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Naučna kritika

ZAŠTO VETERINARI TREBA DA POZNAJU PONAŠANJE ŽIVOTINJA*

Marijana VUČINIĆ[1]*, Katarina NENADOVIĆ[1], Dunja KOVAČ[2], Ljiljana JANKOVIĆ[1]

1 Katedra za zoohigijenu, Fakultet veterinarske medicine, Univerzitet u Beogradu, Bulevar oslobođenja 18, 11000 Beograd, Srbija
2 Kinološka Akademija, Vere Dimitrijević 9, 11186 Beograd, Zemun, Srbija
* Korespodentni autor: Prof.dr Marijana Vučinić, imejl: vucinicm@vet.bg.ac.rs

Kratak sadržaj: Ponašanje je najbrži način adaptacije životinje na promene koje se dešavaju u njenom organizmu ili u životnom okruženju. To je vidljiva osobina životinja. Zbog toga, veterinari mogu da koriste znanje o ponašanju životinja u mnogim granama veterinarske prakse i veterinarske nauke. Poznavanje ponašanja životinja može biti od pomoći u dijagnostici u veterinarskoj praksi. Osim toga, znanje o ponašanju životinja može se primeniti u svim postupcima postupanja sa životinjama kao i pri njihovom obuzdavanju, prilikom kliničkog pregleda životinja, u procesima učenja i obuke životinja, u usmeravanju kretanja životinja, hranjenju, reprodukciji i mnogim drugim aktivnostima. Smeštajni sistemi i sve vrste obogaćivanja uslova života su proizvodi primenjene nauke o ponašanju životinja. Veterinari moraju znati kako da spreče poremećaje u ponašanju i patološke oblike ponašanja životinja, ali i kako da ih leče. Takođe, oni treba da znaju kako da primene znanje o ponašanju životinja za dobrobit životinja. Dalje, nauka o ponašanju životinja može se primeniti u kontroli divljači i štetočina na humaniji način, kao i u očuvanju vrsta. Postoje mnogi drugi primeri primene znanja o ponašanju životinja u veterinarskoj praksi, a koji su izneti u ovom radu.
Ključne reči: životinja, ponašanje, primena, veterinarska praksa

UVOD

Veterinari dolaze u kontakt sa različitim vrstama životinja i različitim upotrebnim kategorijama životinja. Oni sprečavaju pojavu bolesti i povreda i

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leče životinje koje služe za proizvodnju hrane i prirodnih vlakana (farmske životinje), službene/radne životinje i životinje koje se transportuju. Veterinari pregledaju životinje prispele na klanice i one koje se nalaze u stočnim depoima klanica, životinje koje čoveku služe za društvo, zabavu i razonodu ili one koje čovek gaji u kućnim kolekcijama, kao što su akvarijumske ribice, gmizavci, vodozemci, pa čak i insekti („hobisti“). Veterinari brinu i o dobrobiti i zdravlju životinja koje se drže u zoološkim vrtovima, u naučnim instucijama i u pogonima za proizvodnju bioloških preparata i lekova ili u obrazovnim institucijama. Brinu i o zdravlju napuštenih kućnih ljubimaca kao i o životinjama u prihvatilištima i pansionima, o divljim životinjama na prirodnim staništima, a u novije vreme i o životinjama koje se koriste u zooterapiji, odnosno animoterapiji (*Fine*, 2010). Takođe, veterinari su često u situaciji da predlažu odluke o kraju života životinja (*Knesl i sar*., 2017). Ono zarad čega se mnogi vlasnici životinja zabrinu i posete veterinara jeste promena ponašanja životinja. Upravo ta promena ponašanja životinja inicijalni je okidač za prvi kontakt klijenta i veterinara. U 21. veku, kada je uveliko utemeljena posebna oblast veterinarske medicine, koja se zove bihevioristika životinja (američka terminologija), etologija (evropska terminologija) ili „primenjena nauka o ponašanju životinja“, od veterinara se zahteva da je dobro poznaju i primenjuju u svakodnevnoj praksi. Njena primena je od neprocenjivog značaja za ugled, konkurentnost i održivost veterinarske struke (*Loftus*, 2014).

ŠTA JE TO PONAŠANJE ŽIVOTINJA?

Postoje različite definicije ponašanja životinja. Ponašanje je fiziološka funkcija organizma, koja je za razliku od ostalih funkcija jasno uočljiva, odnosno vidljiva. To je svaka aktivnost životinje uključujući i fazu mirovanja i sna. Za razliku od ostalih fizioloških funkcija, ponašanje može da se procenjuje golim okom. Kao i sve ostale fiziološke funkcije, tako i ponašanje životinja ima svoju ulogu, ali ima i svoj uzrok i svoj povod, kao i cilj.

Ponašanje je najbrži način reagovanja i prilagođavanja životinje na promene u životnom okruženju i unutar organizma, a zato i najbrži način očuvanja homeostaze i celovitosti organizma. Na kraju, cilj ponašanja je postizanje osećanja fizičke i termičke udobnosti, prijatnosti, fizičkog i emocionalnog zadovoljstva životinje.

Uzrok ponašanja je uvek neka potreba, odnosno nagon životinje. Aktivirani nagoni prouzrokuju određene emocije, a emocije rezultiraju određenim oblikom ponašanja životinja. Nagoni su pokretači devet osnovnih oblika ponašanja životinja, a to su: reaktivnost, odmor i san, kretanje, higijensko ponašanje (obuhvata higijenu kože i pokrivača kože, higijenu staništa, higijenu mladunaca, defeciranje i uriniranje, termoregulaciju i protezanje), hranidbeno, teritorijalno,

istraživačko (uključuje igru), socijalno (uključuje komunikaciju) i reproduktivno ponašanje (ponašanje u toku polnog nagona, ljubavna predigra, kopulacija, ponašanje u toku graviditeta kod ženki, partus kod ženki, roditeljsko ponašanje, odnosno nega mladunaca). Nagoni kod životinja ne mogu da se potisnu. Oni su urođeni i životinje su uvek motivisane da ih zadovolje. Načinom držanja, životinja može jedino da se spreči da zadovolji nagon na prirodan način, zapravo primenom neke od fizioloških strategija. Onemogućavanjem životinje da zadovolji svoje urođene potrebe na prirodan način nastaju oskudevanja, a njihova posledica su frustracije. Posledica dugotrajnih frustracija je promena ponašanja životinje u pravcu razvoja poremećaja i patoloških oblika ponašanja. Nagoni ne mogu da se programiraju niti da se reprogramiraju. Oni su genetički nefleksibilni i zajednički su za sve životinje.

Povod ponašanja su uvek stimulusi koji se uglavnom nalaze u spoljašnjoj sredini, ali mogu da potiču i iz samog organizma. Po svojoj prirodi, stimulusi mogu da budu biotički i abiotički. Zato ponašanje jasno pokazuje kako se životinja ophodi i kako reaguje u odnosu na druge životinje iste vrste, različitih vrsta, na čoveka ili na predmete, materijale i pojave u životnom okruženju.

Kod svih životinja postoje i visoko specifični oblici ponašanja karakteristični za vrstu. Zato je obaveza čoveka da, životinjama koje drži u zatočeništvu, obezbedi sve uslove neophodne za ispoljavanje visoko specifičnih oblika ponašanja.

Posledica ponašanja je uvek neka emocija, osećanje, odnosno iskustvo životinje. Povezujući posledice ponašanja sa obavljenim aktivnostima, koje su učestvovale u ispoljavanju ponašanja, životinje uče.

Za veterinare je bitno da poznaju emocije životinja. Emocije nisu uočljive kao što je to ponašanje. Ponašanje je indikator emocija (*Beausoleil* i sar., 2016).

PRIMENA ZNANJA O PONAŠANJU ŽIVOTINJA U VETERINARSKOJ PRAKSI

Pred kraj prošlog veka istaknuto je da obrazovanje iz veterinarske medicine zahteva da bihejvioristika ili etologija (primenjena nauka o ponašanju životinja) u veterinarskom kurikulumu bude zastupljena slično kao anatomija i fiziologija (*Sambraus*, 1998). Nemački naučnik (*Sambraus*, 1998) je istakao značaj etologije. U mnogim zemljama Evropske unije ovakvo obrazovanje je zaživelo, dok je u zemljama balkanskog regiona izostalo.

Znanje o ponašanju životinja primenjivo je u svim oblastima veterinarske struke u kojima veterinari dolaze u direktan kontakt sa životinjama. Prvo, primenjivo je u načinu prilaženja i obuzdavanja svih upotrebnih kategorija životinja. Ovde

se znanje iz bihejvioristike primenjuje radi eliminisanja ili minimalizovanja primene fizičke sile u ovim aktivnostima i radi njihovog humanizovanja. Takođe, hvatanje, odnosno sakupljanje nezbrinutih životinja na javnim površinama sve više zahteva da se napuste grubi i neestetski načini i da se primene načini bez fizičke sile. Znanje o ponašanju životinja primenjuje se i radi bezbednosti rada i smanjivanja povreda veterinara, pomoćnog osoblja, drugih životinja ili same životinje sa kojom je veterinar, vlasnik ili radnik u kontaktu. Danas se zahteva da veterinar dobro poznaje bihejvioristiku životinja, odnosno ponašanje koje one izražavaju „govorom tela“ ili grimasama (*Di Gimini*ani sar., 2016). Ove „namere“ su posledica određenih emocija, a njihov rezultat će biti određeni oblik ponašanja životinja. Govor tela i grimase neophodno je poznavati i u dijagnostičke svrhe, kako bi se životinja oslobodila neprijatnih emocionalnih stanja prouzrokovanih bolestima ili povredama, a posebno bola (*Di Giminiani* i sar., 2016). Takođe ih je neophodno poznavati i prilikom obučavanja, odnosno vaspitavanja i treninga životinja (*Hasegawa* i sar., 2014), kako bi se blagovremeno uočilo šta životinja uči lako, teško, šta je zbunjuje, plaši, privlači, motiviše, a šta odbija prilikom savladavanja novih veština. Neprijatno emocionalno iskustvo kao što je bol, gotovo uvek je povezano sa smanjenjem bihejvioralnih aktivnosti (*Viscardi* i sar., 2017).

Znanja o ponašanju životinja primenjiva su i u oblasti veterinarske preventive kod svih upotrebnih kategorija životinja. Projektovanje i uređenje smeštajnog prostora za životinje treba da bude u skladu sa oblicima ponašanja karakterističnim za vrstu životinje (*Balcombe*, 2006). Zato i nije iznenađenje što u današnje vreme legislativa obavezuje na smeštaj životinja u „naturalizovanom“ okruženju kao što je, na primer, slučaj kod nosilja kojima je u kaveznom sistemu držanja potrebno obezbediti materijal za penjanje, skrivanje, čeprkanje i „perušanje“ (*Costa* i sar., 2012).

Poznavanje ponašanja bitan je „dijagnostički alat“ u rukama veterinara. Kod pojedinih bolesti, životinja prestaje da ispoljava određene oblike ponašanja ili ih svodi na minimum ili ih ispoljava na neki drugi način, u neko drugo vreme i na nekom drugom mestu u poređenju sa uobičajenim. Ovo sve može da ukaže na prisustvo bolesti akutnog toka, a cilj promene ponašanja u pravcu smanjenja njegovog intenziteta je upravo čuvanje energije, preko potrebne za „borbu“ organizma sa uzrokom bolesti i ubrzanjem ozdravljenja. U hroničnom toku bolesti, određeni fiziološki oblici ponašanja ispoljavaju se na drugačiji način od uobičajenog, a sve u pokušaju životinje da dostigne stanje udobnosti, prijatnosti, sigurnosti i zadovoljstva. Takođe, poznavanje ponašanja omogućava veterinarima da kod životinja blagovremeno prepoznaju prisustvo neprijatnih telesnih i emocionalnih iskustava kao što su anksioznost, strah, stres, konflikti, frustracije, dosada, patnja i druga. U suprotnom, mogu da se

razviju primarni poremećaji i patološki oblici ponašanja (*Kiley-Worthington*, 1977;*Mench*, 1998). Sekundarni poremećaji i patološki oblici ponašanja su uvek sastavni deo simptomatologije poremećaja funkcije nekog drugog organa ili organskog sistema.

Postupak ocene dobrobiti životinja zasnovan je na vrednovanju direktnih i indirektnih pokazatelja, od kojih je ponašanje životinja direktan pokazatelj (*Fraser*, 2009), pri čemu se u obzir uzima ispoljenost fizioloških oblika ponašanja, prisustvo poremećaja i patoloških oblika ponašanja, ponašanje prema životinjama u okruženju i ponašanje životinja prema ljudima.

Na kraju, znanje o ponašanju može da se primeni ne samo u oceni dobrobiti već i u obezbeđenju dobrobiti životinja i predstavlja jedan od glavnih mehanizama njenog obezbeđenja. Dovoljno je poznavati šta životinja oseća i čemu životinja teži, odnosno šta joj je potrebno na osnovu njenog ponašanja i obezbediti joj to što joj nedostaje ili čemu teži, pa da je dobrobit već zadovoljena (*Dawkins*, 2004).

Brojni su primeri koji pokazuju kako se sve danas u sklopu savremene veterinarske prakse primenjuje znanje o ponašanju životinja. Veterinari koji poznaju ponašanje životinja bolji su kliničari i u mogućnosti su da utiču na očuvanje veze vlasnik-životinja, što je od posebnog značaja za životinje koje se koriste kao kućni ljubimci. Poremećaji i patološki oblici ponašanja kućnih ljubimaca često su uzrok njihovog napuštanja, poklanjanja, prepuštanja prihvatilištima, a ponekad i preuranjene eutanazije. Upravo zato je blagovremena dijagnostika i tretman poremećaja i patoloških oblika ponašanja, ključna za očuvanje veze koja postoji između vlasnika i kućnih ljubimaca (*Seibert and Landsberg*, 2008; *Sherman and Serpel*, 2008).

Bihejvioristi mogu da rade u kliničkoj praksi, ali mogu da rade i u oblastima koje pokriva primenjena veterinarska nauka. Tako u kliničkoj praksi mogu da rade sa kućnim ljubimcima, sportskim životinjama, farmskim životinjama, životinjama u zoološkim vrtovima i oglednim životinjama. U kliničkoj praksi, zadatak bihejvioriste je da spreče pojavu poremećaja i patoloških oblika ponašanja životinja, da na vreme prepoznaju pojavu ovih poremećaja i da znaju da ih tretiraju. Ukoliko veterinari nisu u mogućnosti da sami tretiraju poremećaje i patološke oblike ponašanja, njihova dužnost je da upute klijente kod stručnjaka koji ovo znaju. Svakako, medikamentozni tretman poremećaja i patoloških oblika ponašanja životinja, odnosno psihofarmakoterapija, i dalje je u rukama veterinara. Psihofarmakoterapija se jedino ne sprovodi kod farmskih životinja koje služe za proizvodnju hrane za ljude. Međutim, kod svih nabrojanih upotrebnih kategorija životinja, veterinari mogu da rade na preveniranju poremećaja i patoloških oblika ponašanja. Jedan od načina je „obogaćivanje uslova života“ životinja. Obogaćivanje uslova života sprovodi se kod svih upotrebnih

kategorija životinja. Ovo je strategija koja podrazumeva umetanje takvih materijala, supstrata, predmeta i pojava u životni prostor životinja, a koje ih motivišu na ispoljavanje boljih ili lošijih oblika ponašanja za vrstu, ali i na ostale bihejvioralne aktivnosti. Obogaćivanje uslova života može biti strukturno, hranidbeno, manipulativno, senzorno (vizuelno, auditorno, gustatorno, taktilno) i socijalno (*Young*, 2003).

Bihejvioristika je primenjena nauka. Zato veterinari mogu da rade na poslovima koji se odnose i na humanu kontrolu štetočina (*Clapperton*, 2006;*Meerburg* i sar., 2008), divljih životinja ili na biokonzervaciju (*Berger-Tal* i sar., 2016;*Caro*, 2016;*Merrick and Koprowski*, 2017) i na pronalaženje novih lekova (*Hanell and Marklund*, 2014). U novije vreme, bihejvioristika i etologija dobijaju sve više na tehnološkom značaju i drugačije se zovu „bihejvioralni inženjering". Međutim, primarno mesto bihejvioristike i etologije ostaće obezbeđenje dobrobiti životinja i čoveka (*Marchant-Forde*, 2015).

ZAKLJUČAK

Poznavanje ponašanja životinja i primena u svakodnevnom radu garantuju ugled i održivost veterinarske struke.

Primena znanja o ponašanju životinja u predkliničkoj i kliničkoj praksi može da se primeni i u veterinarskoj preventivi, u osmišljavanju i izgradnji smeštajnih sistema za različite upotrebne kategorije životinja, u svim postupcima sa životinjama kao i u oceni i obezbeđenju dobrobiti životinja.

Neophodno je da kod nas bihejvioristika ili etologija životinja bude dio kurikuluma u obrazovanju doktora veterinarske medicine, kao što je to u zapadnim zemljama.

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Scientific criticism

WHY VETERINARIANS SHOULD UNDERSTAND ANIMAL BEHAVIOR

Marijana VUČINIĆ[1]*, Katarina NENADOVIĆ[1], Dunja KOVAČ[2], Ljiljana JANKOVIĆ[1]

1 Department of Animal Hygiene, Faculty of Veterinary Medicine, University of Belgrade, Bul. oslobodjenja 18, 11000 Belgrade, Serbia
2 Cynology Academy,Vere Dimitrijecić 9, 11186 Belgrade, Zemun, Serbia
* Corresponding author: Prof.dr Marijana Vučinić, e-mail: vucinicm@vet.bg.ac.rs

Abstract: Behavior is the fastest way of animal adaptation to changes that occur in its organism or in its habitat. This is a visible feature of animals. Therefore, veterinarians can use knowledge about animal behavior in many branches of veterinary practice and veterinary science. Knowledge of animal behavior can also be helpful in diagnostics in veterinary practice. In addition, knowledge of animal behavior can be applied in all animal treatment procedures, as well as in their restraint, animal examination, animal learning and training, animal tracking, feeding, reproduction and many other activities. Accommodation systems and all kinds of enrichment of living conditions are part of applied animal behavior science. Veterinarians must know how to prevent behavioral disorders and pathological forms of animal behavior, but also how to treat them. They also need to know how to apply knowledge about animal behavior to protect animal welfare. Applied animal behavior science can be applied to control game animals and pests in a more humane way as well as in conservation of species. There are many other examples of application of animal behavioral knowledge in veterinary practice, as it is presented in this paper.
Key words: animal, behavior, application, veterinary practice

INTRODUCTION

Veterinarians come in contact with different animal species and different categories of animal use. They prevent the occurrence of illnesses and injuries and they treat animals used for the production of food and natural fibers (farm animals), official / working animals and animals being transported.

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Veterinarians examine animals that have arrived at slaughterhouses and those found in cattle depots, animals used for fun, entertainment and recreation, or those kept by people in private collections such as freshwater aquarium fish, reptiles, amphibians, and even insects (" hobbyists "). Veterinarians also take care of welfare and health of the animals which are kept in zoos, in scientific institutions and in plants for the production of biological preparations and medicines or in educational institutions. They also treat abandoned pets, as well as animals in shelters, wildlife in natural habitats, and more recently animals used in zootherapy and animotherapy (Fine, 2010). Also, veterinarians are often in a position to propose decisions about the end of life of animals (Knesl et al., 2017). A change in behavior of animals is the reason why many owners get worried and visit a veteranian. This change in animal behavior is the initial trigger for the first contact between a client and a veterinarian. In the 21st century, when a special area of veterinary medicine, called animal behaviorism (American terminology), ethology (European terminology), or "Applied Animal Behavior Science" is widely established, a veterinarian is required to know it well and apply it in everyday practice. Its application is of undeniable significance for the reputation, competitiveness and sustainability of the veterinary profession (Loftus, 2014).

WHAT IS ANIMAL BEHAVIOR?

There are different definitions of animal behavior. Behavior is the physiological function of an organism, which, unlike other functions, is clearly visible. It is every activity of the animal, including phases in which animals are inactive or sleeping. Unlike other physiological functions, behavior can be estimated by the naked eye. Like all other physiological functions, animal behavior has its role, but it also has its cause and reason as well as its goal.

Behavior is the fastest way of animals' responding and adjusting to changes in the living environment and within the body, and therefore it's the fastest way of preserving the homeostasis and the integrity of the organism. The goal of behavior is to achieve the feeling of physical and thermal comfort, pleasantness, physical and emotional satisfaction of the animal.

The cause of behavior is always a necessity, that is an instinct of an animal. Activated instincts cause certain emotions, and emotions result in a certain form of animal behavior. Instincts are driving forces of the nine basic forms of animal behavior, such as: reactivity, rest and sleep, movement, hygienic behavior (includes hygiene of skin and skin covering, hygiene of habitats, hygiene of cubs, defecation and urination, thermoregulation and stretching), feeding, investigative and territorial behaviour (including game),

social (including communication) and reproductive behavior (behavior including sexual instinct, foreplay, copulation, pregnancy behavior in females, partus, parental behavior, or nursing). Animal instincts can not be suppressed. They are innate and animals are always motivated to satisfy them. By the way in which it is kept, an animal can only be prevented from satisfying the instinct in a natural way, that is by applying some of the physiological strategies. Disabling animals to meet their innate needs in a natural way causes scarceness which leads to frustration. The result of long-term frustration is the behavioral change in the direction of the development of disorders and pathological behaviors. Instincts cannot be programmed or reprogrammed. They are genetically inflexible and are common to all animals.

The cause of behavior is always the stimulus that is mostly found in the outer environment, but it can also come from the body itself. By their very nature, stimuli can be biotic and abiotic. Consequently, behavior clearly shows how an animal responds to other animals of the same species, different species, people or objects, materials, and phenomena in its living environment.

There are also highly specific forms of behavior that are typical for certain species. That is why a man who keeps animals in captivity has to provide all necessary conditions for the expression of highly specific forms of behavior.

The consequence of behavior is always some kind of emotion, feeling, or experience of an animal. Animals learn by associating the consequences of behavior with the activities that have taken part in the manifestation of behavior. It is important for veterinarians to understand animal emotions. Emotions are not as noticeableas as behavior. Behavior is an indicator of emotions (Beausoleil et al., 2016).

APPLICATION OF KNOWLEDGE ABOUT ANIMAL BEHAVIOR IN VETERINARY PRACTICE

Towards the end of the last century it was pointed out that behavioralism or ethology (applied animal behavior science) should be represented in veterinary medicine curriculum similarly to anatomy and physiology (Sambraus, 1998). The German scientist (Sambraus, 1998) emphasized the importance of ethology. In many countries of the European Union, curriculum reform has come to life, while that still hasn't happened in the countries of the Balkan region.

Knowledge about animal behavior is applicable in all areas of veterinary profession in which veterinarians come into direct contact with animals. First, it is applicable in the way of approaching and restraining in all categories of animal use. In these cases knowledge of behavioralism is applied to eliminate

or minimize the application of physical force in these activities and in their humanization. Also, harsh and non-aesthetic methods of catching stray animals in public places should be replaced with methods without physical force. Knowledge about animal behavior is also applied for the safety of work and the reduction of injuries to veterinarians, staff, other animals or the animal with which the veterinarian, owner or worker is in contact. Today, a veterinarian is required to understand animal behavior that is, the behavior expressed by "body language" or grimaces (Di Giminianii sar., 2016). These "intentions" are the result of certain emotions, and their result will be a specific form of animal behavior. It is also necessary to know body language and grimaces for diagnostic purposes in order to free the animal from unpleasant emotional conditions caused by illnesses or injuries, especially the pain (Di Giminiani et al., 2016). It is also necessary to know them during training of animals (Hasegawa et al., 2014) in order to see what is easy or difficult for animals to learn, what they find confusing, frightening, attractive, motivational, and what keeps them from gaining new skills. An unpleasant emotional experience such as pain is almost always associated with a reduction in behavioral activity (Viscardi et al., 2017).

Knowledge about animal behavior is also applicable in the field of veterinary prevention in all categories of animals use. The design of animal fascilities should be in accordance with the behavioral forms typical for certain animal species (Balcombe, 2006). Therefore, it is not a surprise that today's legislation requires animals to be housed in a "naturalized" environment, as is the case of laying hens, for example, a cage should be equipped with things for climbing, hiding, poking about and plucking. (Costa et al, 2012).

Behavioral knowledge is an important "diagnostic tool" in the hands of a veterinarian. In certain animal diseases, the animal ceases to manifest certain forms of behavior or minimizes them or exposes them in some other way, at some other time, and in some other place compared to the usual. This can all point to the presence of acute disease, and the goal of changing behavior is simply saving the energy which organism needs to "fight" with the cause of the disease and to accelerate the healing. In the chronic course of the disease, certain physiological forms of behavior are manifested in a different way than the usual one, in the attempt of an animal to reach the state of comfort, comfort, safety and satisfaction. Also, knowledge of animal behavior allows veterinarians to timely diagnose unpleasant physical and emotional experiences such as anxiety, fear, stress, conflict, frustration, boredom, suffering, etc. Otherwise, primary disorders and pathological behaviors may develop (Kiley-Worthington, 1977; Mench, 1998). Secondary disorders and pathological behaviors are always an integral part of

the symptomatology of another organ or organ system dysfunction.

Animal welfare assessment is based on the evaluation of direct and indirect indicators, of which animal behavior is a direct indicator (Fraser, 2009), taking into account manifestation of physiological behavior patterns, the presence of disorders and pathological forms of behavior, behavior towards animals in the environment, and animal behavior towards humans.

Behavioral knowledge can be applied not only in the assessment of animal well-being but also in ensuring animal welfare and it is one of the main mechanisms of its provision. It is enough to know what an animal needs, on the basis of its behavior and to ensure what it is missing, and the well-being is already achieved (Dawkins, 2004).

Today, there are numerous examples that show in what ways knowledge about animal behaviour is applied in veterinary medicine. Veterinarians who know the behavior of animals are better clinicians and are able to influence the preservation of the owner-animal relationship, which is of particular importance to animals used as pets. Disorders and pathological forms of pets' behavior are often the cause of their abandonment, sheltering, and sometimes premature euthanasia. That is why timely diagnosis and treatment of disorders and pathological forms of behavior is crucial for maintaining the relationship between owners and pets (Seibert and Landsberg, 2008; Sherman and Serpel, 2008).

Behaviorists can work in clinical practice, but they can also work in areas covered by applied veterinary science. In clinical practice they can work with pets, animals in sports, farm animals, animals in zoos and experimental animals. In clinical practice, the task of behaviorists is to prevent the occurrence of disorders and pathological forms of animal behavior, to recognize the occurrence of these disorders in time and to know how to treat them. If veterinarians are not able to treat disorders and pathological behaviors themselves, their duty is to guide their clients to experts who know this. Certainly, the medication treatment of disorders and pathological behaviors of animals, or psychopharmacotherapy is still in the hands of veterinarians. Psychopharmacotherapy isn't applied to farm animals used in food production. However, in all listed animal categories of use, veterinarians can work on prevention of disorders and pathological behaviors. One way is to "enrich living conditions" of animals. Enrichment of living conditions is carried out in all categories of animal use. This strategy involves placing materials, substrates and objects into the living space of animals that motivate animals to show better or worse behavior for their species, but also other behavioral activities. Enrichment of living conditions can be structural, nutritional, manipulative, sensory (visual, auditory, gustatory, tactile) and social (Young, 2003).

Behaviorism is applied science. Therefore, veterinarians can work

in pest control (Clapperton, 2006; Meerburg et al., 2008), wildlife control or bioconversion (Berger-Tal et al., 2016; Caro, 2016; Merrick and Koprowski, 2017) and in the search for new drugs (Hanell and Marklund, 2014). In recent times, behaviourism and ethology are becoming more and more technologically important and are referred to as "behavioral engineering". However, ensuring animal welfare will stay the primary task of behaviourism and ethology.

CONCLUSION

Knowledge of animal behavior and its application in everyday work guarantee the reputation and sustainability of the veterinary profession.

The application of animal behavior knowledge in pre-clinical and clinical practice can also be applied in veterinary prevention, in designing and building accommodation systems for different categories of animal use, in all animal procedures as well as in assessing and providing animal welfare.

It is necessary to include behaviorism or ethology in veterinary medicine curriculum in our county, as it is the case in Western countries.

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