

# Stray Dogs Problem and Right Approach to Prevent Attack

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**Abstract:** In this study, it is aimed to examine the knowledge level of reading stray dogs' behavior and the correct approach. Understanding the aggression of dogs and understanding their behavior is very important for stray dogs and dog owners in social life. Questionnaires prepared online were shared with 279 people of different ages and genders working in different fields in 50 provinces located in different regions, and the feedback obtained by answering voluntarily was taken into consideration. As a result of the study, when a dangerous-looking dog is encountered, it is necessary to stay as calm as possible and start to walk away slowly, without losing sight of the dog, with short steps, and without running under any circumstances. But without turning your back, because turning your back on the dog is a sign of weakness and an invitation to attack. While 36% left unanswered the question of what should be done at the time of the dog attack, 20.1% replied by saying that they would stand calmly and shout and scare, and 20.9% would shout and stop. The results of the survey show that there are inaccuracies and deficiencies in both the body language of the dogs and the way they approach the dog. The participants answered the frequency of encountering stray animals by saying 75.9% daily. A safe approach to dogs or knowing the suitable approaches to calm a dangerous dog is very important in eliminating the dangers. These results show that there is a need for correct, informative activities on dog behavior and the right approach.

**Key words:** Stray dogs, problem, approach, knowledge.

## 1. Introduction

The man appeared on earth about a million years ago. It is reported that around 10,000 plant and animal species were domesticated to meet their specific needs and adopted a sedentary lifestyle [1]. For animals, domestication first started with dogs to warn the enemy or assist in hunting, and then sheep, goats, reindeer, cattle, donkeys, and giant house horses are thought to have been domesticated [2]. Dogs have always been seen as a friend in the transition from hunter-gatherer to settled life next to humans. The fact that the first dog breed was named 200 years ago during the domestication process of dogs and the establishment of breed standards suggests that man was the biggest factor in the evolution of the dog. Today, dogs still serve people in many areas, such as walking aid, shopping, drug detection, and guiding in earthquakes.

However, dogs that are left unattended and born into city life carry a big problem.

The probability of the occurrence of hazards in terms of occupational health and safety is expressed as a risk. Risk assessment includes examining the environment and informing and educating the people living there about the risks. While performing risk analysis in any field, risk control steps are used to control and eliminate hazards and risks. There are six steps in risk control: elimination, replacement, separation, engineering methods, administrative controls, and personal protective equipment. The best way to control risk is to eliminate it. However, in some cases, the risks cannot be completely eliminated, in which case other steps are taken. A hazard is defined as a source, situation, or process that may cause injury to people, deterioration of health, damage to the environment, or a combination

of these. Risk is the combination of the probability of a hazardous event or exposure occurring and the severity of the injury or ill health that the event or exposure may cause. Risk has two basic features, which are the probability of an undesirable event occurring and the effect of the occurrence of the risk on the result. With the increase in the number of stray dogs, the elements of danger and risk have increased. The magnitude of the risk arising from the danger of stray dogs can be understood from the cases experienced. For this reason, knowing the protection methods for stray dogs personally, in addition to what to do at the city level, is an important step in risk assessment.

The concept of stray animals is defined in the Implementing Regulation on the Protection of Animals. According to this, stray animal means “pets that have no shelter or are outside the boundaries of the owner’s or guardian’s home and land and are not under the control or direct control of any owner or guardian”. These animals can be animals such as cats, dogs, birds, or turtles in general. While the regulations regarding stray animals are strictly enforced in Europe and the USA, those who do not comply with the rules receive heavy fines, and certain conditions are required to be met in order to adopt an animal. In addition, it is obligatory to pay taxes for those who keep pets and to receive training for certain species. In some countries, only animals on the list determined by the government can be adopted, while those outside the list cannot be adopted due to illness, safety, or health reasons.

In some countries, according to regulations made in recent years, people with 20 aggressive dog breeds such as Rottweilers or Pitbulls are required to undergo some training on the care of animals. In some places, dog species that are considered “dangerous” are required to be on a leash in public places. Those who do not comply with this rule are subject to fines. In addition, animal rights are guaranteed by the Animal Protection Law, and it has been determined how animals will be treated, how they will be housed, and what to do in case of emergency. There is no stray dog problem in the

USA, EU member countries, England, Japan, Switzerland, and Australia. The legal regulations regarding the welfare conditions of dogs in these countries prevent this problem. In Turkey, the Animal Protection Law No. 5199 was adopted in 2004 in order to ensure the comfortable lives of animals, to treat animals well and appropriately, to ensure that animals are best protected against pain, suffering, and torture, and to prevent all kinds of victimization. Following this law, the Implementing Regulation on the Protection of Animals was issued in 2006. However, existing regulations do not provide for the welfare of stray dogs and are insufficient to solve the problems experienced by humans and other living things. In Turkey, the stray dog problem continues to exist as a serious safety and health problem, and its impact is increasing gradually.

Stray animals, on the other hand, move with their herds. In fact, domestic dogs begin to become aggressive in their survival instincts by living on the street, accessing food and drinking sources, and competing [3]. Aggressive animals, on the other hand, pose a threat to humans, other dogs, and other creatures. Stray dogs cause thousands of deaths [4, 5] and injuries to millions of people [5] due to the attacks they carry out, rabies and other zoonotic diseases they carry, and the accidents that occur due to their sudden movements. In addition, since it is a dominant species, it does not allow other mammals such as cats, squirrels, rabbits, and many other species such as birds nesting on the ground to survive and may cause the complete extinction of these species [4]. Kılıç and Sarierler [6] evaluated 114 bite cases in dogs treated between 1999 and 2003 according to age, bite type, bite time, and bitten body area of dogs and cats bitten by dogs. As a result of the study, it was found that male dogs were bitten more frequently than female dogs; 61% of the bitten dogs were small in size, around 2 years old; and most bite injuries occurred in May (16%), April (11%), and October (10%).

Morzycki et al. [7] examined a total of 475 dog bite waxes and found that the majority of bites (140.30%)

occurred in the summer months. Pitbulls bite wax (27%), was encountered most frequently, the majority of the patients were female (295, 62%), and occurred on the hands (264 cases, 56%). It is stated that bites on the head and neck constitute 11% of all injuries; 50% of wounds were treated with dressing alone, while others required varying levels of intervention. Dog bite wounds range from minor to extremely complex [8]. Therefore, stray dogs pose a serious threat to city life. The domestication of the animal made the animal dependent on humans, and the animal was taken to settlements by humans. This situation brought some negative aspects to the agenda. The number of stray dogs continues to increase, and in parallel with this, dog attacks also continue to increase. On the other hand, when the number of stray dog number increases or when there are complaints, it is not enough to collect them and take them to shelters.

In Turkey, stray animals are frequently seen on the streets despite all this. While the number of registered stray dogs in Turkey is around 1 million, it is estimated that there are around 10 million stray dogs. Street dogs can give birth to between 2 and 12 puppies in one litter, depending on their breed. Considering the environment, shelter, and healthy nutritional conditions, at least four of the puppies born to stray female dogs manage to survive. In order for the number of stray dogs to start decreasing, at least more than 70% of them must be neutered in the first place. In the catch-neuter-raft method used in places where there are few stray animals in the world, the dog is caught, spayed, and then left at the place where it was collected. However, this method is insufficient in places where the number of dogs is high, and more effective methods are used. There are more than 1,300 municipalities and only about 250 animal shelters in Turkey. Accordingly, the news of dog attacks has increased rapidly in the last few years. According to the survey titled "Overview of Street Animals", conducted by the Ministry of Interior with 1,105 participants in March 2022, 34.3% of the people in Turkey find stray animals dangerous.

According to the survey, the rate of those who were attacked by stray animals by themselves or a relative was determined to be 40.5%. However, street animals are also alive, and more humane and effective methods should be used under the umbrella of animal welfare and moral values.

This study was carried out as a survey study to determine the public level of knowledge of dealing with stray dogs with the right approach.

## 2. Material Method

In this study, the questionnaire method was used to determine the level of knowledge about how to approach stray dogs. The primary data for the research consisted of observations and answers given to the prepared survey questions. In the process of conducting the surveys within the scope of this study, the COVID-19 pandemic has emerged. The online survey method, which provides advantages in terms of prolongation of the pandemic process, cost, speed, and convenience, was used. Questionnaires prepared online were shared with 279 people of different ages and genders working in different fields in 50 provinces located in seven different regions of Turkey, and the questions answered voluntarily were evaluated.

In the survey, there are 5 questions about the age, gender, and education level of the participants; 5 questions about the experience of a stray animal attack; 4 questions about animal feeding and animal love; 4 questions about the reasons for the attack of dogs; 4 questions about dog aggression; and 3 questions about the signs of a dog attack. There were 3 questions about dog warning body signs, and 3 questions about before attack behavior, 4 questions about during attack behavior, 4 questions about encountering a dangerous dog. The prepared questions were first applied face-to-face to a volunteer group; the duration and clarity of the survey were tested; and after the necessary corrections were made, it was implemented in a wide area.

In this context, the data obtained through face-to-face surveys and on-site observation formed the data of

the study. In the evaluation of the data obtained in the research, analyses were made using the Excel program and IBM SPSS STATISTIC 20.

### 3. Findings and Discussion

The distribution of the participant’s age, gender, education, and place of residence is summarized in Table 1. It is understood from Table 1 that 54.6% of the participants are female, 37.6% are in the 35-40 age range, 55.9% are university educated, and 41.9% live in the city center. The participants answered the question about the frequency of encountering stray animals by saying 75.9% every day.

In the survey conducted by the Ministry of Interior, 67.3% of the participants stated that they encountered stray animals almost every day, while 39.5% stated that they encountered cats and 33.1% dogs [9]. Pursuant to Animal Protection Law No. 5199 and the Regulation on the Identification and Registration of Cats, Dogs, and Ferrets, it is required for pet owners to be registered in the Pet Registry System (PETVET) [9]. In this context, as of December 31, 2022, in Turkey, a total of 1,429,370 pets, 855,105 cats, 574,240 dogs, and 25 weasels, had been registered with the Jeep method. Looking at Table 2, which shows the distribution of information on the participants’ stray animal attack

experience, 39.4% stated that they were not attacked, 22.9% said they were attacked, and 37.6% left this question unanswered. Were you injured in the attack? 37.6% of the respondents left the question unanswered, 48.4% answered yes, and 14.0% answered no. In addition, it is understood that 16.8% of those who were attacked received treatment after the attack. Have you seen a stray animal attack someone? 37.6% left the question unanswered, 38.4% saw it as yes, and 24.0% answered no.

According to According to Centers for Disease Control and Prevention (CDC) data, children aged 0-4 are the age group that experiences the most dog bites. Again, according to the same data, dogs bite the head and neck regions of children of the same age group, and can be life-threatening; 6.7 out of 10 people die each year due to infection as a result of dog bites. In the survey conducted by the Ministry of Interior, “Have you or a relative of yours been attacked by a stray animal?” The rate of those who answered the question “I stopped by” was 13.6 percent, the rate of those who said “Yes, a relative of mine came by” was 26.9 percent, and the rate of those who said “No” was 61.8 percent.

Do the participants keep pets at home? 37.3% of them went unanswered, 19.0% answered yes, and 43.7% answered no (Table 3). Do you feed street animals?

**Table 1** Distribution of participants’ age, gender, and educational status.

| Age   | Percent | Gender | Percent | Education level | Percent | Living area | Percent | Frequency of encountering stray animals | Percent |
|-------|---------|--------|---------|-----------------|---------|-------------|---------|---|---------|
| 18-24 | 22.6    | Female | 54.6    | Unanswered      | 37.3    | Unanswered  | 37.3    | Often                                   | 15.3    |
| 25-30 | 6.5     | Male   | 45.4    | Lycee           | 5.7     | District    | 19.4    | Sometimes                               | 5.7     |
| 35-40 | 37.6    |        |         | Middle school   | 1.1     | Village     | 1.1     | Rarely                                  | 3.1     |
| 40-50 | 12.5    |        |         | University      | 55.9    | City        | 41.9    | Daily                                   | 75.9    |
| 50+   | 20.8    |        |         |                 |         | Other       | 0.4     |   |         |

**Table 2** Distribution of information about the stray animal attack experience of the participants.

| Seeing a stray animal attack | Percent | Street Animal      | Percent | Post attack          | Percent | Did you get injured | Percent | Injured body part get | Percent |
|------------------------------|---------|--------------------|---------|----------------------|---------|---------------------|---------|-----------------------|---------|
| Unanswered                   | 37.6    | Unanswered         | 37.6    | I received treatment | 16.8    | Unanswered          | 37.6    | Head                  | 29.8    |
| Yes                          | 38.4    | I’ve been attacked | 22.9    | there was no need    | 12      | Yes                 | 48.4    | Neck                  | 33.9    |
| No                           | 24.0    | I was not attacked | 39.4    | I ran away           | 32.1    | No                  | 14.0    | Arm                   | 27.1    |
|                              |         |                    |         | I didn't stop        | 39.1    |                     |         | Leg                   | 9.2     |

**Table 3 Distribution of information about the participants’ pets keeping at home, feeding animals on the street, having pets in their immediate surroundings, and liking animals.**

| Pet feeding | Percent | Feeding the street animal | Percent        | Do relatives have pets? | Percent | Do you like animals? | Percent |
|-------------|---------|---------------------------|----------------|-------------------------|---------|----------------------|---------|
| Unanswered  | 37.3    | Unanswered                | 37.99          | Unanswered              | 37.3    | Yes                  | 60.2    |
| Yes         | 19.0    | Yes                       | 7.53           | Yes                     | 29.1    | No                   | 2.2     |
| No          | 43.7    | No                        | 6.81           | No                      | 33.6    | Depends              | 37.6    |
|             |         | Never                     | 3.58           |                         |         |                      |         |
|             |         | Sometimes frequently      | 20.07<br>24.01 |                         |         |                      |         |

37.99% of them went unanswered, 7.53% answered yes to the question, and 6.81% answered no, 3.58% of them went never, 20.07% answered sometimes and 24,01% answered frequently. Do any of your relatives have pets? 37.3% of them went unanswered, 29.1% answered yes, and 33.6% answered no. Do you like animals? While 60.2% yes, 33.6% no answer to the question, 37.6% replied that it changes according to the appearance of the animal.

In the survey conducted by the Ministry of Interior, the rate of those who said “I love animals” was 82.3%, while the rate of those who gave the opposite answer was 9.2%, and the rate of those who said “I am undecided” was reported as 8.5% [9]. Adapting to city life is very important for pets and stray animals, just like humans. Attacks caused by stray animals mostly occur when basic needs (food), and habitats are violated. Domestic animals, on the other hand, can harm their own species and other domestic animals as a competitive or defensive behavior. Aggressive behavior in dogs, which is the most common pet

species, requires precautions [10].

In this sense, the distribution of the answers given to the questions to determine the level of awareness of the participants of the survey about the reasons for the attack of the dogs is summarized in Table 4. When the table showing the distribution of answers given to the knowledge levels of the participants about the causes of attacks on dogs is examined, it is understood that 58% gave correct answers, 3% incorrect answers, and 38.0% left the question unanswered.

When Table 5 shows the distribution of answers regarding the knowledge of the participants on dog aggression examined, the majority (49%-60%) marked it as correct. However, 37%-38% of the participants left unanswered questions about the reasons for attacking stray dogs.

In fact, animals can become aggressive for different reasons. The dog tells what affects what in which situation with body language. The condition of the aggressive dog should be evaluated by taking into account the body language and the conditions of the

**Table 4 Distribution of answers to the level of knowledge of the participants about the reasons for the attacks on dogs.**

| Dog area protection | Percent | Dogs instinct to protect against puppies | Percent | Defending objects and food in dogs | Percent | Response to sensory pain in dogs | Percent |
|---------------------|---------|--|---------|------------------------------------|---------|----------------------------------|---------|
| Unanswered          | 38.0    | Unanswered                               | 37.6    | Unanswered                         | 37.6    | Unanswered                       | 38.0    |
| Correct             | 58.8    | Correct                                  | 60.2    | Correct                            | 58.8    | Correct                          | 49.8    |
| False               | 3.2     | False                                    | 2.2     | False                              | 3.6     | False                            | 12.2    |

**Table 5 Distribution of responses on participants’ knowledge of dog aggression.**

| Aggression is just a symptom | Percent | Aggressiveness of a docile dog is a sign of illness. | Percent | The mistreated animal is aggressive. | Percent |
|------------------------------|---------|--|---------|--------------------------------------|---------|
| Unanswered                   | 38.0    | Unanswered   | 38.7    | Unanswered                           | 37.6    |
| Correct                      | 58.4    | Correct  | 48.7    | Correct                              | 48.7    |
| False                        | 3.6     | False  | 12.6    | False                                | 13.7    |

animal. However, the fact that 37%-38% of the participants in Table 5 left the water unanswered about their knowledge of dog aggression can be considered as an expression of lack of knowledge or uncertainty.

Borchelt [11] states that more aggression occurs in male dogs than female dogs, in general, approximately 2/3 of the aggression cases are detected in males. This shows that it is not compatible with the balanced distribution of non-aggressive behaviors. A higher incidence of aggression in males is common in many species, including dogs [12] due to genes, gonadal and non-gonadal hormones, neural organization, body size, and weight [13, 14]. In general, the most sexually dimorphic types of aggression occur in the context of reproductive behavior. Thus, in many species, male aggression is associated with seasonal changes in androgens and correlates with adult androgen levels [15].

3.1 Dog Body Language

It is important to know what sounds like barking, howling, groaning, and growling means in dogs [16]. Looking at Table 6, which shows the distribution of the answers given by the participants to the questions about dog body language, it is understood that in general, 37%-38% of the participants left unanswered and their correct answers were wrong.

What does it mean for a dog to wag its tail? While 37.6% of the participants left unanswered, 38.7% gave the wrong answer by saying happy. Wagging the tail only means that the dog is emotionally aroused.

Understanding the dog’s emotions is as important to the speed and direction of the wagging as the position of the tail [17]. The position of the dog’s tail relative to the ground gives important clues about their emotional state, the higher the tail, the more assertive the dog. Dogs with their tails pointing down or even tucked between their legs are in fear and stress. Dogs that raise their tails like a flag can be confident, perhaps even aggressive. What about body movements in dogs, such as licking their lips, growling, fluffing their fur, and yawning? The movement of a dog’s fur is also an important sign, and any hair on the back of their head, neck, or body indicates that they should stay away. If dogs lick their lips, growl, fluff their fur, and yawn, punishing them is the wrong answer, as it will increase aggression. If the dog has movements such as yawning, blinking, nose licking, and turning his head, he expresses that he is uncomfortable. While 41.9% of the surveyed participants answered that they were comfortable, the rate of those who left unanswered was determined as 38.7%.

Since dogs are herd animals, they tend to react immediately in case of danger. As with other animals, dogs may choose to fight, run, freeze, and exhibit different behaviors in case of stress. Looking at Table 7, which shows the distribution of answers to the questions about the body signs of dogs at the moment of attack, 38% of the participants left the questions unanswered in general, and it is understood that their correct answers were wrong.

**Table 6 Distribution of the answers given by the participants to the questions about dog body language.**

| What does dog tail wagging mean? | Percent | What does lip licking, growling, fluffing and yawning mean in a dog? | Percent | What does blinking, nose licking, eyebrow raising, head tilting mean in a dog? | Percent | Not making eye contact, head turned away, ears tilted back, what does it mean to show the neck and abdomen area by lying on the back, nose and forehead area straight, mouth edges backwards, tail between legs | Percent |
|----------------------------------|---------|--|---------|--|---------|---|---------|
| Unanswered                       | 37.6    | Unanswered   | 39.4    | Unanswered   | 38.7    | Unanswered  | 38.4    |
| Happy                            | 38.7    | Comfortable  | 54.1    | Comfortable  | 41.9    | Comfortable   | 1.4     |
| Excited                          | 9.3     | Stressful  | 6.5     | Uncomfortable  | 15.1    | Uncomfortable   | 34.4    |
| Disappointment                   | 9.1     |  |         | Attack   | 1.8     | submission  | 14.0    |
| Attack                           | 5.3     |  |         | Defense  | 2.5     | Defense   | 11.8    |

**Table 7** Distribution of the answers to the questions about the body signs of the dogs at the moment of attack.

| Ears tilted forward, forehead and nose area and wrinkled, lips, mouth open, curled teeth and gums may be visible, tense legs, body tilted forward, tail fluffed in the air, back feathers fluffy | Percent | Ears are sloping forward, weight is mostly on the front paws, tail is straight, no wrinkles on the nose and forehead, what does it mean if the mouth is closed, the body is slightly tilted forward? | Percent | Fluffy back feathers, ears tilted back, enlarged pupils, nose wrinkled, lips curled—perhaps teeth visible, tail between legs—almost no movement, what if body is lowered stance? | Percent |
|--|---------|--|---------|--|---------|
| Unanswered   | 38.0    | Unanswered   | 38.41   | Unanswered   | 38.4    |
| Attack   | 2.5     | Comfortable  | 5.70    | Comfortable  | 1.4     |
| Love   | 44.4    | Carefully  | 9.60    | Carefully  | 14.0    |
| Attack   | 13.3    | will attack  | 24.48   | will attack  | 34.4    |
| Warning  | 1.8     | Frightened   | 21.81   | Frightened   | 11.8    |

Do you know dangerous dog breeds? 38% of the participants left the questions unanswered and 85.2% called the Pitbull dog breed dangerous. Although fighting is seen as a threat and obedience in the animal kingdom, it is of great importance in establishing the herd hierarchy. At this point, body language, as an expression of social status, is critical in relations within and between herds. A dog has body language signs that express emotions such as relaxed, excited, attack, threat, and afraid. Animals send messages to each other using these body language signs. Other animals, on the other hand, choose the fight or obedience sign by displaying an attitude according to the body sign given by the other side. Individuals in the herd show their status in the herd by using their body language and minimizing conflicts.



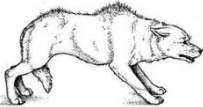
Can you tell the difference between a dog's desire for attention and a bark when it detects danger? 38.4% of the participants left the question unanswered, and 8.10% answered yes, while 53.50% answered no. Dogs, like other animals, can express their emotional states, social relations, and wishes and desires (Table 7). The frightened dog puts its ears back completely, tucked its tail tightly between its legs, and begins to tremble, its mouth is tightly closed. In the meantime, she may miss her toilet, release scent from her anal glands and lower her hips, moaning pathetically. When Table 8, which shows the distribution of answers to the question of what the dogs mean by posture, is examined, they answered the relaxed posture at 49.1% and the attack

posture at 34.4% correct. However, it is understood that 38% of the participants left the questions unanswered and confused the attack stance with the dog stance that threatens to attack.

Dog behavior to attack is different. Understanding that dogs are signaling to attack provides the necessary time and opportunity for protection. To the questions asked about the pre-attack body language signs of dogs, Table 9, which shows the distribution of the answers given, is examined. Do the dogs give a warning signal before they bite? They answered the question as 42.7% yes, 18.3% no. Is the unsocialized dog more aggressive? 56.3% answered as correct. And 55.9% of the respondents answered that dog warning signs and anxiety/fear signs are similar. However, it is understood that 38%-39% of the participants left the questions unanswered.

Knowing the dog's body language and the meaning of the sounds it makes will help to take precautions in terms of danger to be protected. However, in some cases, excessive drooling in the mouth, a strange staggering and gait, short breaths, any bleeding and other signs of injury should be kept in mind as body language signs to be avoided. In signs of dog attack, the signals that dogs give before attacking are growling, showing teeth, ear and tail signals, left foot standing in front of right foot. Children are the most common victims of dog attacks; and are more likely to be seriously injured. Most of these attacks occur during normal daily activities and interaction with familiar dogs [10].

**Table 8** Distribution of the question of what the dogs want to express with their body shapes.

| What does the following posture mean?   | Answers       | Percent |
|---|---------------|---------|
|  | Unanswered    | 38.4    |
|   | Comfortable   | 1.4     |
|   | Uncomfortable | 14.0    |
|   | Attack        | 34.4    |
|   | Defense       | 11.8    |
|  | Unanswered    | 38.0    |
|   | Comfortable   | 49.1    |
|   | Attack        | 3.2     |
|   | Defense       | 9.7     |
|  | Unanswered    | 38.4    |
|   | Comfortable   | 1.4     |
|   | Uncomfortable | 14.0    |
|   | Attack        | 34.4    |
|   | Defense       | 11.8    |

**Table 9** The answers given to the questions asked about the body language signs of the dogs before the attack.

| Dogs give warning signals before they bite. | Percent | An unsocialized dog becomes aggressive. | Percent | Dog warning signs and anxiety/fear signs are similar. | Percent |
|---|---------|---|---------|---|---------|
| Unanswered                                  | 39.1    | Unanswered                              | 38.0    | Unanswered  | 39.1    |
| Correct                                     | 42.7    | Correct                                 | 56.3    | Correct   | 55.9    |
| False                                       | 18.3    | False                                   | 5.7     | False   | 5.0     |

*3.2 In Case of Attack*

While 37.3% of the participants left unanswered the questions of what to do when a dog attacks, 11.5% answered I don’t know, 1.8% I would run away, and 6.5% I would change my direction. When encountering a dangerous-looking dog, it is necessary to stay as calm as possible and start slowly, without losing sight of the dog, with short steps, and without running under any circumstances. But don’t turn your back because turning your back on the dog is a sign of weakness and an invitation to attack. Regarding what to do in case of a dog attack, while 36.3% left unanswered, 20.1% responded by saying, “I stand calmly and shout and scare”, and 20.9% say “stop by shouting”. The rate of those who said they would ignore it was determined as 7.5%. Regarding the only thing dogs are afraid of, only 1.8% of the participants answered correctly by saying being out of breath.

In the event of a dog attack, it is absolutely necessary not to run or run; the fleeing person becomes the direct prey. People usually flee from dog attacks in herds, and in this case, the animals turn to the predator position and bite. When dogs attack in a pack, leaning slightly to the ground and pretending to pick up a stone, walking with both arms open, and shouting increase the risk that dogs will panic. Turning to look at him, waving his hand or arm towards the dog as if threatening, shouting loudly, and looking directly into the eyes are approaches that create a perception of threat to the dog. If such wrong approaches are avoided when faced with a dangerous dog posture, the dog will not be threatened and forced to attack it.

To the question of how to speak softly to the dog during the attack, 52.47% said yes, to the question of suddenly shouting and stepping towards him; 50.25% I don’t know, to the question of ignoring.



**Table 10 Responses of the participants to the questions of what to do when a dog attacks.**

| Distract the dog                                     | Percent | In dog attack           | Percent | The only thing dogs are afraid of | Percent | What to do in a dog attack | Percent |
|--|---------|-------------------------|---------|-----------------------------------|---------|----------------------------|---------|
| Unanswered   | 37.3    | Unanswered              | 36.3    | Unanswered                        | 39.4    | Unanswered                 | 37.6    |
| I don't know   | 11.5    | Escape                  | 12.5    | Push                              | 3.6     | Put a barrier between      | 41.6    |
| Escaping   | 1.8     | Go over                 | 2.8     | Escaping                          | 33.7    | Suffocate.                 | 7.5     |
| Clapping your arms to the side as big as you can     | 21.1    | Keep calm, shout, scare | 20.1    | Being out of breath               | 1.8     | Push                       | 5.7     |
| Stand calmly towards him and loudly command the stop | 21.9    | Say stop                | 20.9    | Hit                               | 21.5    | Escape                     | 4.7     |
| Change your direction on the road                    | 6.5     | Ignore                  | 7.5     |                                   |         | Hit                        | 2.9     |

**Table 11 Distribution of the answers given to the suggested behavior questions in case of encountering a dangerous dog.**

| Talking softly to dogs | Percent | When coming towards you, he should suddenly shout and step towards you. | Percent | I will ignore | Percent | I make eye contact | Percent |
|------------------------|---------|---|---------|---------------|---------|--------------------|---------|
| Unanswered             | 38.6    | Unanswered  | 37.6    | Unanswered    | 37.8    | Unanswered         | 38.7    |
| Yes                    | 52.47   | I don't know  | 50.25   | I don't know  | 41.77   | I don't know       | 47.55   |
| No                     | 8.93    | Yes   | 3.12    | Yes           | 8.26    | Yes                | 6.41    |
|                        |         | No  | 9.03    | No            | 12.17   | No                 | 7.34    |

On the other hand, 41.77% responded by saying they don't know. On the other hand, 6.41% answered yes to the question of making eye contact incorrectly; 37%-38% of the participants left the suggested behavior questions unanswered in case of encountering a dangerous dog.

#### 4. Conclusion

The results of the survey show that there are inaccuracies and deficiencies in both the body language of the dogs and the way they approach the dog. The participants answered the frequency of encountering stray animals by saying 75.9% every day. No living thing is aggressive; they also have an important place in this ecological system. The right approach to living things, understanding their body language is important in terms of protecting both ourselves and them. When faced with a dangerous dog:

- Standing still
- Not running
- Keeping your hands at your sides
- Being quiet, not making noise
- Avoiding eye contact with the dog

- Looking down while observing the dog

The right approach is to retreat in slow, short, calm steps when the dog loses interest.

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#### Conflicts of Interest

The authors declared that there is no conflict of interest.

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