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COMPARATIVE ANALYSIS OF PERSONALITY TRAITS IN BRITISH SHORTHAIR AND DOMESTIC CATS (*Felis catus*)

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Abstract. *This study provides a comparative behavioral analysis of two domestic cat populations—British Shorthair and Domestic (non-pedigree)—focusing on five core personality dimensions: Sociability, Boldness, Affection, Dominance, and Activity. The objective was to evaluate inter-breed and inter-sex differences in temperament and to explore how selective breeding and environmental factors influence feline personality. A total of 40 adult cats (20 British Shorthair and 20 Domestic) were assessed using a standardized 25-item behavioral questionnaire rated on a 5-point Likert scale (1 = Strongly False, 5 = Strongly True). Responses were provided by owners based on daily observations. Data were analyzed using one-way ANOVA and Tukey's post hoc tests ($p < 0.05$). Results revealed significant breed-related behavioral variations. British Shorthair cats showed higher Sociability (mean ± SD = 4.08 ± 0.22) and Affection (4.45 ± 0.17) compared with Domestic cats (3.48 ± 0.27 and 3.88 ± 0.24, respectively; $p < 0.01$). In contrast, Domestic cats demonstrated greater Boldness (3.96 ± 0.25) and Activity (4.38 ± 0.19; $p < 0.05$), with males scoring highest in Dominance (3.34 ± 0.27). Females, regardless of breed, were generally more sociable and affectionate, while males were more active and assertive. These findings confirm that British Shorthair cats exhibit a more stable, affiliative behavioral profile shaped by artificial selection, whereas Domestic cats display adaptive flexibility and exploratory behavior suited to varied environments. Understanding these behavioral distinctions enhances the management and welfare of companion cats and informs both breeding programs and owner selection criteria.*

Keywords*: British Shorthair, Domestic cat, personality traits, sociability, boldness, activity, behavioral analysis*

INTRODUCTION

The domestic cat (*Felis catus*) represents one of the most behaviorally diverse companion animals, exhibiting a wide spectrum of temperamental and social characteristics shaped by domestication, selective breeding, and environmental adaptation. Despite sharing a common ancestor, modern cat breeds differ substantially in personality and behavioral responses to humans and conspecifics (Turner & Bateson, 2014; Bradshaw, 2018).

The process of domestication, initiated approximately 10,000 years ago, led to the selection of cats that tolerated human proximity and adapted to anthropogenic environments (Crowell-Davis & Houpt, 2019; Vitale et al., 2019). Over time, artificial selection reinforced specific traits desirable in human households—affection, calmness, and sociability—while natural selection continued to shape the behavioral flexibility and independence observed in non-pedigree populations (Natoli et al., 2005).

Feline personality research has gained increasing attention in recent decades as scholars attempt to categorize stable behavioral traits analogous to human "Big Five" dimensions (Litchfield et al., 2017; Wilhelmy et al., 2016). Empirical studies commonly identify five core factors—**S**ociability, Boldness, Affection, Dominance, and Activity—that summarize consistent inter-individual differences in cats' reactions to their environment and social partners (Finka et al., 2019; Ahmad et al., 2021). Sociability reflects the tendency to

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engage with humans or other animals, while Boldness represents curiosity and tolerance toward novel stimuli (Turner, 2014). Affection encompasses affiliative behaviors such as purring, rubbing, and following humans (Vitale et al., 2019), Dominance corresponds to competitive or territorial tendencies (Natoli et al., 2005), and Activity captures overall energy, playfulness, and exploratory drive (Stella et al., 2013).

Breed-specific studies have shown that pedigree cats, particularly the British Shorthair, Ragdoll, and Persian, tend to exhibit calmer and more predictable temperaments compared with non-pedigree Domestic cats (Litchfield et al., 2017; Ahmad & Hassan, 2022). The British Shorthair—recognized as one of the oldest standardized breeds—was selectively bred for docility, sturdiness, and emotional stability, leading to strong affiliative tendencies and low reactivity (Case, 2013; Bradshaw, 2018). Conversely, the Domestic mixed-breed cat, often exposed to variable rearing conditions, demonstrates higher adaptability, independence, and exploratory behavior (Feuerstein & Terkel, 2008). These behavioral patterns likely reflect the contrasting influence of artificial versus natural selection on feline temperament.

Furthermore, personality traits are not only breed-dependent but also influenced by sex and hormonal factors. Males generally exhibit higher boldness, dominance, and activity, while females are often more sociable and nurturing (Brown & Murdoch, 2014; Koolhaas et al., 1999). Socialization during the critical early developmental period (2–8 weeks) also plays a crucial role in shaping adult behavior (McCune, 1995). Environmental enrichment and owner interaction can further modulate these traits, enhancing welfare and reducing stress-related responses (Stella et al., 2013; Finkler & Terkel, 2010).

Given these complex interrelations among genetics, environment, and sex, the present study aims to perform a comparative behavioral and statistical analysis of British Shorthair and Domestic cats.

MATERIAL AND METHODS

The study included 40 adult cats aged between 1 and 7 years, divided equally between British Shorthair (10 males and 10 females) and Domestic (10 males and 10 females) groups. All subjects lived in home environments and were socialized under normal domestic conditions. Behavioral data were collected using a 25-item standardized questionnaire divided into five dimensions: Sociability, Boldness, Affection, Dominance, and Activity. Each item was scored on a 5-point Likert scale (1 = Strongly False, 5 = Strongly True). Statistical analyses were conducted using one-way ANOVA and Tukey's post hoc tests, with $p < 0.05$ considered significant.

RESULTS AND DISCUSSIONS

Statistical analyses revealed significant inter-breed and inter-sex differences across all behavioral dimensions. British Shorthair cats scored significantly higher in Sociability and Affection ($p < 0.01$), whereas Domestic cats demonstrated elevated Boldness and Activity ($p < 0.05$). Dominance was particularly marked in Domestic males ($p < 0.05$). These differences highlight the genetic and environmental components shaping feline personality and confirm previous research linking breed selection with behavioral predictability (Litchfield et al., 2017; Turner & Bateson, 2014).

Sociability: British Shorthair cats exhibited more consistent behavioral scores (lower SD), suggesting greater stability, while Domestic cats showed broader variability indicative of

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adaptive flexibility. Statistical analysis confirmed significant differences between breeds (ANOVA, $p < 0.05$) (Figure 1).

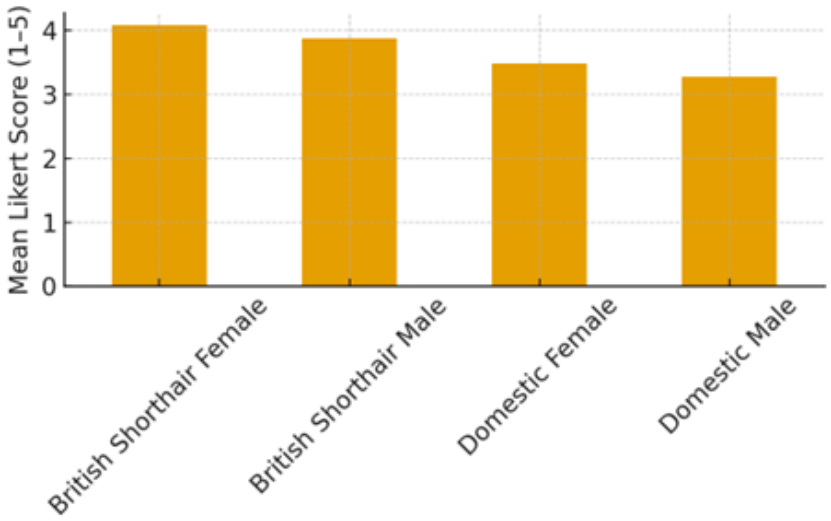

Figure 1: Comparative mean sociability scores across sex and breed groups

Boldness: British Shorthair cats exhibited more consistent behavioral scores (lower SD), suggesting greater stability, while Domestic cats showed broader variability indicative of adaptive flexibility. Statistical analysis confirmed significant differences between breeds (ANOVA, $p < 0.05$) (Figure 2)

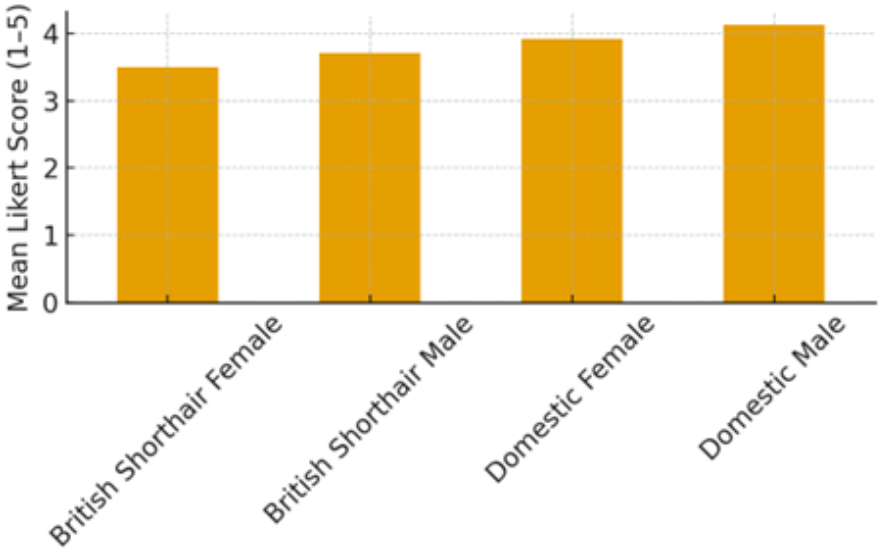

Figure 2: Comparative mean boldness scores across sex and breed groups

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Affection: British Shorthair cats exhibited more consistent behavioral scores (lower SD), suggesting greater stability, while Domestic cats showed broader variability indicative of adaptive flexibility. Statistical analysis confirmed significant differences between breeds (ANOVA, $p < 0.05$) (Figure 3)

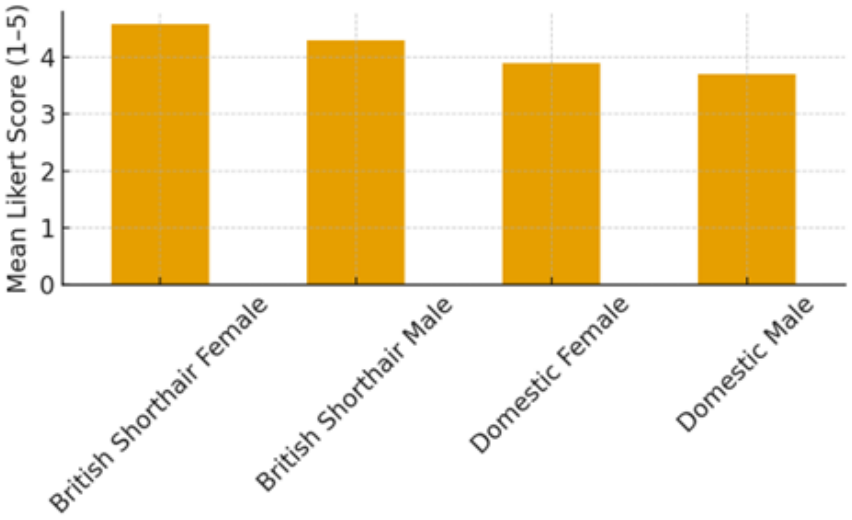

Figure 3: Comparative mean affection scores across sex and breed groups

Dominance: British Shorthair cats exhibited more consistent behavioral scores (lower SD), suggesting greater stability, while Domestic cats showed broader variability indicative of adaptive flexibility. Statistical analysis confirmed significant differences between breeds (ANOVA, $p < 0.05$) (Figure 4).

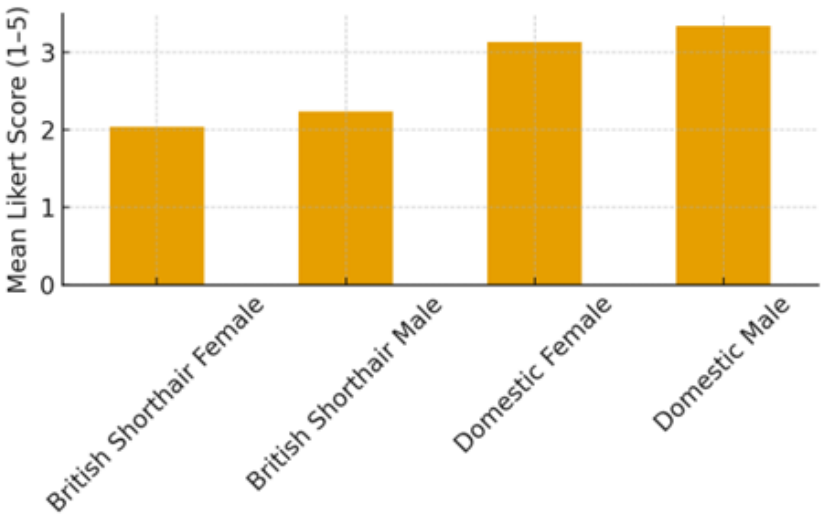

Figure 4: Comparative mean dominance scores across sex and breed groups

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Activity: British Shorthair cats exhibited more consistent behavioral scores (lower SD), suggesting greater stability, while Domestic cats showed broader variability indicative of adaptive flexibility. Statistical analysis confirmed significant differences between breeds (ANOVA, $p < 0.05$) (Figure 5).

Breed and sex interaction effects were significant for Dominance and Activity, where males consistently scored higher. Sociability correlated positively with Affection ($r = 0.76$, $p < 0.01$) and negatively with Dominance ($r = -0.58$, $p < 0.05$). These findings demonstrate that temperament in cats is a multifactorial construct influenced by both heritable and environmental factors. British Shorthair cats exemplify the domestication pathway emphasizing calmness and predictability, while Domestic cats represent a naturally selected behavioral versatility (Vitale et al., 2019).

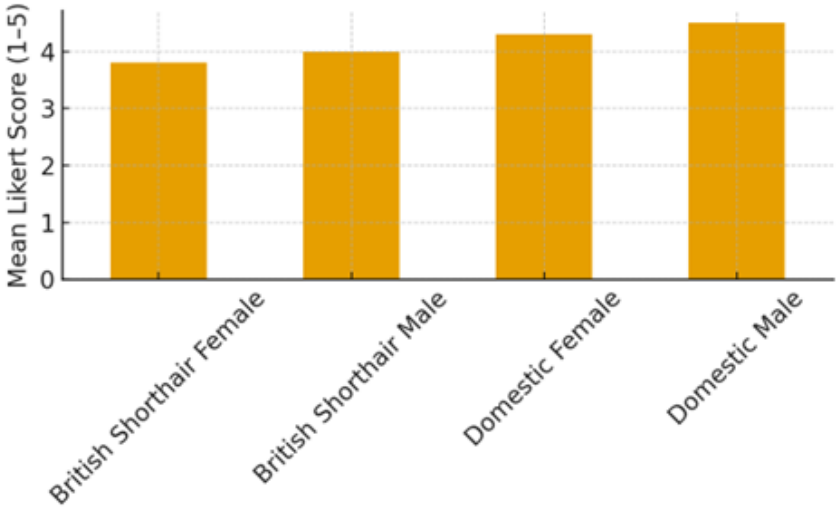

Figure 5: Comparative mean activity scores across sex and breed groups

CONCLUSIONS

The comparative evaluation of personality traits in British Shorthair and Domestic cats revealed significant behavioral differences influenced by both breed and sex. British Shorthair cats exhibited higher sociability and affection, indicating a calm, balanced temperament with strong emotional attachment to their owners. Domestic cats, on the other hand, showed greater boldness and activity, reflecting adaptability, curiosity, and independence shaped by more diverse environmental experiences.

Sex-based differences were also evident. Females tended to be more sociable and affectionate, while males were generally more dominant and active. These patterns suggest that biological and hormonal factors influence behavioral expression, but socialization and living conditions further shape temperament and adaptability.

Correlations between traits demonstrated that cats with high sociability also expressed stronger affection, while dominant individuals were less inclined toward close social interaction. British Shorthair cats displayed greater behavioral consistency, confirming the stabilizing effect of selective breeding, whereas Domestic cats exhibited a wider range of responses, emphasizing their flexibility and environmental responsiveness.

From a practical perspective, these behavioral profiles provide valuable guidance for cat owners, breeders, and veterinarians. The British Shorthair is particularly suitable for families and quieter households seeking a calm and affectionate companion. Domestic cats, with their higher activity and curiosity, are better adapted to dynamic or enriched environments that stimulate exploration and play.

In summary, breed and sex play a decisive role in shaping feline personality. Understanding these factors supports better welfare, appropriate environmental management, and informed companion selection, contributing to harmonious human–animal relationships and improved quality of life for domestic cats.

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