

The Relationship of Body Size to Behavior in Kintamani Dogs

(HUBUNGAN UKURAN TUBUH TERHADAP PERILAKU ANJING KINTAMANI)

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Abstract

The Balinese believe that body size (the ratio of body length to snout length) in dogs is related to behavior, therefore body size is used to predict dog character. How to predict by measuring body size is a local wisdom that is still trusted for choosing a good dog. This belief has been running for a long time from their ancestors and has become a culture. Dog behavior according to local wisdom in Bali in general and in Sukawana Village, Kintamani District, Bangli Regency in particular, is categorized as: *guna*, *jaya*, *forced*, *tek* and *kyul*. *Guna* is a dog with an obedient character, useful and suitable as a hunting dog. *Jaya* is a dog with good character, attractive, energetic, tends to be hyperactive, this type of dog is also good for hunting. *Force* is a dog that is difficult to manage, requiring special handling, suitable for keeping the house. *Tek* is a dog with dirty behavior and difficult to train or manage and *Kyul* is a dog with a lazy character. A total of 66 Kintamani dogs were used as experimental animals. The research design used a cross-sectional study design. Body size observation data was then compared with clinical observations in the same dog. The results show that there is a relationship between behavior and body size (ratio of body length to snout length). It was concluded that body size (body length to snout length ratio) can be implemented to predict behavior.

Keywords: Behavior; body length; dogs

Abstrak

Masyarakat Bali percaya bahwa ukuran tubuh (rasio panjang tubuh dengan panjang moncong) pada anjing berhubungan dengan perilaku, oleh karena itu ukuran tubuh digunakan untuk memprediksi karakter anjing. Cara memprediksi dengan mengukur ukuran tubuh merupakan kearifan lokal yang masih tetap dipercaya untuk pemilihan anjing yang baik. Kepercayaan ini sudah berjalan lama dari leluhur mereka dan sudah menjadi budaya. Perilaku anjing menurut kearifan lokal di Bali pada umumnya dan di Desa Sukawana, Kecamatan Kintamani, Kabupaten Bangli pada khususnya, dikategorikan sebagai: *guna*, *jaya*, *paksa*, *tek* dan *kyul*. *Guna* merupakan anjing dengan karakter penurut, berguna dan cocok digunakan sebagai anjing pemburu. *Jaya* adalah anjing berkarakter bagus, atraktif, energik, cenderung hiperaktif, anjing jenis ini juga baik untuk berburu. *Paksa* adalah anjing yang sulit diatur, memerlukan penanganan khusus, cocok untuk penjaga rumah. *Tek* adalah anjing berperilaku kotor dan sulit dilatih ataupun diatur dan *kyul* adalah anjing berkarakter pemalas. Sebanyak 66 ekor anjing kintamani digunakan sebagai hewan coba. Rancangan penelitian menggunakan rancangan *crosssectional study*. Data pengamatan berdasarkan ukuran tubuh kemudian dikomparasi dengan pengamatan secara klinis pada anjing yang sama. Hasil menunjukkan terdapat hubungan antara perilaku dengan ukuran tubuh (rasio panjang tubuh dengan panjang moncong). Disimpulkan bahwa ukuran tubuh (rasio panjang tubuh dan panjang moncong) dapat diimplementasikan untuk memprediksi perilaku.

Kata kunci: Anjing; perilaku; ukuran tubuh

INTRODUCTION

The Balinese believe that body size (body length to snout ratio) is related to behavior. How to predict by measuring body size is a local wisdom that is still trusted to choose a good dog. This belief as the wisdom of the local Balinese people has been going on for a long time from their ancestors and has become a culture. Dog behavior according to local wisdom in Bali in general and in Sukawana Village, Kintamani District, Bangli Regency in particular is proposed as: *guna*, *jaya*, *paksa*, *tek* and *kyul*. *Guna* is a docile dog, useful and suitable as a hunting dog. *Jaya* is a dog with good character, attractive, energetic, tends to be hyperactive, this dog breed is also good for hunting. *Paksa* is a dog that is difficult to manage, requiring special handling, suitable for keeping the house. *Tek* is a dog that behaves dirty and is difficult to manage or manage. *Kyul* is a dog with a lazy character (Dharmawan, 2009; Carcan, 2017).

Dogs have different characters such as fierce, obedient, agile and lazy (Martin and Bateson, 1986; Miklosi, 2007; Mehrkama and Wynnea, 2014). Research shows body size, skull shape, distance between eyes are related to dog behavior (Helton and Helton, 2010; McGreevy *et al.*, 2013). Cannas *et al.*, (2018) stated that body size, gender and age affect dog behavior. Similarly, recent research at the University of Sydney further proves Coppinger's theory, which suggests that the size and shape of a dog's skull are important factors in shaping behavior. Certain physical characteristics in dogs are consistently associated with certain types of behavior. There is a strong relationship between height, weight, video proportions (relative width and length) and behavior. Basically, the shorter the dog, the less regulated its behavior.

The only behavioral trait associated with height is training (Lindsay, 2005; Jensen, 2007; Blackwell *et al.*, 2008). When the average body weight decreased, excitability and hyperactivity increased. The ratio of the width to the length of the

skull is an interesting casing. Long-headed dogs, such as Afghans, Salukis, and Whippets, seem to be the product of choice for targeting, because of these indicators. Conversely, the booking results that a short-faced dog, such as the pug, that has some boyish features is not a hunting dog. unwanted behavior such as aggression towards owners, or towards partners, is more common in small dogs. This suggests that, in smaller dogs, they have a less tolerant behavior, while larger dogs have a more tolerant behavior. Recent reports have shown that the structure of the dog's eyes and brain depends on the shape of the skull and the shape of the skull depends on the sex (McGreevy *et al.*, 2013).

A dog's height can be used to predict a number of aspects of a dog's behavioral tendencies. It may surprise many that shorter dogs are usually more aggressive than taller dogs. Also, taller dogs tend to show more affection, cooperation and play with humans. A dog's weight can also be used to predict certain personality characteristics. Heavier dogs tend to be bolder, more curious and attentive. Lighter dogs tend to be more cautious and have a shy character (Lehner, 1998; Leaver and Reimchen, 2008).

Head shape can also predict some differences in temperament. Brachycephalic dogs appear to be more involved with their owners with a higher interest in playing with humans. On the other hand, these short-faced dogs are more defensive when faced with difficult situations (such as seeing someone dressed as a ghost). Dolichocephalic dogs tend not to engage in object play, especially with unfamiliar humans. However, this long-faced dog is not easily startled and recovers more quickly when startled (van der Borg, 2015) and Podberscek and Serpell (1997) stated that environmental influences on the expression of aggressive behaviour and Tami *et al.* (2008) argues that relationship between management factors and dog behavior.

The Balinese believe in ancestral culture that has existed for generations and it is recorded in lontar that body size (the ratio of body length to snout length) can be used to predict dog behavior. Body length is measured from the tip of the nose to the tip of the tail, while the length of the muzzle is measured from the tip of the nose to the horizontal line of the right and left eyes. This belief is based on observations made long ago. From these observations a behavioral formulation was made based on the comparison between body length and snout length, resulting in five categories of behavior. The fifth behavior is arranged sequentially from number one to number five. This behavior is written in Lontar Siksan Wawalungan, Griya Pada, Kerambitan, in the order *guna, jaya, paksa, tek* and *kyul*. Dog behavior with local wisdom approach is used to predict dog behavior as hunting desire.

RESEARCH METHODS

Research design

The research design used a cross-sectional study design and the results are presented in descriptive.

Sample

Sixty six dogs were used in this study, all dogs were observed for clinical symptoms and were physically healthy. The observations were carried out in the village of Sukawana village, Kintamani sub-district, Bangli district, Bali.

Data Source Determination

The data includes two kinds of observations of body size (the ratio of body length to snout length) and observations of clinical characters (seeing clinical signs). Both observations were carried out by interviewing (questionnaire) with the owner.

Research variable

Independent variable: body size and clinic sign. Dependent variables: behavior according to local wisdom (*guna, jaya, forced, tek* and *kyul*) and character based on clinical observations. Controlled variables: place, age, time and type of dog.

Variable Definitions

Body size is the ratio of body length to snout, namely the length of the body from the tip of the nose to the tip of the tail (os coccygea) divided by the length of the snout (measured from the horizontal line of the right eye with the left to the tip of the nose) (Carcan Asu. 2017). And clinical signs are an objective description of behavior. Behavior according to local wisdom: *Guna* is a dog with an energetic character, obedient, useful, easy to train. *Jaya*: is a dog with an attractive character, energetic, tends to be hyperactive, suitable for use as a hunter. *Paksais* a dog with a difficult character to manage, needs coercion from the owner, suitable for keeping the house. *Tek* is a dog characterized by dirty behavior, difficult to manage / train. *Kyul* is a dog with a lazy character, likes to eat and sleep (Carcan, 2017). All dog samples came from the same place, age, time and type of dog.

Data analysis

Data were analyzed descriptively by comparing clinical observations with body size observations. Then a percentage that describes the truth value (Snedecor and Cochran, 1994).

RESULTS AND DISCUSSION

Results

The relationship (association) of behavior (body size) with behavior clinical sign shows that there is compatibility. Data on body size respectively: 23 dogs, *jaya*, 18 dogs, *paksa* 9, *tek* 9 dogs, 7 dogs *kyul*. While data from clinical sign are 18 *jaya*, 13 dogs, *paksa* 11 dogs, 14 dogs *tek*, and 10 dogs *kyul*. The mean percentage of conformity between behavior by body size and behavior by clinical sign was 73.3%. The complete relationship (association) of behavior (body size) with behavior on clinical sign is presented in Table 1.

Discussion

The results between behavior (clinical observation) and behavior (body size) are quite similar. The statistical test obtained a correlation of 73.3%. This shows that the

level of truth of the behavior prediction system based on the body size of 100 dogs, 73 dogs is in accordance with clinical observations. The meaning of the theory used by the Balinese people as local wisdom is proven to be found that there is a relationship between body size (ratio of body length to snout length) in dogs and behavior.

In accordance with research conducted by Helton and Helton (2010) that body size (large dogs, small dogs) is related to dog behavior (intelligence). He also reported that the distance between the left and right eyes is also related to intelligence.

Several other studies suggest that there is a relationship between a dog's cephalic index (CI: ratio of skull width to skull length) and dog behavior. Using the Canine Behavioral Assessment and Research Questionnaire (C-BARQ) concluded that the ratio of skull width to skull length ratio is associated with behaviors such as emotional urination, tail chasing, compulsive fly snapping, aggression directed at strangers, and staying on stairs. (McGreevy *et al.*, 2013).

There is a correlation between body size, sex, and age with dog behavior. Dogs are small in size and generally "anxious" rather than "aggressive"; male dogs are mostly "aggressive" and female dogs (neutered and intact) are mostly "anxious"; dogs adopted from pet shops are all anxious (Cannas *et al.*, 2018).

Similarly, recent research at the University of Sydney further substantiates Coppinger's theory, which states that the size and shape of a dog's skull are important factors in shaping behavior. Certain physical characteristics in dogs are consistently associated with certain types of behavior. There is a strong relationship between height, weight, video proportions (relative width and length) and behavior. Basically, the shorter the dog, the more erratic the behavior.

From the results of clinical observations and some results from previous researchers it can be interpreted that the belief of the

Balinese people as a wealth of local wisdom can be accepted and used to predict the character or behavior of dogs.

It can also be understood that behavioral data based on clinical observations and behavior based on body size show that dog behavior is used the most compared to force, jaya, tek, and kyul. This illustrates that according to the posture and comparison of limbs and the character of the Kintamani dog, it is genetically passed on to the next generation to characterize the character of the character. This description shows that most Kintamani dogs have non-aggressive characters.

CONCLUSION AND SUGGESTION

Conclusion

The results show that there is a relationship between behavior and body size (ratio of body length to snout length). It was concluded that body size (body length to snout length ratio) can be implemented to predict behavior. From the results of clinical observations and some results from previous researchers it can be interpreted that the belief of the Balinese people as a wealth of local wisdom can be accepted and used to predict the character or behavior of dogs.

Suggestion

Prediction of behavior based on the ratio of body length to muzzle length as a wealth of local wisdom can be maintained. Repeat research can be done by measuring the ratio of body length to muzzle length in young dogs (4-6 months old). Observation of behavior was carried out at an adult age (over 1.5 years of age).

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Tabel 1. Assciation of Behavior (Body Measurement) with Behavior (Clinical Sign)

Behavior	Body size (dogs)	Clinic (dogs)	Non-Asosiasi (dogs)	%
<i>Guna</i>	23	18	5	78,3
<i>Jaya</i>	18	13	5	72,2
<i>Paksa</i>	9	11	2	81,8
<i>Tek</i>	9	14	5	64,3
<i>Kyul</i>	7	10	3	70
Average				73,3