a calm sit or relaxed state within one minute). Both groups had similar low-stress baseline cortisol levels in the morning (indicating no chronic stress difference at baseline), but after a mild stressor, the chaotic group's cortisol spiked much more (+2.6 vs +1.2). This suggests structured pups had a blunted stress response – they did react (cortisol rose some, that's normal) but to a lesser degree and presumably returned to baseline faster. Indeed, heart rate variability measures show the structured group maintained more stability: only a 20% drop in HRV during play and recovering to baseline within ~2 minutes, whereas the chaotic play group had a 45% drop (significantly higher sympathetic arousal) and took about 5 minutes post-play to recover their HRV to normal. These physiological differences illustrate that the mentorship pups were experiencing less extreme highs and lows in arousal – their bodies could stay more balanced even during excitement, and settle quickly once the excitement ended.

Focus and Self-Control: Another striking difference was in the puppies' focus on their handlers. In the name-call test, mentorship pups by 20 weeks would almost universally respond on the first call, often even preemptively checking in with their owner during

exploration. Conventional pups were much more variable – some ignored the first call or required multiple prompts, especially if something interesting was around. On a 0–10 focus index, the structured group averaged around 8.8 (out of 10) by the end of training, versus 6.5 for the chaotic group. This gap reflects that structured pups had learned to treat the human's voice and cues as meaningful signals even amid distractions, likely because their upbringing consistently reinforced gentle guidance. Many owners in the mentorship group reported their puppies would "automatically sit and look at me if they weren't sure what to do," whereas owners in the chaotic group often said it was hard to get their pup's attention once excited.

Impulse Control and Transitions: We measured how well puppies could transition out of an aroused state (like rough play) into a calm state when signaled. By 20 weeks, 87% of mentorship group puppies successfully responded to a calming cue during play sessions (e.g., owner saying "settle" and ceasing play, or an adult dog giving a calming signal) and would promptly sit or lie down to relax. In contrast, only 40% of the conventional group puppies reliably responded to a similar cue – many in this group either didn't know how to stop on cue (permissive upbringing didn't teach them) or were too overstimulated to heed it. Often, those puppies required being physically picked up or having all stimuli removed to finally calm down. The frequency of "arousal overshoot" episodes was notably higher in the chaotic group as well. In weekly logs, mentorship families reported very few instances of uncontrolled zoomies or biting that couldn't be redirected (~1 episode per week on average by the end), whereas conventional families reported frequent episodes (~4 per week on average) where the puppy got "out of control" with excitement or frustration (like biting the leash, knocking things over, or ignoring everyone until they tired themselves out).

Behavior in Novel Situations: Although not explicitly numeric in Table 1, qualitative tests showed environment had shaped the puppies' confidence. In a novel object test (e.g., a remote-controlled toy moving oddly), structured pups tended to pause, perhaps startle slightly, then approach or investigate often after glancing at the owner or mentor dog as if seeking confirmation. Many would quickly recover from the surprise and even playfully engage the object when they saw the owner was calm. Chaotic-raised pups showed two common patterns: some would overreact (either barking and approaching in a frenzy or startling and running away far) and took longer to settle even after the owner spoke reassuringly – their recovery was slower; others were bold but without checking back with the owner at all (charging in to attack or grab the object). The latter might seem confident but could be a sign they weren't anchored to the owner's guidance (lacked the secure base behavior). In fact, one interesting observation is that *secure-base seeking* (pup uses owner as reference in uncertainty) was clearly more frequent in the structured group. Those pups had learned that the human is a source of information and safety, so they naturally included the human in how they react, which is

a hallmark of a balanced bond. The chaotic group puppies either leaned toward independent hyper-reactivity or anxious avoidance in novel scenarios.

Overall, these results draw a clear line between the two rearing environments: structured companionship produced puppies who were physiologically calmer under stress, behaviorally more focused and easier to soothe, and who actively looked to humans for guidance. In contrast, the chaotic play environment yielded puppies who had larger stress responses, difficulty calming down, and either lack of or inconsistent engagement with human cues. These differences became more pronounced by the 20-week mark (as shown by the widening gap in time-to-calm and recovery scores from 12 to 20 weeks in Table 1), suggesting that initial small divergences compounded over development. Even though all pups in our study were loved and well-fed, the style of interaction made a significant difference in their emotional resilience.

Impact of Correction Styles: Indirect vs. Permissive vs. Aversive Approaches

Within the Conventional group, we observed varied approaches to correction, and similarly varied outcomes. We compared three subgroups based on predominant correction style across the study: Indirect-Guidance (Mentorship group, n=15), Permissive (Conventional subset, n=7), and Aversive (Conventional subset, n=8). For the purpose of analysis, the Mentorship group serves as a model for “indirect correction” since those owners used body language and gentle cues almost exclusively. Below, Table 2 presents key behavior outcomes related to how puppies responded to and learned from corrections in these subgroups:

Table 2. Puppy Behavior Outcomes by Correction Style (Indirect vs Permissive vs Aversive)

Outcome Measure	**Indirect Correction (Mentorship)**	**Permissive Handling (Conv. subset)**	**Aversive Correction (Conv. subset)**
Compliance with Misbehavior Interruption (% of instances puppy stopped the behavior when corrected)	90%	40%	85%
Repeat Misbehavior Rate (same issue occurring again within 5 min of correction, % of incidents)	15%	70%	30%

Post-Correction Stress Signals (average count per event)	1 (e.g. brief pause)	0	4 (multiple signs: cower, ears back, etc.)
Time to Resume Normal Play/Affect after a correction (seconds)	5–10 s (very quick, pup resumes happily)	N/A (no clear correction given)	30–60 s (pup hesitant or subdued)
Mouthing Improvement (reduction in mouthing incidents from 8 wks to 20 wks)	**-80%** (large reduction)	-30% (small reduction)	-70% (reduction, but with side effects)
Confidence Score in New Tasks (1–5 scale, 5=high confident)	4.5 ± 0.5	4.0 ± 0.6	3.2 ± 0.8
Trust in Handler (qualitative, based on approach/avoid behavior)	High (pup seeks handler when uncertain)	Moderate (neutral, no fear)	Lower (some avoidance after corrections)

Table 2: Data here highlight the nuances of how correction style influences learning and emotional side effects.

Compliance %: Puppies with indirect corrections complied 90% of the time with the first gentle interrupter (e.g., a mentor dog's body block or owner's calm "uh-uh") – they stopped the misbehavior in most cases, showing they understood the cue. Aversive corrections had a similar immediate compliance (85% stop rate, slightly lower perhaps if the puppy was too overstimulated to even hear the command at first). Permissive handling had only ~40% "compliance," but this is a bit different to interpret because in many cases no clear correction was given at all – essentially those puppies would just continue the behavior until they themselves stopped or were lured away later, hence the low percentage. The Repeat Misbehavior Rate helps clarify: in permissive homes, 70% of the time a puppy that was, say, chewing a shoe would go right back to chewing it or something else inappropriate within minutes since nothing convinced them not to. In aversive homes, sometimes the pup would not repeat immediately (only 30% recurrence in the short term – punishment did often inhibit the behavior temporarily), whereas in indirect correction homes, recurrence was very low (15%) because pups got the message in a way that they internalized (e.g., they learned biting hard ends the fun, so they stop doing it).

However, the post-correction experience for the puppy differed greatly. Indirectly corrected pups showed almost no stress afterward – typically just pausing briefly. They often resumed normal wagging or found an acceptable behavior (like switching to a chew toy) within seconds. There was usually maybe 1 minor stress sign observed (often just a momentary freeze or a single lick-lip as they figured out "oops, not that"). In contrast, aversively corrected pups frequently showed multiple stress signals: on average 4 different stress-related behaviors (e.g., ears pinned, crouching, avoiding eye contact, tail low, a stress yawn, etc.). After being yelled at or physically corrected, many of those pups took a good half minute or more to "shake it off" and return to play, and even then, some remained hesitant. One could say they *complied* but looked cowed or less joyful immediately afterward. The permissive pups ostensibly had zero stress signals because they were never truly corrected – but the flip side is, they also didn't learn to stop the behavior in the moment, so they just kept at it, often until someone physically removed the object or the puppy from the situation without a direct reprimand (which itself could cause frustration but not the same as receiving correction).

Interestingly, when looking at a specific common behavior issue like *excessive mouthing/biting*, by 20 weeks the outcomes were:

- Indirect group: ~80% reduction in mouthing incidents compared to early weeks. These puppies learned through consistent gentle redirection and perhaps feedback from littermates/mentors that hard biting gets them nowhere, so by 5 months many had very soft mouths or only mouthed appropriate chew toys.
- Permissive group: only ~30% reduction. Many of these puppies continued nipping people or clothes well into 5 months because they never got clear signals that it was unwanted – a couple of the families reported the biting was still a big problem at 5 months, whereas it had mostly resolved in the mentorship group.
- Aversive group: ~70% reduction in mouthing – so, nearly as much improvement as the indirect group, indicating punishment *did* eventually suppress the behavior. However, the qualitative notes indicate some of these pups seemed to not mouth out of fear. For instance, one owner noted their puppy "now hesitates before taking treats from my hand, as if worried it might be wrong," suggesting a potential side effect of aversive methods: the puppy is less outgoing or trusting in general, not just avoiding the bad behavior.

This ties into the Confidence and Trust measures. On our 1–5 confidence scale for approaching new tasks or solving puzzles, the indirect group averaged a confident 4.5 (often eager to investigate with encouragement), permissive group was also fairly high at 4.0 (they had plenty of freedom, so many were bold, though sometimes a bit overconfident), but the aversively trained pups lagged at around 3.2, with some showing hesitance or a "pessimistic" attitude when faced with something new (perhaps worried

about doing something wrong). This echoes known research that dogs trained with force can develop a more pessimistic outlook and fearful demeanor psychologytoday.com. The trust in handler is harder to quantify but in our observations we saw that indirect correction strengthened the pups' trust – they saw the handler as a guide, not a source of random punishment. Those puppies often *sought out the handler* when unsure (e.g., during loud noises, they'd run toward the owner, not away). Permissive pups didn't fear their owners (no reason to), but they also didn't particularly look to them for guidance – the owner was sometimes more like a big playmate or background figure. Aversive-corrected pups, unfortunately, showed some avoidance behaviors specifically around times they expected a scolding – e.g., a few would not come immediately when called if they had just chewed something up, or they'd belly-crawl back to the owner, indicating a conflict between wanting comfort and fearing punishment. This suggests trust was somewhat eroded.

In summary, indirect correction proved to be the most effective at teaching desired behavior with minimal negative fallout. Puppies got the message (high compliance, low repeat offenses) and were not emotionally scarred by the process (they remained confident and trusting). Permissive approach resulted in puppies that were emotionally secure (no fear), but at the cost of poor manners and self-control (they simply didn't learn boundaries or impulse control as well). Aversive correction did manage to reduce some unwanted behaviors, but it carried clear emotional side effects – higher stress, wariness, and a decrease in the puppy's overall exuberance and confidence in some cases.

These outcomes reinforce the idea that *how* we correct is just as important as *whether* we correct. A guided yet gentle approach strikes the balance between structure and security. Indirect methods essentially communicate "I'm guiding you" instead of "you're bad," which helps puppies learn without fear.

Case Study Summaries

To bring these numbers to life, we present a few fictionalized case studies based on composite observations from the study. Each case features a puppy with a name and background, illustrating how different upbringing approaches manifested in real-life scenarios and development.

Case 1: "Bella" – Thriving with a Mentor's Guidance

Background: Bella is a Golden Retriever puppy from the Mentorship group. She was raised in a household with an older, calm Golden (an "aunt" dog named Maggie) and two adults who embraced the structured companionship approach. From week 8 onward, Bella's day followed a predictable routine: playtimes in the morning and evening with Maggie (supervised by the owners), interspersed with naps and quiet chew

time. If Bella got too mouthy with Maggie, Maggie would gently but decisively stand up and step over her – a canine body language that made Bella pause. The owners also practiced indirect correction: for instance, when Bella started chewing a chair leg, they would say “Ah-ah, here Bella” in a cheerful tone and offer a toy instead, or calmly guide her away rather than shouting.

Development: At 12 weeks, Bella was a bit timid with new things but very quick to seek reassurance appropriately. During the novel object test at 3 months, Bella startled at a tumbling umbrella, but rather than bolting, she ran behind Maggie and peeked out. Seeing Maggie sniff the umbrella calmly (the owners had arranged this, knowing Maggie’s presence would help), Bella cautiously came forward and soon was batting the umbrella playfully. Her cortisol at 12 weeks post-test was relatively low (for a startle, a rise from 1.7 to 3.0 µg/dL), and within minutes she was back to normal tail-wagging. By 20 weeks, Bella had blossomed into a confident explorer. In a visit to a friend’s house, she politely greeted a stranger and then looked back at her owner as if asking “Is this person okay?” – a secure base behavior. Bella’s owners reported that if she ever got overly excited (like zoomies in the yard), they could simply go quiet and kneel down; Bella would notice and come over, automatically calming when pet gently. Her emotional recovery score was one of the highest in the study (9/10 by the end). One specific incident stands out: a metal pan accidentally crashed in the kitchen one day, a sound that sent Bella leaping in surprise. However, observers noted Bella did a quick “shake off” (stress relief action) and trotted to her owner with ears perked. She demonstrated a mixture of concern and trust, as if saying “that was scary, but I’m okay now, right?” Sure enough, within seconds she was calmly lying at the owner’s feet. Bella’s case exemplifies how a structured, secure environment produces a pup who is not fearless per se (she still got startled, she’s not a robot) but *resilient* – able to recover quickly and seek guidance rather than panic.

Case 2: “Rocky” – Chaos and Inconsistent Corrections

Background: Rocky, a Labrador mix, was part of the Conventional group in a busy household with three young children. The family loved Rocky dearly and showered him with attention, but they had a more laissez-faire approach. Playtime was often exuberant and uncontrolled – the kids would chase Rocky around the house, squealing, and Rocky would be nipping at their heels in excitement. The parents sometimes intervened if a child got nipped too hard or if something got knocked over, usually by shouting “Rocky, no!” and briefly holding him down to stop him, or gating him in the kitchen for a “time-out”. At other times, minor misbehaviors were ignored because everyone was too busy or thought “he’s just a puppy.” Rocky had no other dog to learn from, and calm moments were rare during his active periods.

Development: At 12 weeks, Rocky was already showing signs of being a high-energy, easily over-aroused pup. In the lab play-to-calm test, Rocky took the full 3 minutes allowed and still was jittery, unable to sit still even when the evaluator tried a gentle pat to soothe him. His heart rate soared during play and didn't fully settle by the end of the observation. Back home, logs showed that evenings were a witching hour – Rocky would get mouthy and wild, and the kids would sometimes scream, which only intensified his zoomies. Corrections from dad (the primary caregiver) were inconsistent: one day a stern scolding, another day laughing off the same behavior. By 20 weeks, Rocky had grown in size and so had his rambunctiousness. He loved people but would jump up on every visitor with force. The family's attempts to train "off" weren't sticking, likely because sometimes jumping was tolerated (even inadvertently rewarded with attention) and other times he got yelled at. When a correction did happen, Rocky often rolled on his back in appeasement or dashed away, only to come bouncing back a few minutes later, seemingly forgetful or unfazed in the moment (until the next scold). In a stranger approach test at 20 weeks, Rocky bounded to the new person enthusiastically but then got overly excited, nipping at the person's shoelaces. When the parent grabbed his collar to pull him back, Rocky yelped – whether from surprise or slight pain – and then avoided coming back to that person for a bit. His trust wasn't shattered (he still loved the family), but he clearly didn't have that secure, check-in behavior; he was more about stimuli and reactions. Physiologically, Rocky's cortisol after the mild stress challenge was high (5.0 µg/dL from a 1.8 baseline – one of the larger jumps in the study). His recovery score was low; observers noted that even 10 minutes after a scare, Rocky would still pant and pace unless actively engaged to calm down. Rocky's case highlights how a chaotic environment with mixed signals can lead to a dog that is *hyper-excitable and slow to regain composure*. He's friendly and outgoing, but struggles with self-regulation. By the end of the study, the family did start implementing some of our suggested mentorship techniques (like structured nap times and consistent calm corrections) and they reported slight improvements – a promising sign that even Rocky could learn to settle better with more structure. But at 5 months, he was notably less emotionally regulated than pups like Bella.

Case 3: "Max" – Quick Learner with a Bit of Fear

Background: Max is a male Goldendoodle who ended up in the Conventional group's aversive subset. His owner was an experienced dog owner but followed a traditional training mindset. Eager to have a well-behaved dog, he started obedience training early and was firm about not letting Max "get away" with bad behavior. Max's environment at home wasn't chaotic per se (no kids, and generally a quiet home), but the correction style was direct. For example, when Max jumped up or stole a sock, the owner would use a stern "NO!" and occasionally a spray bottle of water for deterrence. Max was also crate trained strictly (any mouthing of hands led to a short crate time-out). While there

was plenty of affection during calm moments, Max learned that misbehavior would result in something unpleasant.

Development: This approach did yield certain results: by 16 weeks, Max seldom jumped on furniture or people, and he had very polite leash manners for his age. In fact, observers noted Max was one of the *easiest to handle physically* – he wouldn't pull much and would sit on command reliably. However, there were subtle signs of stress. During the observations, whenever the owner reached for a deterrent (like picking up the spray bottle), Max would visibly flinch or cower slightly. After a stern correction, Max's body language turned very submissive (ears down, tail low). It often took him a minute or two before he was wagging again. In one incident logged, a loud male visitor entered the home and Max piddled submissively; the owner thought Max was just excited, but our team suspected it was a bit of fear as Max crouched low. Max's cortisol levels were somewhat contradictory: his baseline cortisol was low (1.5 µg/dL, perhaps due to a quiet home), but his cortisol after our mild stress test was surprisingly high (4.0 µg/dL) given his calm demeanor externally. This might indicate internalized stress. Behaviorally, Max was less playful and more restrained than other pups his age during group playdates; he tended to avoid rough-and-tumble play, possibly because he had learned that exuberance could lead to reprimand. On the positive side, Max's focus on his handler was excellent – arguably better than any other puppy, as he almost never did anything without checking if it was okay. But the flip side was a certain lack of spontaneity or confidence. In the puzzle task (where pups had to open a box to get a treat), Max hesitated and looked to his owner repeatedly for permission to proceed, even though the task was benign. His confidence score was moderate (3/5), lower than many mentorship pups. Max's case shows that a highly structured environment *without* emotional softness (i.e., using aversives) can yield compliance and a degree of calm, but potentially at the cost of the puppy's natural curiosity and trust. Max is certainly not a terror in the house – by all accounts he was well-behaved – but he carries a bit of anxiety around making mistakes. Over time, that could develop into fear-based issues if not addressed. The good news is Max's owner, upon seeing the study's mid-point reports, started toning down the harshness and using more treats and praise for alternate behaviors, which Max responded to eagerly. By 20 weeks, even though classified as an aversive-case initially, Max was getting more of a mixed approach and showing improvement in confidence (for example, he stopped flinching at the spray bottle because the owner phased it out and used a cheerful redirection instead).

Case 4: "Luna" – From Overstimulated to Balanced

Background: Luna, a female English Cream Golden, began in a rather chaotic household (two teenagers who loved to play rough with her) akin to the permissive subset. For the first two months, Luna basically ruled the roost – jumping on couches, mouthing hands during play, and rarely being corrected. The family's philosophy was

that she was a baby and should just have fun. However, by 4 months Luna became a handful: she was 40 pounds and still mouthing like crazy, stealing food from counters, and had no “off-switch.” The family grew concerned when Luna knocked over a visiting younger cousin in excitement. At this point (around 18 weeks), they reached back out to us (they knew we were observing anyway) for guidance. We provided them with mentorship techniques to try, effectively shifting Luna into a structured routine late in our study.

Development: Luna’s case is illuminating because it shows the possibility of change. Initially, her data looked similar to Rocky’s – low compliance with any command, very high arousal and slow recovery (time to calm after play at 16 weeks was ~3 minutes). Her cortisol reactivity was on the high side, and focus was abysmal (one observer joked that Luna treated her name as background noise). After the family changed tactics – implementing set playtimes, enforcing short time-outs *preemptively* for over-arousal (like a puppy playpen for calm-down time, not as punishment but as a routine break), and most importantly, *consistently redirecting and indirectly correcting misbehavior* – Luna’s behavior started to shift. By 20 weeks, Luna could play tug for a minute and then actually drop the toy when mom stood up and said “all done” (something unfathomable a month prior). Her mouthing frequency plummeted once the teens learned to yelp softly and withdraw attention every single time she bit too hard. They also praised her a ton for gentle play. Luna’s post-correction stress signals remained basically zero (she never really became fearful since they never used aversives), and now with structure, her compliance went way up. In her final assessment, Luna managed to sit politely for greeting and even showed off a “settle on mat” skill the family taught her to replace jumping. It was a dramatic turnaround in a short time – highlighting puppies’ remarkable learning capacity when the approach is right. Luna’s cortisol at 20 weeks after a stress test was down to 3.2 µg/dL (from 4.8 at 16 weeks), and her recovery time after play dropped to 1 minute. Observers bumped her resilience score notably. Luna’s case is essentially a **success story** demonstrating that even a hyper, overstimulated pup can become much calmer and more regulated once a structured, mentorship approach is applied. It also emphasizes that it’s never too late in puppyhood to course-correct – the developmental plasticity is there.

These case studies, though fictionalized composites, mirror many real experiences. They showcase how different puppies responded to their upbringing:

- **Bella** flourished with structure and gentle guidance – confident and quick to recover.
- **Rocky** struggled in chaos – very active and friendly but hard to calm and lacking self-control.

- **Max** was obedient under aversive training but showed signs of stress – well-behaved yet somewhat inhibited.
- **Luna** illustrated the change possible when switching from permissive chaos to structure – making big improvements in a short time.

Through these narratives, we see the principles in action: *mentorship and indirect correction cultivate resilience and trust*, whereas *chaotic or harsh environments can produce either hyperactivity or inhibited fear*. Most importantly, puppies are learning every moment from the environment we provide; when that environment is intentionally structured for calm learning, the results can be outstanding.

Collaborative Implications

The findings of this study carry several important implications for how we, as caregivers and professionals, collaborate in raising emotionally healthy dogs. The term "collaborative" here applies on multiple levels: within the family, between owners and trainers/behaviorists, and even across the wider community (breeders, veterinarians, shelters). By recognizing the impact of structured companionship and indirect correction, all stakeholders can work together to implement these practices for the benefit of puppies everywhere.

1. A Unified Family Approach: One clear message is that *consistency and teamwork within a household* are critical. Family members must collaborate to provide a coherent environment. If one parent is calmly structuring play while the kids are encouraging wild antics, the mixed signals could diminish the benefits. Families raising a puppy should agree on basic guidelines – for example, setting aside calm periods, using the same indirect cues for "no" (like everyone says "oops" or redirects rather than one person shouting and another person laughing at the behavior). This study showed that puppies thrive when the household dynamics are steady and synchronized. Thus, family education is key: our results could be shared in puppy classes or pediatrician-vet cross-talks to emphasize that raising a good family dog is much like raising a child – it takes a village of consistent mentors. If the whole family collaborates on mentorship-based interactions, the puppy learns much faster and everyone benefits from a calmer pet. We often say "it takes a stable family to raise a stable dog," and these data back that up.

2. Trainers and Behaviorists – Embracing Mentorship Methods: For dog trainers and behavior consultants, the data provide empirical support for incorporating mentorship and indirect correction techniques into training programs. Trainers often work directly with owners, so this is a collaboration between professional and client. By explaining the why – e.g., *showing a client that puppies in our study who were not yelled at had 50% fewer stress behaviors* and learned just as well – we arm trainers with

convincing evidence. In practical terms, trainers can use these findings to design puppy classes that focus on social modeling (perhaps having a calm adult dog present in classes to demonstrate behaviors) and teach owners how to effectively redirect and set boundaries without coercion. Veterinary behaviorists or academically inclined trainers might use the quantitative results to advocate for change: for instance, discouraging dominance-based techniques by pointing out the cortisol differences and potential for anxiety when aversive methods are used. This kind of research-to-practice pipeline is exactly how collaborative progress is made – experts and caregivers aligning on humane, effective strategies.

3. Breeders and Early Socialization Programs: Breeders and puppy culture programs are on the front lines of early development. The mentorship approach can start even before a puppy goes to its new home. Breeders can ensure that litters have interaction with gentle adult dogs (under supervision) and controlled novelty exposure, rather than being kept in isolation or conversely, allowed chaotic free-for-all sibling play 24/7. Many responsible breeders already do early neurological stimulation and moderated socialization; our findings give weight to those practices. Collaboration here means breeders working with new owners to transition the puppy smoothly – educating them on maintaining the calm, structured environment as the puppy leaves the litter. "Structured vs. Overstimulated Puppy Rearing" isn't just a catchy phrase – it's a guideline breeders can discuss with clients. Imagine a breeder including a one-page summary of this study's key points in the puppy packet: it could encourage new families to stick to calmer routines and gentle guidance, thereby extending the breeder's early work. Additionally, shelters and rescue organizations that foster puppies can implement mentorship by perhaps pairing puppy fosters with adult "nanny" dogs when possible, and coaching adopters similarly. It becomes a community effort to produce well-adjusted dogs.

4. Ongoing Monitoring and Collaborative Care: Veterinarians can play a collaborative role by monitoring behavioral development as part of routine puppy check-ups. With data showing how pivotal early environment is, vets (who see puppies for vaccines) could ask a few lifestyle questions and offer resources. For example, if a vet hears "oh, he's wild and we just let him run crazy to tire him out," they might gently suggest structured play tips, referencing that too much chaos can actually backfire. In cases where a puppy is showing early signs of anxiety or extreme hyperactivity, a vet might refer the owner to a puppy class oriented around mentorship techniques, or to a behaviorist who can help set up a plan. Essentially, the veterinary community and behavior specialists should work hand in hand with owners – a collaborative triad – to implement these best practices during the critical developmental window. Proactively addressing issues by adjusting the home environment could prevent more serious

behavior problems down the line (like adolescent dogs with no impulse control or adults with anxiety issues).

5. Policy and Educational Outreach: On a broader scale, if we treat these findings as a white paper for the industry, it can inform puppy training certification curricula and humane education campaigns. For instance, organizations could incorporate modules on “Building Resilience through Structure” for new puppy owners. Some humane societies run puppy socialization classes; they can design those to avoid free-for-all puppy ruckus and instead have intervals of play and calm, teaching pups to settle intermittently – which mirrors our study’s positive condition. Collaboration might also mean joining forces across disciplines: child psychologists, for example, might collaborate with dog behaviorists to draw parallels and create family programs that teach empathy and calm interactions for kids with dogs (since family dynamics affect the puppy). By highlighting our study’s results in newsletters, blogs (like the Just Behaving blog), and perhaps even scientific conferences, we hope to spark a conversation that bridges anecdotal wisdom and scientific evidence. The partnership between researchers and practitioners (such as the Just Behaving team) in this project serves as a model: when those who *implement* a philosophy document and analyze outcomes systematically, it elevates the approach from just an art to an art informed by data.

6. The Human–Dog Team: Finally, at the most fundamental level, these findings remind us that a puppy and its owner are a developing team. Collaboration in this context means the human adjusting their behavior to guide the dog, and the dog responding in turn – a two-way street. Our results underscore that when humans put in effort to remain calm, provide structure, and communicate through gentle coaching (not coercion), dogs reciprocate by being more attuned, calmer, and resilient. This improves the bond and trust on both sides, reinforcing a positive cycle of interaction. In essence, the human-canine relationship itself is collaborative; we are co-authors of each other’s behavior to a degree. Recognizing this can encourage owners to take responsibility for the energy they bring into interactions. If something goes awry (puppy freaks out or misbehaves), instead of blaming the dog, owners can ask “How can I adjust the environment or my approach to help them succeed?” That mindset shift is powerful and can lead to better outcomes — exactly what our study demonstrated quantitatively.

Concluding Thoughts

In conclusion, **“Structured Companionship and Indirect Correction”** has proven to be more than just a feel-good idea – it measurably impacts puppy emotional regulation and resilience. Puppies raised with calm mentorship showed quicker recovery from stress, lower physiological stress responses, better focus, and enduring trust. Those raised amidst chaos or corrected harshly exhibited more difficulty in self-regulation and signs of stress or insecurity. By sharing these findings, we aim to inspire a more

thoughtful approach to puppy raising, one that treats socialization and training not as separate tasks but as an integrated, relationship-based process.

Moving forward, our hope is that families, trainers, and all dog enthusiasts will collaborate to implement these principles. Future research could build on this by following puppies longer into adulthood to see how early differences persist or by exploring specific aspects (like exactly how much mentor dog influence contributes vs. human influence). But even without further data, the take-home message is clear: when in doubt, be the calm, guiding companion your puppy needs. Structure their world with love and limits, correct them gently and consistently, and you will likely raise a dog that can handle life's ups and downs with poise. The resilience we foster in our puppies today lays the foundation for the balanced, emotionally healthy dogs and happy households of tomorrow.