

Overview of the Correlation Between Animal Abuse and Criminal Behaviors and the Significance

Qingyang Zhong

*The Hang Seng University of Hong Kong, Hong Kong, China
s246841@hsu.edu.hk*

Abstract. This article provides an overview of the correlation between animal abuse and later criminal behaviors, emphasizing the importance of early identification and prevention of violence. Existing research demonstrates that individuals who abuse animals, especially during childhood, are at significantly higher risk of engaging in aggressive, violent behaviors later. Factors contributing to this relationship include exposure to family violence, empathy deficits, emotional regulation difficulties, desensitization to violence, and neurobiological alterations such as changes in cortisol, dopamine, serotonin, and glutamate levels. Many studies adopting large-scale samples, statistical analysis tools, and interdisciplinary approaches validate these associations. Furthermore, this article highlights the role of contemporary animal protection laws and welfare frameworks in countries such as the United States, which not only safeguard animal well-being but also serve as preventive mechanisms against future criminal behaviors. The findings underscore the significance of integrating psychological, social, and legal interventions to reduce violence, protect vulnerable groups, and improve societal safety.

Keywords: Animal abuse, Family violence, Empathy deficiency, Future criminal behaviors, Neurobiological changes

1. Introduction

In modern times, many people attach importance to laws about animal protection, they think that animals ought to enjoy the necessary welfares rather than treating them cruelty. Hence, there are much research that indicates that there are varieties of factors that can lead to future criminal behaviors for individuals abused animals or witnessing violence towards animals during their childhood. The factors all play a significant role in resulting future criminal behaviors, including lack of empathy, desensitization, sensation seeking, regulation of emotion level and decrease or increase in biological neurotransmitters. Much research used many samples to make sure the data can be generalized to society. In addition, some research uses analytical methods such as IBM SPSS Statistics 27 to analyze data from samples to make results more accurate and can build cause and effect relationship [1]. Moreover, there are also some laws that did well about animal welfares and rights. This indicates the nowadays situation's reasons and solutions or advantages that can reduce the behaviors of animal abuse and prohibit serious criminal behaviors.

2. Retrospection for research and factors resulting in future criminal behaviors

Many researchers used varieties of methods in their studies to show that there is very close link between animal abuse and violence or offensive, behaviors. Monsalve et al. stated that if people suffered from family violence during their childhood, they have higher probability to abuse animals [2]. Data showed that about 76 per cent people who abused animals also abused children [2]. In addition, Volant et al. showed that 52.9 per cent people abuse animal in a group of female people who subjected to maltreat [2]. By contrast, in a group of female people who have not suffered from family violence, simply 1 per cent of them reported participating in animal abuse [2]. This states that family violence is an important factor that can lead to animal abuse by children. Furthermore, Baldry found that there is close relationship between future violence [2]. It indicated that people who abuse animals when they are a child, they have higher propensity to participate aggressive behaviors.

Research has shown that people who participates serial murder cases or sexual cases when they become an adult has history of abuse animals [2]. This research could be a support for corroborating the proposed correlation between animal abuse and future criminal behaviors.

Dr. Felthous also found that 25 per cent or criminals who are offensive abused animals for more times when they are a child and gave a conclusion that there is link between behaviors of abuse and future criminal behaviors [3].

In Fremouw et al.'s study, the sample was reversely small, which was 29 participants, and the result showed that people who abuse animals have higher tendency to do bullying behaviors compared to people who have not participate animal abuse [4]. In Flynn 'research, he gave a support for concurrence of animal abuse and family violence or other criminal behaviors [4]. Also, DiLillo found 860 participants who are university students to be a sample [4]. And data showed that approximately 60 per cent students who abused animals reported that they have history of witnessing the family violence.

DeMello found that for significant cases criminals like Jeffrey Dahmer have history of abusing animals [1]. And Arluke and Madfis showed that no less than 40 per cent significant cases criminals abused animals during their childhood [1]. They used IBM SPSS Statistics 27 to do data analysis to make data more accurate [1]. This kind of analysis provide clearly diagrams, make data more representative and more validate. Other studies also can replicate the method of analysis. From the data, we know that there is strong link between animal abuse and criminal cases. Victims from these have common characteristic, they are vulnerable groups, and many criminals experienced vulnerability when they were a child.

People who abused animals have common characteristics. These characteristics can be included in social learning and frameworks of social information-processing. They always have problem of empathy deficient, problem of self-regulations, exposing to family violence, thinking for things that can make them more exciting, growing family without security, changing in values and biological changes [2,5]. First, empathy deficient is the most vital problem that make people do more serious behaviors. Plant et al. showed that witnessing family violence have higher propensity of empathy deficient. This also called "callous-unemotional traits", refers to problem that cannot understand other's painfulness. Dadds et al. found that correlation moving in the reverse direction to empathy in callous-unemotional traits case [5]. When exposing to the environment of family violence for long time, for example, if children always witness his mother or pet are suffering from abuse, they would be afraid of be abused and choose to neglect victims to protect themselves from hurts. After longer time, they will be cool and cannot understand other's emotion gradually. Longer time of being exposed to surroundings of family violence will disturb the normal development of empathy. This

type of behavior is more common for children, especially during the time of development of empathy, exposing this for longer time will distort their value of empathy. Hence, they will be deficient in empathy when they become an adult. In addition, Zhang et al. found the negative relationship between behaviors of prosocial and traits of behavior [2]. Second, difficulty in regulating emotion is also a factor to result in animal abuse. Vaughan et al. stated that regulation deficient is also a vital factor for violence and Parfitt and Alleyne found that deficient in regulating emotion will lead to animal abuse [5]. If people cannot express their emotion right, especially the negative emotion, they tend to abuse animals. Also, for people who cannot regulate their emotion carefully, they tend to think that life is not under control by themselves, hence they are likely to fill this gap by abusing animals, to gain the belief of everything is under control. Third, the factor of sensation seeking for them should also be considered. Wilson and Scarpa found that people with higher sensation seeking are tend to more aggressive [5]. The measure used a meta-analysis to integral some individual research and validate the result. Some people prefer to give excessive pursuit of stimulation rather than understand animal's painfulness. Then, desensitization of violence is a vital factor.

According to Monsalve et al., children will normalized violence or aggressive behaviors and model behaviors via observational learning [2]. During the most important development stage, children are likely to imitate the model and learn behaviors by observing others.

If they are expose to violence for a long time, they will think that this kind of behavior is normal and be desensitized to this kind of behaviors, then do more violence. Also, their brain would like to experience habituation [2]. The brain will be irritated when first time to witness violence in the family. Repeated exposure may lead to habituation alongside amygdala and decreased prefrontal regulatory control.

Violence would be internalized to their own behavior pattern solidify their thinking pattern, closer to aggression. They may believe that aggression is an effective method to deal with problems. As time passes, the cognitive script will change as long time exposing to family violence. Besides, Muri et al. found that socioeconomic status can also affect the tendency to animal abuse. The study's basis is the prior study about child abuse. And this study use sample of 9240 around children in Norway and there is 75.5 per cent response rate. The result is that animal abuse is link with socioeconomic status [4]. Family with pooler situation always suffer from more stress, and they are more likely to get anxiety or be depressed, this kind of stress may bring children more negative rearing style. Also, there is higher probability that more pooler family tend to do more aggressive behavior, if children expose to violence for a long time, their thinking to aggression can be changed and hard to return to the original state. Children in pooler family also experienced neglect rearing style, making them cannot build a positive value toward life.

Level of stress also be a factor to affect the aggressive behaviors. If children access more stress such as family violence and stress suffered when they are a child, they will be more likely to participate violence. For example, for element of family violence, there were two questions, the first is whether children witness family violence towards mother, and the second is whether children witness family violence towards father, and the result is that the index of the first is higher than the second, which is 8 per cent against 3.5 per cent, this means that there are more family violence towards mother by their father is more [5]. When witnessing their mother is experiencing family violence, they will be guilty but cannot do anything to protect their mother, hence they are more likely to develop the ambivalent attachment and feel insecurity about family.

Gender differences is also an indicator for abuse animals. There is a study showed that only 3.8 per cent female who are the sample of the study abused animal, while there is 11.8 per cent male in

the sample group abused animal, potentially mediated by gendered norms of expressing emotions and level of showing empathy [5]. There is a stereotype that male should be good at controlling their temper rather than express their emotions easily, this makes more male cannot express their feelings although they have negative thoughts to fit into the expectation of society. While more study showed that female have more empathy compared to male, female tend to understand other's or animals' emotion.

Children who witnessed family violence can lead to trauma, which can shape the zone full of anger, anxiety and helplessness. They do not have proper way to vent their emotion, negative feelings can be cumulated gradually, so they have higher propensity to abuse animal as animals cannot speak, especially for companion pets, that children very love with, children can experience more significant trauma when witness their companion pet is abused, they are more inclined to abuse animal later to externalized painfulness of them. According to Monsalve, longer traumatic experiences can have very close link with bedwetting, as stated above, bedwetting is the most representative symptom for pyromaniacs [2]. MacDonald found that animal abuse is the vital indicator to predict the future criminal behaviors, such as pyromaniacs [2].

Long time to expose to family violence can alter the biological neurotransmitters in people's body and more likely to abuse animals. When children witness violence in family for a long time, there will be habituation, during this process, there will be some change in neurotransmitters, such as fewer vesicles, while the level of postsynaptic cleft will be lower during the process of habituation. Some neurotransmitters will decrease the level of empathy, such as serotonin and oxytocin. According to diagram that illustrate the relationship between animal abuse and biological change, dopamine level will increase and fewer level of serotonin [2]. For response for aggression, there will be increased number of glutamate and decrease number of Gamma-Aminobutyric Acid (GABA) [2]. After witnessing more violence in family, amygdala can be monitored overmuch, the amygdala will become more active and sensitive during the witnessing process, hence there is an increase level of glutamate. During the long time exposing to family violence including animal abuse, there will be an increase of cortisol which can inhibit the production and number of GABA [2]. GABA as an inhibitory 'brake' in neural circuits, if there is long time for exposing to violence in family, the braking system are more likely to become unstuck, weakening the inhibitory control. In addition, according to Teicher et al., experiencing trauma for more times can change the level of limbic system circuits. This means that limbic system circuits play an important role in shaping the normal system in brain. Furthermore, according to diagram from McDonald, higher level of cortisol can affect the production of antidiuretic hormone, and limbic system can influence emotion and empathy, which is the vital element to result in the consequence of animal abuse or any other types of abuse [2].

3. Discussion about laws for animal protection and their benefits

In modern life, more and more people started to pay close attention to welfares of animals, even The United States of America has concerned the aspect of animal welfares in very early time [6,7]. Now, many people regard animals as their good friends, even regard their companion pet for their family members. Travis and Murray stated that when there is divorce between a couple, their companion pets will be concerned that who can be a carer for them, rather than only viewing them as property [6]. The Oregon Legislature stated that animals should under the warm surroundings, they have feelings, including happy, stress, sad, and fear [6]. People ought to protect them from any of harms. Animal protection is not only prevention for physical harms but also feeling protection. There are some methods of assessment to measure the feeling of animals. For example, emotional problems in

dog can be measured, and this became the vital element for animal welfares. Elements in emotion including rates of heart and change in respiratory rates, types of fear and anxiety for isolation. Malkani et al. used an assessment called Animal Welfare Assessment Grid (AWAG) [8]. Elements in AWAG have factors of physical, psychological, environmental, procedural. According to result of the assessment, people can find out what factors cause animal's pain most [8]. This assessment reflects that the status of animal has increased, and people can take care of their companion pet more carefully. Also, there are also some laws to protect animals from any types of harms. Tasmania have program called Safe Beds for Pets. It provides shelter for companion pets for urgent use, for example, pets that experienced harms in family violence can be into the shelter [9]. In New York, neglecting animals is also not allowed, for more warm caring for animals [6]. Also, laws in California states that people should offer enough space, appropriate food for animals, especially in bad weather [6]. California also prohibits the captivity for orcas [6]. This can protect animals' feelings in animals' exhibitions from emotional problems. Furthermore, pet feeder is supposed to have license to make sure the safety of food for pets. In addition, the Bronfenbrenner's model of bioecological systems revealed that there is significant need for cooperations in interdisciplinary organizations [10]. For example, an expert in tooth can find problems in animal's teeth to deduce what kind of abuse animal experienced [2]. Hence every field should make cooperations between each other, to make sure there is a complete animal's protect system.

4. Conclusion

The article states the background of animal abuse and change in people's mind. There are also statements and overviews of past research to support the relationship between animal abuse and criminal behaviors. Although there are people with more aggression, there are laws to offer a deterrent effect for them. Research significance for this article is that people can have a better understanding of theories of animal abuse and factors affected by animal abuse. Therefore people can have complete understanding of animal abuse and hazards of animal abuse and do more protection for animals, making harmonious coexistence between animals and humans.

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