

## Perspectives of Snake Owners in Indonesia on Understanding Information about Snakes and Snakebites

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### Abstract

*This study uses a mixed-methods approach to examine the perspectives of snake owners in Indonesia regarding snakes, venomous species, and snakebite management. A survey was distributed to 1,109 respondents, with 109 participants forming the core group for analysis. The research aims to assess snake owners' knowledge about venomous snakes, handling snakebites, and myths surrounding these reptiles. Findings indicate that while the public generally fears snakes, many reptile enthusiasts in Indonesia keep snakes as pets for reasons such as hobby, conservation, and education. However, a significant gap in knowledge exists regarding the identification of venomous versus non-venomous snakes, with some respondents unable to distinguish between them accurately. Additionally, while most respondents recognized the importance of immobilization following a snake bite, some still believed in outdated and dangerous practices, such as suctioning or cutting the wound. The study also uncovered that while most participants view snakes as ordinary creatures, a small portion still holds superstitions, such as believing snakes are evil spirits. This perpetuates fear and misunderstanding of snakes. In conclusion, the research highlights the need for better education on snake identification, proper bite management, and debunking myths to improve the safety of snake keeping in Indonesia. Increased public awareness and accurate information can help mitigate the risks of keeping snakes as pets and foster a more informed and responsible approach to reptile care.*

*Keywords: Snake; Snakebite; Environmental Communication.*

### Abstrak

Penelitian ini menggunakan pendekatan mixed methods untuk mengkaji perspektif pemelihara ular di Indonesia mengenai ular, spesies berbisa, dan penanganan gigitan ular. Sebuah survei didistribusikan kepada 1.109 responden, dengan 109 partisipan yang pernah atau masih memelihara ular. Penelitian ini bertujuan untuk menilai pengetahuan para pemelihara ular tentang ular berbisa, penanganan gigitan ular, dan mitos-mitos seputar reptil ini. Hasil penelitian menunjukkan bahwa meskipun ular umumnya ditakuti oleh masyarakat, banyak penggemar reptil di Indonesia yang memelihara ular sebagai hewan peliharaan dengan berbagai alasan, seperti hobi, konservasi, dan pendidikan. Namun, ada kesenjangan yang signifikan dalam pengetahuan mengenai identifikasi ular berbisa dan tidak berbisa, dengan beberapa responden tidak dapat membedakannya secara akurat. Selain itu, meskipun sebagian besar responden menyadari pentingnya imobilisasi setelah gigitan ular, beberapa masih percaya pada praktik-praktik yang sudah ketinggalan jaman dan berbahaya, seperti mengisap bekas gigitan ular mengeluarkan bisa. Penelitian ini juga menemukan bahwa meskipun sebagian besar partisipan memandang ular sebagai makhluk biasa, sebagian kecil masih memegang teguh mitos, seperti mempercayai bahwa ular adalah jin. Hal ini melanggengkan rasa takut dan kesalahpahaman terhadap ular. Penelitian ini menyoroti perlunya edukasi yang lebih baik mengenai identifikasi ular, penanganan gigitan ular yang tepat, dan menghilangkan mitos-mitos yang ada untuk meningkatkan keamanan pemeliharaan ular di Indonesia. Peningkatan kesadaran masyarakat dan informasi yang akurat dapat membantu mengurangi risiko yang terkait dengan memelihara ular sebagai hewan peliharaan dan mendorong pendekatan yang lebih terinformasi dan bertanggung jawab terhadap perawatan reptil.

Kata Kunci: Ular; Gigitan Ular; Komunikasi Lingkungan.

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## INTRODUCTION

As reported by National Geographic, snakes are important to ecosystems because they are both prey and predator. In the rice field food chain, snakes prey on rats and keep rat populations in check. In addition, snakes are also preyed upon by mammalian predators, eagles, and owls and killed by reptiles and even their species. However, as snake species proliferate and grow wild, humans will more frequently encounter them, and people's fears and dislikes of snakes will become more prevalent, causing them to be relocated or even persecuted (Bateman, 2021; Burghardt, 2009). The fear in the community could be because they know how deadly snake bites can be.

In addition, many believe that snakes have various benefits and are used in medicine. It is also believed that it can be an alternative treatment if eaten by humans. Even more than that, snakeskin is often used as a material for making bags. However, snakes are also a common health problem in tropical and subtropical countries due to their bites. Snakebite is still a global public health problem since the World Health Organization included it in its list of notifiable tropical diseases in 2009. Most of Indonesia's population who work in the agricultural sector are considered snake-bitten.

Due to inaccurate reporting systems, no national epidemiologic report is available in Indonesia. Information on snakebite cases only comes from hospital reports. From 2004 to 2009, only 42 snakebite cases were treated. Unless women dominate the workforce, women are less likely to be bitten by snakes than men. Children and young adults are the age groups most commonly bitten by snakes (Suryati, 2018).

Even so, there is still no official statement regarding the number of snakebite cases in Indonesia. However, it is known that around 100,000 cases have occurred, both those who were only bitten and those who were fatal, judging from the characteristics of snakes as animals that have habitats and places to live in plantations and rice fields. We all know that Indonesia has many rice fields and plantations. In addition, Indonesia has around 450 species of snakes, of which 10 have high venom.

As a result, many people still feel that snakes do not have a proper existence and are only a threat because Indonesia is still a tropical country, so snakes can become extinct at any time due to being killed, especially for people who still believe that snakes have been the subject of myths, legends, and human fears since time immemorial. Considered a mysterious and deadly creature, snakes often make people have mixed feelings, especially in their minds.

For some, snakes symbolize wisdom or strength, while for others, as mentioned earlier, they manifest fear and threat. Amidst these diverse perceptions of snakes, snakebite becomes a more complex issue with profound health and psychological implications.

It is important to understand that people's perspectives on snakes are not always based on scientific knowledge but are more influenced by cultural, religious, and environmental factors and personal experiences when encountering these reptiles. Some people glorify them as gods or totems, while others only see them in terms of danger. As a result of the myths and folklore about snakes, they become entrenched in the culture and shape people's perceptions and responses to them. The fact that snakes can bite humans and cause injury and even death reinforces the complexity of how people view them. Reactions to snake bites range from fear to reliance on traditional or alternative medicine. The origin of the snake may also influence the perception and handling of snakes.

Even the mystical product that was made by the people is the snake charmer. In Indonesia, snake charmer is known to be a mystical figure who can conquer and become immune to snake bites. They are also believe that snake charmer equals to shaman, because think only people that has supernatural power who can control snakes. Not only the snake charmer that is known as a figure with a mystical aura but snakes are also believed to be mystical animals. Snake has at various times represented immortality and death (Morgan,

2008). Even all snake species are generally perceived as dangerous in local communities in Java. In addition, the negative perception towards snakes has often been reinforced by the use of extreme negative terms (e.g., 'terror', 'killer', and even 'demon') for headline news (Cahyadi, 2020). This makes snake charmers use black snakes as the show's main star. The snakes used in performing are very diverse, but the most commonly used are blue krait and cobras.

For this reason, of course, many people feel worried and wary of the presence of snakes. Many of them, of course, find out how to deal with snakes and their bites through the internet, and there are even those who still believe in the words of their ancestors. This is especially true for people who believe snakes have been the subject of myths, legends, and human fears since immemorial. Currently, disinformation related to snake bites is very prevalent on the internet, especially on Facebook. Many Facebook users post about snake bite treatments, such as using plants to prevent snake venom from spreading throughout the victim's body. Not only ordinary people but even President Joko Widodo, while camping in the National Capital Region (IKN) in 2022, was also affected by snake-related misinformation. President Jokowi was apparently in a camp surrounded by salt to prevent snakes (detikNews, 2022).

On the other hand, many scientific studies discuss the truth about salt and snakes—one of the scientific studies by Guruh Jaya W. and Dr. Drh. Soedarmanto Indarjulianto, in 2014, has proven that snakes are not afraid of salt. This study on the effect of salt on pythons reticulatus was conducted to evaluate the myth that salt can repel snakes. This study used 5 (five) python reticulatus snakes. This study used two methods: 1) the snakes were inside the salt circle and given bait placed outside the salt circle, and 2) the snakes were sprinkled with salt. As a pre-treatment control, the snakes were placed on the floor without salt, and their reactions and behaviors were observed. The results of this study 1) snakes without salt usually moved, 2) snakes placed inside the salt circle did not move after being baited outside the circle, the snakes moved towards the bait regardless of the salt, 3) snakes sprinkled with salt did not react to avoid or evade the salt. It was concluded that salt does not affect the behavior of pythons reticulatus.

As time goes by, science and technology become so sophisticated; with the massive number of people who have explored the range of knowledge about snake handling and bites that they can, many of them contribute to helping conserve snakes. Conservation activities can help conserve snakes because conservation itself has a relationship with the area, which means the area has the primary function of protection or culture (Indonesia, 2009). Although the protected snake species, according to the *Peraturan Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia Nomor P.20/MENLHK/SETJEN/KUM.1/6/2018* (Indonesia, 2018) are only python bivittatus or python bodo, condo, timorensis, and boelani. However, other snakes can also be endangered and protected by the government if the people do not help in conservation.

Keeping snakes is currently one of the ways to conserve them, and this activity is still widely practiced by Indonesians, who call themselves reptile lovers. It can also be considered as a form of conservation. However, it is common for someone who keeps snakes to be bitten by their pet. Some may or may not survive the bite of the venomous and deadly snake. As a result, snakes are considered a frightening scourge to society. Scientifically, it is not wrong for humans to fear and protect themselves when encountering things that they find threatening or unpleasant (Santrock, 2003).

The perception of fear of snakes and their bites, there is a need for environmental communication to observe and know what causes the perception of fear of snakes and their bites to be as widespread as it is today. Even so, during the data collection period for this research, quite a few Indonesians still have a high interest in keeping snakes as pets at home. Therefore, this study

will focus on keeping these exotic animals among Indonesians to see how this interest differs from those who still fear snakes.

## RESEARCH METHODS

In this study, researchers used mixed methods to collect quantitative (numerical) and qualitative (descriptive) data. Mixed methods research will emphasize quantitative and qualitative approaches (Creswell, 2019). The researcher used a sequential explanatory model combining quantitative and qualitative research designs in two sequential phases, which aims to confirm and explain quantitative research results with qualitative data (Ivankova, 2006).

Respondents were selected through the snowball sampling technique, which starts with a small number and then gets bigger (Sugiyono, 2019). The research begins with quantitative data collection by distributing questionnaires in the form of Google Forms to people throughout Indonesia through WhatsApp groups that spread from one person to another. Later, each individual will fill in 10 questions.

This study's sample includes ordinary people who are snake owners in big cities that are currently rampant in reptile keeping and also areas that still have a tradition or culture of keeping snakes. Afterward, the data collected from the questionnaire was analyzed using Excel to obtain an overview of the respondent's level of knowledge about snakes and their bites.

After the quantitative data is collected and analyzed, the second phase of this research will delve deeper into the experiences and views of the individual who has met the desired criteria. Furthermore, each individual will be asked for their subjective perspective as snake owner and then fill in the questions in the reason column as a form of a more in-depth interview to explore further the perceptions, experiences, and understanding of the snake-keeping community in Indonesia.

The questionnaires were distributed to 1,109 people, of which only 54 were snake owners, and 55 were people who used to keep snakes but now do not. Therefore, since this study will focus on individuals as snake owners, the data only amounted to 109 people (10% of the respondents).

## RESULTS AND DISCUSSION

Snakes are among the top-level predators that act as environmental controls (Beaupre and Douglas, 2009). However, as snake species proliferate and grow wild, they are more likely to be encountered by humans, and people's fear and dislike of snakes may lead to their relocation or even persecution (Bateman, 2021; Burghardt, 2009). This fear may be because people know how deadly snake bites can be. However, the fear of snakes does not apply to snake or reptile lovers. They keep snakes as a form of pleasure or love for these slithering animals.

Keeping snakes helps in conservation. When, in fact, snakes exist in wildlife, they have a role in maintaining the balance of the ecosystem, controlling the population of agricultural pests such as insects, rats, and small mammals in gardens and rice fields that can disturb crops (Anggun, 2015). However, snakes are often found in residential areas. This is because anthropogenic habitat modification, such as urbanization and agricultural development, substantially alters the spatial attributes of landscapes. These transformative processes fragment, degrade, and/or remove natural ecosystems (Alberti, 2016). This can undoubtedly be a problem, especially if the snake bites people in settlements.

Many snake bite cases occur in Indonesia, which has vast plantation and agricultural land, especially in places where people still have a traditional nature in suburban areas. In Indonesia, many people in remote areas still trust healers or medicine from plants to cure people affected by snake bites (Dafa, 2021). Many people there still do not understand how to handle victims affected by snake bites

properly and do not know the danger of snakebites.

In this study, we are interested in examining the perspectives of people in Indonesia who keep snakes as pets at home and how well they understand the information so that they are not negligent in their maintenance. The dataset was obtained from a questionnaire administered to 109 snake owners across Indonesia who answered questions about their perspectives on snakes and their bites. Based on the data collected, the respondents were categorized according to their age, gender, and reasons for keeping snakes, as shown in the following table:

Table 1  
Sample and population characteristic

Gender	N	%
Women	19	83
Men	90	17
Age		
10 – 15	3	3
16 – 20	25	23
21 – 25	27	25
26 – 30	21	19
31 – 35	12	11
> 35	21	19

Source: Researcher's data

Table 2 Factors Associated with Perspectives on Snakes and Their Bites

Variable	Reasons for keeping snakes				
	Internal		External		Total
	N	%	N	%	N (%)
<b>Can differentiate between venomous and non venomous snakes</b>					
Yes	25	66	47	66	72 (100)
No	13	34	24	34	37 (100)
Total	38	35	71	65	109 (100)
<b>Know how to handle snake bites</b>					
Yes	25	66	41	58	66 (100)
No	13	34	30	42	43 (100)
Total	38	35	71	65	109 (100)
<b>Snake Myths</b>					
Yes	9	24	20	28	29 (100)
No	29	76	51	72	80 (100)
Total	38	35	71	65	109 (100)

Source: Researcher's data

### Reasons for keeping snakes

It is important to at least know the reasons why someone would want to keep a snake. Many responded that keeping snakes is a form of their interest in snakes and as a hobby. In addition, they

believe that keeping snakes can help in snake conservation and educate the public that snakes are not animals to be feared and can be cared for in the home environment. Unlike other pets, they stated that keeping snakes is easy, and maintenance is not complex.

In addition to the previous answers, it turns out that some keep snakes because they are inspired by relatives who are rescuers and also snake-loving influencers. Another unique reason is to keep snakes as research material and an early warning indicator of a disaster, especially earthquakes. However, Roy Silalahi, the Chairperson of the Aspera Reptile Snake Lovers Community (detikNews, 2019), stated that snakes are animals that cannot be kept just like that, especially by ordinary people. Even most ordinary people do not know what the characteristics of dangerous snakes are and are not. So he said it is better to consider all reptiles, especially snakes, dangerous to avoid unwanted events.

Before considering keeping snakes in the home environment, knowing what should be prepared for the right person, such as an expert or handler, is better. Thus, unwanted things will not happen in the future and, instead, create a wider scourge against snakes. There are motive reasons that researchers have classified, which consist of three questions: distinguishing between types of venomous snakes, knowing how to handle snake bites, and myths about snakes themselves.

### **Can Differentiate between Venomous and Non Venomous Snakes**

Snakes are a diverse group of reptiles that are widely distributed throughout the world, especially in Indonesia, which is known as a tropical country and is also home to 10% of the world's snake population (BRIN, 2022). The number of snakes that can be easily found peaks in hot climate countries, while species richness is highest in the rainy season (Ratnarathron, 2024). In addition, Indonesia has vast rice fields and plantations. Indonesia's total paddy fields (LBS) in 2019 was 7,463,948 hectares. Meanwhile, the number of plantation business households in Indonesia in 2023 was 10,877,356 (BPS, 2023), and snakes have a stake in the surrounding environment.

Although many snakes are not venomous, some can produce venom that can potentially kill their prey. Research and in-depth understanding of venomous snake species is essential to protect humans and other fauna, especially those who want to keep snakes as animals in the house. Therefore, one reason for keeping snakes is that the owner must be able to distinguish between venomous and non-venomous snakes.

Snake species are classified into two types, namely venomous and non-venomous; the two categories of snake species can be distinguished through the shape of the snake's body, the shape of the snake's head, the arrangement of teeth, the snake's habitat and the characteristics of the snake's nature when looking for prey (Waller, 2022). In the world, there are approximately 2185 types of snakes that can be found, both venomous and nonvenomous of the two groups, for the types of snakes that are familiar in Indonesia are classified into nonvenomous and venomous snakes, including cobra, king cobra, boa, python, welding, kaput. The following are venomous and non-venomous snakes:

#### 1) Venomous (Venomous)

Although legless, snakes move faster than many animals. All snakes move by pushing against the surface they are on. Large, heavy snakes can travel with their bodies straight as a caterpillar. This is called rectilinear movement. Waves of muscle contraction pass through the abdominal muscles, and the large abdominal scales grip the ground; strong muscles for walking, for some snakes, can be a deadly weapon. Such snakes are known as constrictors. The largest snakes that kill constrictors are boa constrictors and pythons, such as adult African rock pythons, which can reach a length of 6 meters and kill and devour antelopes. The nature of this snake is fast movement,

but it is afraid of its opponent.

## 2) Non-venomous

Although some people think all snakes are dangerous, only a few can harm humans. This is because the venomous category is divided into medium and deadly. Only certain species use their deadly venom to kill small prey or for self-defense. Snakes do not sting with their tongues as expected. The protruding tongues of snakes and lizards are merely testing the air or soil for other animal odors. Rattlesnakes and other snakes also have heat-finding pits on their faces to track down warm-blooded prey, day or night. The real danger of a venomous snake is, of course, its venomous bite. The venom is a special type of saliva stored in the internal glands of the snake's head.

When a venomous snake bites its victim, it sprays through a groove or cavity in the fangs, like medicine in a syringe. The venom attacks the victim's blood and nerves, which control the heart and muscles until the victim is paralyzed. The characteristics of a venomous snake are that it has a triangular head shape and fangs in both jaws. However, some venomous snakes do not share these physical characteristics and are even different. The nature of the viper itself tends not to be so aggressive, moving slowly but not afraid of its enemies. This type of snake usually hunts its prey at night and eats others smaller in size. The habitat of this snake varies from rice fields, water, and even deserts because this type of snake adjusts its habitat based on the color of their skin, including Weling, Welang, Viper, Ader, Cobra, and Raja beluga (Waller, 2022).

After knowing the two types of snakes, how to handle dangerous snake bites and venom is undoubtedly something that must be known by every individual, especially for people who want and are snake owners. Unfortunately, according to Aji Rachmat from Sioux Snakes Indonesia, many people who want to keep snakes think the snakes they want to buy are harmless (Mongobay, 2019).

This is in line with the results of the data analysis that has been carried out, but many snake owners still feel hesitant about distinguishing the types of snakes that are venomous and those that are not. Thirty-seven of the questionnaire respondents were unable to distinguish between venomous snakes. Many of them said they would ask the snake seller first if they only wanted to buy a tame snake that did not have venom. They can now easily buy snakes online. Keeping snakes is not something to be toyed with. Even so, the majority of snake owners, 72 people, can distinguish the types of venomous snakes, 25 of whom learned by themselves when hunting snakes in the wild with years of experience (internal) and the majority of whom, 47 people, learned through the internet, relatives, and seniors in their community (external).

There should be no owners who cannot identify venomous snakes from nonvenomous ones, as this should be the most essential step before deciding to keep a snake. In addition, this can be the focus of the problem because it can be fatal if it harms the owner if they do not have enough information about the animal they are keeping. Therefore, it is necessary to educate the seller and the buyer before finally selling the snake. Of course, the buyer or keeper must dig up a lot of information about the things that need to be known when keeping a snake.

## **Know How to Handle Snake Bites**

In addition to knowing which snakes are venomous and which are not, as the most basic knowledge, handling snake bites is another important thing that snake owners should know, especially if they have venomous snakes in their care. In the results of the author's data analysis, at least 90% of snake owners answered that immobilization prevents the spread of venom due to snake bites. However, the concern is that the rest of the snake-owner respondents still do not know how to handle snake bites properly.

Even though they stated that they knew how to handle it, some of them were still wrong and

stated that snake venom could be sucked out and the bite wound tied up. Both of these are incorrect, although there used to be a well-known John Wayne-style snakebite treatment

method of "slice, suck and spit" or incision, mouth suction, and spitting as an attempt to remove the venom and prevent the spread of venom throughout the body (Networkbali, 2010).

This method is not appropriate and can even make people who suck it exposed to the venom from the snake bite because the most appropriate first aid when bitten by a snake, according to the World Health Organization (WHO), is first done by moving the victim to a safe place, because antivenom production is decreasing. After that, immobilize the victim or make them completely immobile. The principle of first aid for snake bites is to prevent the spread of venom and, secondly, to prevent infection of the bitten part; help should be done as quickly as possible. Do it with the correct method in addition to trying to keep the victim calm to prevent hysteria during the implementation of Airway, Breathing, and Circulation treatment and not to worry so that the snake venom does not spread faster, provide a comfortable position for the victim, reduce physical movement by immobilizing the snake bite area by bandaging the area (World Health Organization, 2023).

If the treatment is done wrong, it can undoubtedly have fatal consequences, which can cause the victim to experience paralysis and even death. Other than that, what can hinder the recovery of victims is that many people still believe in traditional medicine, namely bringing victims to healers or shamans in the village. There is also the difficulty of accessing hospitals in remote villages, the unavailability of antivenom at the nearest hospital, the high cost of treatment for the purchase of antivenom, and the lack of availability of trained personnel to handle snake bites (Vongphoumy, 2017). These factors can contribute to the estimated mortality rate of 5 million people each year bitten by venomous snakes, resulting in up to 2.5 million snakebite cases per year of poisoning, at least 100,000 deaths, and three times as many amputations and permanent disabilities (World Health Organization, 2016).

The local effects of venomous snake bite wounds are rapid swelling and pain (Sudoyo, 2010). Therefore, the owner and the people around the owner, such as family and neighbors, must understand snake bite treatment. Victims of venomous snake bites must immediately get help and can be handled so that the mortality rate of snake bites can be reduced. Many people understand how to handle snake bites properly.

### **Snake Myths**

Indonesia is one of the most diverse countries regarding culture, language, ethnicity, and religion (Palindungan, 2018). According to the BPS census in 2010, there are more than 300 ethnic groups, or to be precise, 1,340 ethnic groups that grow in Indonesia (BPS, 2012). Of the many ethnic groups in Indonesia, they have diverse cultures. The culture referred to here is hereditary and something created by the mind (Rachman, 2021). The products of the mind can be in the form of ancestral rituals and mythologies that have developed over the years so that they are rooted and cannot be separated from society, mainly traditional communities. One of the products is a myth related to snakes and their handling.

In the last discussion of this study, researchers presented the results of the data analysis. The answers given to questions related to snake myths that they believe in as snake owners, it turns out that there are still respondents who say that snakes are the incarnation of jinn or demons. They believe that salt can make snakes avoid the reason they are sacred and do not like it when their skin is exposed to salt. Another corroborating reason is that they have proven it with personal experience.



Although only a few respondents believed that snakes are the incarnation of invisible beings and that salt can ward off snakes, some chose to keep snakes because snakes are sacred and spiritual beings for two respondents. However, the other 95% of respondents do not believe and believe that snakes are just living creatures and are only venomous animals belonging to the reptile group and that salt has no effect on snakes.

Indeed, this is also because, along with the development of technology, many people have been able to distinguish between scientific and spiritual things or myths. However, it cannot be denied that there are still traditional Indonesian people who believe that snakes are the incarnation of invisible creatures or someone's delivery to cause harm to people they do not like. So this factor also makes snakes a frightening specter in the community. Subtle beings can change their form into black snakes, as said in some of the belief books adopted by the Indonesian people. However, when it comes to the study of scientists, snakes are living creatures just like humans and other animals. So, it has nothing to do with creatures that the naked human eye cannot see.

## CONCLUSION

Various perspectives and assumptions have long been and continue to be prevalent in Indonesian society, becoming one of the things that are rooted and difficult to eliminate— starting from the basic understanding that they have about snakes and their bites to how to handle the bite of the slithering animal itself. Myths still exist and will never disappear, even though it turns out that people have a much more scientific understanding of snakes.

This study uses a mixed method, which integrates quantitative and qualitative data to explore the perspectives of Indonesians, particularly snake owners, towards snakes and the potential dangers posed by snake bites. Using mixed methods, it explores the perspectives of Indonesians, especially snake owners, towards snakes and the potential dangers their bites pose. Although snakes are known as dangerous animals, the interest in snake-keeping in Indonesia is relatively high, especially nowadays with the rise of reptile-loving communities, so this is the main focus of this research. The main objective of this study was to understand how Indonesians who keep snakes perceive the animal and their level of knowledge about the types of venomous snakes, how to handle snake bites, and perceptions of myths about snakes.

The results show that although snakes are known as dangerous animals to many people, Indonesians, especially reptile enthusiasts, still have a high interest in keeping snakes. Their main reasons for keeping snakes include a hobby, snake conservation, and educational purposes so that people no longer view snakes as feared animals. However, there is a concern behind this interest about the lack of in-depth understanding of snakes, especially venomous snakes. Most of the snake handlers in this study could differentiate between venomous and non-venomous snakes. However, the data also showed that some respondents still could not do so. This shows the importance of basic knowledge that snake owners should have before deciding to keep snakes.

Furthermore, regarding snake bite treatment, most snake handlers are aware of the importance of immobilization measures to prevent the spread of venom. However, even though most respondents knew the correct way to handle snake bites, some snake handlers still make mistakes in performing first aid, such as bandaging the wound or suctioning the venom, which can worsen the situation. Incorrect knowledge about snake bite treatment can potentially lead to death. Therefore, further education is needed on proper snake bite treatment by medical standards.

In addition, myths surrounding snakes also still influence some people. Most respondents perceived snakes as ordinary animals that are venomous or non-venomous, but some believe that snakes are incarnations of spirits or have mystical powers. Such myths often exacerbate people's

fear of snakes and can lead to mistreatment of snakes, such as persecution or destruction of snakes for no apparent reason.

Therefore, it is important to take a scientific knowledge-based approach so that people can differentiate between myths and facts. Although snake owners in Indonesia have a high level of interest in these animals, many of them still lack understanding of the risks involved, especially regarding the types of venomous snakes and their handling.

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