Commentary

Development of a mental wellness program for animals

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If one were to ask pet owners what kind of life they wanted for their pets, the answer invariably would be a happy and healthy one.[1] With today's increasingly sophisticated clinical services and the proliferation of veterinary specialists, we have effectively addressed the "healthy" aspect of pet owners' desires. But veterinary medicine has not addressed the "happy" aspect.[2] This is unfortunate, in that when people were given a choice between the 2 for themselves, they rated happiness as more desirable.[3] With happiness, as the term is used in humans,[3] there is a sense that things are right with the world. This is the goal of a caring pet owner for their pet, and it is reasonable to assume it to be a desire of pets for themselves. However, to be more precise, when we speak of animal happiness it is mental health and well-being to which were are referring.

Mental health in animals has received scant attention except when it contributes to behavior problems. But, mental health and well-being encompass much more than behavior problems, including positive experiences, emotional fulfillment, happiness, and life satisfaction. A program designed to promote mental health and well-being is not restricted to animals with undesirable behavior; rather, such a program would be of benefit to all animals, well-behaved or not. Wellness care for mental health has equal if not more importance and value as such care for physical health. In this article, mental wellness care refers to a proactive program to promote, maintain, and maximize the mental health and well-being of animals. Such a program has the potential to vastly enrich the life experience of animals and provide them with the opportunity for maximal enjoyment of life.

Defining Mental Health and Mental Well-being

Specific definitions of mental health used for humans may be adapted for use in animals. For instance, mental health may be defined as a condition of being sound mentally and emotionally that is characterized by an absence of mental disorders and by adequate adjustment, especially as reflected in feeling comfortable and able to meet the demands of life.[4] Mental well-being is related to, but differs from, mental health. Many descriptions of mental well-being have been proposed, and there is no consensus on its meaning. However, the central element in most descriptions of mental well-being is emotional pleasantness, or a balance between pleasant and unpleasant feelings (affect) over time in one's life.[5,6] Emotional pleasantness appears to be associated with an evaluative process of how an individual animal feels about the quality of its life.[7] It is this evaluation of one's own life that makes mental well-being closely related, and possibly equivalent, to a number of other concepts, such as quality of life,[7] welfare,[8] happiness,[7,9] life satisfaction,[3] contentment,[9] and "feeling good."[10] Just as the constituent components of emotional pleasantness and life evaluation exist along a continuum, so too, therefore, does mental well-being, ranging from very good to poor. A preponderance of positive feelings and experiences would constitute good mental well-being, whereas a preponderance of unpleasant feelings would constitute bad mental well-being.[5,11]

Because of the distinction between mental health and mental well-being, an individual conceivably could have poor mental health and good mental well-being. Such a situation might occur, for instance, with a cognitive disorder such as canine cognitive dysfunction.[12] In such a situation, the cognitive decline diminishes mental health but also, by its very nature, prevents the animal from recognizing or caring about the loss of mental functions. Hence, the animal does not or cannot perceive the quality of its life as being altered, and mental well-being is therefore unchanged.

Emotional Needs

As for physical health, the basic foundation of mental health is the meeting of needs. Needs, both physical and emotional, are those factors required for normal function; basic needs must be satisfied for an animal to maintain a state of physical and psychologic homeostasis.[7] Examples of physical needs include water, energy (nutritional input), and excretion of waste products. Examples of emotional needs identified in animals include social companionship,[13] mental stimulation,[14] controllability,[15] predictability,[15] and skills for coping with stress and challenges.[16] All needs appear to have evolved because of their associated survival advantages.[17]

When emotional needs are not fulfilled, unpleasant feelings arise that alert the animal to the need and motivate behavior to lessen the intensity of the

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unpleasant feelings. Because unmet emotional needs result in unpleasant feelings that are adverse to mental health and mental well-being, attention to emotional needs is the most fundamental requirement of any program for maintaining mental health and well-being.

Developmental Aspects of Mental Health and Mental Well-being

Mental health and well-being have important developmental influences during the early stages of life. Most importantly, specific periods during early life—termed sensitive periods—play crucial roles in mental development. Events that occur during these sensitive periods guide the development of emotional processes in beneficial and detrimental ways, thereby having profound implications for mental health and mental well-being throughout life.

Numerous studies have identified a relatively well-defined period during which animals form their primary social bonds.[18] This socialization period, which occurs between 3 and 12 weeks after birth in puppies and between 2 and 7 weeks after birth in kittens,[19] is the time during which animals form social attachments to their own and other species. Dogs and cats that have not been properly socialized with people and other animals by the end of this period may never be able to develop healthy, positive social relationships with people or other animals. In such cases, people and animals may be perpetual sources of fear rather than comfort.[19]

Another important sensitive period is the time during which exposure to a specific stimulus desensitizes the animal to that stimulus. This reduction of fear through familiarity optimizes mental health and well-being throughout life by minimizing fearful experiences. An especially clear example of this is the process of imprint training of neonatal foals. Exposure of neonatal foals to various stimuli (eg, loud noises, flapping flags, whistles, gunfire, submergence in water, and being touched anywhere on the body) during first 3 days of life permanently desensitizes them to those stimuli. Similar processes have been identified in rats[18] and dogs.[20] Early enrichment and exposure to a variety of stimuli is beneficial in reducing fears for the pets' lifetimes.[20,21]

Numerous studies have indicated that emotional health and development are highly influenced by human handling during infancy. Petting and handling of young rats increase viability under stress,[22] and handling of rat pups during infancy is the single variable most strongly associated with emotional reactivity throughout life.[23] Rats that were handled during infancy have reduced displays of anxiety and fear when placed in situations of novelty or conflict, and these emotional effects persist well into adulthood.[24] Human handling of infant animals can also slow mental changes associated with aging. A study[25] of the effects of neonatal handling on rats revealed that rats handled as infants had less hippocampal cell loss and fewer age-related spatial memory impairments in old age. Cats handled during infancy are more resistant to stress, display less fear, and are capable of learning certain tasks faster than cats that are not handled.[26]

A third crucial sensitive period is the period during which fears may be permanently instilled, resulting in heightened fear responses to certain stimuli throughout life.[20,27] Psychologic trauma or fearful experiences that occur early in life, especially between 8 and 10 weeks of age in dogs, can result in fearful responses that can endure for the life of the pet.[27] Minimizing animals' exposure to emotionally distressing situations during these times is an important developmental aspect of mental wellness care.

Reproductive Aspects of Mental Health and Mental Well-being

Reproductive status and interventions also appear to have important implications for mental health and mental well-being. The sex drive, especially in males, is a powerful motivational force; therefore, when a motivated animal is prevented from acting upon this drive, it may experience intermittent or persistent frustration. Spaying and neutering can alleviate or prevent this emotional state and, presumably, create a less distressed mental state throughout life. Moreover, spaying and neutering lessen the risks of numerous diseases[28] and, hence, lessen the negative impact of the discomforts of these illnesses on mental health and well-being.

On the other hand, neutering may not be uniformly associated with improved mental health. A recently reported study[29] in dogs suggests that neutering may be associated with adverse mental health effects in later life. Gonadectomized male dogs had a higher rate of progression of cognitive impairment, compared with sexually intact males, suggesting that circulating testosterone in aging sexually intact male dogs may have a protective effect against the progression of cognitive impairment.[29]

Influences on Mental Health and Mental Well-being

Mental health and mental well-being each exist on a continuum ranging from poor to good, and certain factors are known to have a positive or negative influence on these mental states. To maximize mental health and well-being, mental wellness programs should focus on maximizing positive influences and minimizing negative influences.

Social companionship—A large body of research indicates that social animals have been evolutionarily equipped with a complex set of emotions to promote social bonding, affiliations, and relationships.[17] These emotions appear to be associated with highly pleasurable feelings, which act as a strong motivator and reward for social interactions.[17] The neurologic basis of the emotional pleasure of social bonding has been elucidated in studies[17,30] involving a variety of animal species, which have revealed that friendly and affectionate social interactions, such as grooming, play, and physical contact, activate brain opioids and other neuropeptides known to be associated with pleasurable feelings. In dogs, numerous studies and anecdotal observations have indicated that human contact is rewarding for socialized individuals, appearing to elicit immensely desirable feelings.[31,32] Social contact is not invariably pleasurable, however. Personality, socializa-

tion, previous social experiences, and familiarity all contribute to whether social interactions are pleasurable or stressful.[10]

Social affiliations are further enforced by unpleasant emotions that serve to discourage separation and isolation. If social relationships are disrupted, severed, or impaired, a number of unpleasant feelings are activated to motivate the animal to reestablish the social association.[17,33] A social animal left by itself will become stressed,[34,35] and dogs kept in conditions of social isolation develop abnormal behaviors such as pacing, circling, and whirling.[36]

The neurologic basis of social isolation has been most extensively studied in rats, dogs, and primates, and the processes have been found to be quite similar among all mammals.[17] The emotional discomfort appears to be mediated by some of the same neuropeptides that are associated with pleasurable feelings of social connectedness, namely, opioids, oxytocin, and prolactin.[17] Opioids appear to play the largest role; studies[13,17,37] have consistently indicated that opiate compounds lessen the signs of emotional discomfort associated with social deprivation, decreasing the animal's need to seek companionship.

Mental stimulation—Research in the neurosciences has indicated that the brains of higher animals are constructed to function optimally when receiving a specific amount of stimulation; when too much or too little stimulation is presented to the brain, disorganization, instability, disease, and suffering may result.[38,39] Studies consistently indicate that mental stimulation is emotionally rewarding to animals, and there is a strong motivation to seek novel stimuli and avoid a stimulus-deficient environment.[14] Visual and physical exploratory behavior is reinforcing,[14,40] and animals will work for light, to obtain access to another environment, or for brain stimulation.[41] Rats will choose a more complex environment over a less complex one and will quickly learn to perform a task to gain access to a new compartment to explore.[38] Many animals prefer to work for their food rather than have it available freely.[14,42,43] Primates will work and learn simply to engage in problem-solving behaviors, with or without external rewards.[10] Novel stimuli appear to be associated with positive feelings in animals.[44]

Inadequate mental stimulation, on the other hand, gives rise to the unpleasant emotional state of boredom, which serves to motivate the individual to seek stimulation and thereby alleviate the discomfort.[14,42] Boredom is a form of distress[45] that, when severe, may cause more suffering than physical pain[46] and is a serious impairment of mental well-being.[42] Boredom occurs in animals inhabiting unstimulating, unchallenging, and monotonous environments.[14]

In animals, inadequate mental stimulation can lead to a vast array of abnormal, maladaptive, and even harmful behaviors.[14,42] Stereotypic, repetitive behaviors, such as pacing, weaving, bobbing up and down, rocking, bar biting, masturbation, self-licking, tail and flank sucking, self-mutilation, and self-clasping, are observed in many species of farm animals, zoo animals, laboratory animals, and companion animals that are inadequately stimulated mentally.[47,48] Boredom in dogs and cats is known to lead to forms of self-trauma and self-mutilation.[49] However, the distress of boredom may have subtle or no recognizable signs, often manifesting as sleep or passivity.[14]

Sense of control—Considerable research involving a wide variety of animal species, including humans, has demonstrated the importance of a sense of control for mental well-being.[3,11,15] A sense of control over one's life and circumstances is one of the most reliable predictors of positive feelings of well-being in human beings.[50] For animals, the ability to control unpleasant feelings (eg, anxiety, fear, loneliness, boredom, pain, and nausea) has an important influence on mental health and well-being.[15,51] Animals raised in situations in which they were given control over such things as access to water and food and the amount of light in their habitat grew up to be more exploratory, more self-confident, and less anxious than animals that received the same water, food, and lighting but had no control over these factors.[52] The sense that one has control, even if it is not exerted, is highly effective in reducing the intensity and harmful effects of physiologic and emotional stress.[11,16]

A sense of control over adverse conditions, specifically the ability to minimize emotional distress, is one of the most critical needs for mental health and well-being in animals. A sense of control provides positive expectations about one's circumstances and creates hope that unpleasant life events will not endure. In practical terms, providing a sense of control means providing the animal with the means to end or lessen emotional distress and offering choices in life, such that by exercising various options the animal perceives the ability to control events, especially those of an adverse nature, in its life.

Animals deprived of any control over their own circumstances, especially under persistent or repetitive aversive conditions, may develop severe emotional distress in the form of helplessness and hopelessness.[15] Animals in disturbing (ie, mildly aversive to oppressive) conditions feel helpless and hopeless when they experience repeated trauma or distress over which they have no meaningful control.[50] These individuals learn that regardless of any response they might try, the unpleasant situation will continue or recur, and they may develop paralysis of the will, passive resignation, and motionless apathy.[50] This condition, termed learned helplessness, is a debilitating emotional state that, when protracted, amounts to depression.[15] After exposure to uncontrollable stressors and development of learned helplessness, animals have great difficulty coping with all kinds of life's tasks and challenges, even the most routine, such as competing for food or avoiding social aggression.[15]

Predictability—Unpredictability makes stressful stimuli much more stressful.[16,53] For example, animals have more pronounced stress responses when aversive handling is unpredictable than when the same handling treatment is given in a predictable way.[54] It has been hypothesized that the unpredictability of life events, in particular stressful stimuli, creates a persis-

tent anxious, stressed state in which the animal constantly fears the unknown onset of another aversive event.[16] Conversely, the ability to predict events provides a sense of stability and security, allowing the mind to experience calm and comfort between aversive events.[16] This notion is supported by the finding that even in the absence of any stressor, the loss of predictability itself elicits a physiologic stress response.[16] On the other hand, too much predictability may also be undesirable, as total predictability in life can be equated to monotony and, hence, risks boredom. Accordingly, too much or too little predictability can each have detrimental influences on mental well-being.

Mechanisms for coping with stress—Defining stress has been an elusive task, and thus far no definition has been entirely satisfactory. Extensive research has characterized the physiologic manifestations of stress (eg, activation of the autonomic nervous system and hypothalamic-pituitary-adrenal axis). However, when we speak of stress, we are frequently referring to an emotional experience, or more specifically, the unpleasant emotional experience elicited by some stimulus. In fact, it has been experimentally demonstrated that it is the psychologic component of stress that is most, and possibly solely, responsible for eliciting the physiologic stress response.[55-57] Accordingly, stress and unpleasant emotional experience have often been used as relative synonyms. In animals, substantial evidence suggests that there are several emotional forms of stress, including fear, anxiety, loneliness, frustration, anger, grief, and depression.[14,17]

Because stress is so closely associated with unpleasant feelings, it would follow that stress is invariably aversive to mental health and well-being and that a mental wellness program would include a provision for protecting animals against stress. However, substantial evidence supports the contention that some degree of stress is necessary and beneficial to animal well-being and that too little stress can be unpleasant to the animal and detrimental to well-being.[9,14,58] The most important aspect of stress as it pertains to mental health and well-being appears to be the animal's ability to respond to demands of its environment, that is, to cope effectively with stressors. Coping refers to the animal's ability to lessen the negative impact of a stressful stimulus.[45] Coping strategies include physiologic, cognitive (eg, reasoning, memory, and positive thoughts), and behavioral (eg, escaping, problem-solving, scaring away the threat, seeking social support, and acquiring mental stimulation) responses.[45] The ability to cope appears to be the factor most correlated with the impact of stress on mental well-being[9] and physical health.[15] Some researchers consider adversity and coping to be the principle constituent of mental well-being.[59] In this view, mental well-being derives from successfully coping with life's problems, not from experiencing no problems that demand coping behavior.[10] Thus, mental health and well-being depend less on the quantity of stress encountered and more on how well the animal is succeeding in or failing to cope with the stress and its associated feelings.[9,59] This suggests that a challenging environment with some adversity is more supportive of mental well-being than a benign and sterile, although physically safe and healthful, environment.[10]

Stress research has identified specific factors that lessen the psychologic and physical (health) impact of stress, thereby assisting individuals in coping effectively with stressful stimuli and events.[16] These factors include social companionship (with familiar and compatible companions,[60-62] including humans[63,64]), a sense of control over the stressor, and predictability of the stressor.[53,54]

Pleasurable and positive experiences—Mental well-being, reflecting the balance of pleasant and unpleasant feelings, is benefited by experiencing pleasurable feelings. In addition to the pleasurable experiences of social companionship and mental stimulation already mentioned, other examples of pleasurable experiences include taste pleasures (palatable foods, snacks), human touch (petting, massage, lying in lap), climbing, digging up things, and lounging in sunlight. Pleasurable experiences are not limited to what human caregivers actively give to animals; rather, the animal's life should consist of plentiful opportunities for the animal to generate positive, pleasurable experiences for itself. If an animal's life is devoid of a meaningful ability to generate positive experiences, the animal's mental well-being will be adversely affected.

The benefit of pleasure has limits, however, and maximization of pleasure is neither necessary nor desirable for optimal mental well-being. This is because animals do not always choose that which is in their best long-term interest, opting instead for immediate over delayed rewards.[65] For example, permitting a pet unlimited consumption of highly tasty foods may maximize pleasure but ultimately will harm well-being by contributing to the development of obesity.

Physical health—The discomfort of disease or injury contributes powerful unpleasant feelings to one's overall life experience.[66] Relief of this discomfort is a primary reason people seek health care.[67] The negative influence of disease on mental well-being is further compounded by the fact that infirmity and physical disabilities have the potential to limit one's opportunities for experiencing pleasure.[50] By inducing unpleasant discomfort states and limiting pleasurable experiences, health disorders exert a powerful influence on the balance of pleasant versus unpleasant feelings and may adversely affect mental well-being.[10,50]

Anxiety and fear—Innumerable causes exist for anxiety and fear. Some of the more common inciting causes in pet animals include loud noises (eg, construction work), teasing and torment by children or other animals, maltreatment or abuse, and tension and fighting among the people in the house. A specific source of anxiety in dogs is associated with the canine social structure. Dogs, like many social animals, form organized dominance hierarchies; this social structure minimizes confusion and antagonistic encounters, thereby promoting group order and stability. When dominance hierarchies are poorly established or frequently disrupted or an individual is uncertain of its

position in the hierarchy, the individual animal develops a measurable stress response[16] and adverse health effects[68-70] and experiences anxiety.[20,70] In dogs, anxiety resulting from uncertainty in the social hierarchy may be expressed in the form of aggression.[20] To a certain degree, dogs regard human family members as other members of the pack[19]; therefore, anxiety for dogs would likely be minimized if the hierarchy in the household, including human members, were clearly established.

Nutritional Aspects of Mental Health and Mental Well-being

The role of nutrition in mental health and well-being has received little attention, but the few studies that have been published suggest that nutrition may play an important role and is worthy of additional study. Dodman et al,[71] for instance, studied the effects of dietary protein content on aggression in dogs. They found that in dogs with fear-induced territorial aggression, a lower dietary protein content resulted in a significant reduction in aggressive behavior. Using behavior as a reflection of mental health and well-being, these findings indicate that, in certain circumstances and for certain individuals, diets with a high protein content may be adverse to optimal mental health.

Cognitive impairments associated with aging in dogs[12] may respond to nutritional intervention. A new food[a] has recently been developed and marketed for dogs that according to the company's research improves cognitive performance in aging dogs.[72,73] The relevant ingredient of the diet is a blend of antioxidants intended to protect against free radical damage.[74] The company's literature claims that the diet has been clinically proven in older dogs to improve alertness, increase learning ability and attentiveness to problem-solving tasks, and improve signs of disorientation, social interactions, altered sleep patterns, and house-soiling.[73,74] Because the diet appears to reverse the changes of canine cognitive dysfunction,[12,72,73] mental health may be benefited by such dietary interventions. A similar food[b] has been recently marketed by another manufacturer; however, no specific claims have been made regarding mental health benefits.[75]

Excessive food intake may be linked to diminished mental well-being. If caloric intake results in obesity, mental well-being may be adversely affected by the increased discomforts attributable to the burden of extra body weight, specifically joint pain.[76] In addition, the decreased mobility and activity accompanying obesity will lessen opportunities for pleasurable activities, such as energetic play, walks, and runs. In addition, obesity may be the result of diminished mental well-being. It has been proposed that animals enduring boredom or frustration may resort to food consumption as their only pleasure; in such situations, eating serves as a coping mechanism.[77] This would suggest that obesity may, in certain situations, be a sign of poor mental well-being and that there would be important value in assessing the mental well-being of overweight animals.

A Proposed Mental Wellness Program

The goal of a mental wellness program is to promote, maintain, and maximize mental health and mental well-being. Such a program should be proactive, using a preventive approach to address developmental (ie, the formation in early life of a healthy psychologic state) and maintenance (ie, sustaining mental health and well-being throughout life) aspects of mental health and well-being.

A useful way to conceive a comprehensive mental wellness program is to view it as a 3-part program consisting of prevention, protection, and promotion. Prevention focuses on measures instituted in the early stages of life that foster the development of mental stability and emotional balance. Protection refers to measures to minimize (though not necessarily eliminate) unpleasant feelings of physical and emotional origin and to provide animal with the tools to effectively cope with stress. Promotion refers to increasing opportunities for animals to experience pleasurable feelings and experiences by offering them things that bring pleasure and eliminating impediments to experiencing pleasure.

Prevention—During the socialization period, encourage interaction and positive experiences with people and other animals. Specific measures include encouraging early play and interaction with the dam and littermates, placing young pets in new homes during the socialization period to permit social bonds to be formed with new owners, and exposing young animals (especially puppies) to as many different people (ie, individuals of both sexes and various ages and races) and animals (dogs, cats, and others) as possible.[19] For puppies, positive experiences with other dogs early during the socialization period can be achieved through puppy socialization classes and daycare programs.[78]

During the sensitive period in which exposure to stimuli has a fear-desensitization effect, young animals should be exposed to a wide variety of stimuli,[19-21] including all stimuli the animal might be expected to encounter in its life (eg, car and air travel, thunderstorms, fireworks, children, gunfire, and traffic noises). Exposure to novel locations, such as parks, other homes, crowded offices, and elevators, will best ensure emotional confidence and stability when the pet later encounters strange places.[19] A special consideration involves health and physical care. Exposing the animal to medical and physical maintenance procedures during this sensitive period (eg, nail trimming, combing, bathing, trimming with electric clippers, ear manipulations, taking a temperature, teeth brushing, pill giving, and visiting the animal hospital) will lessen the adverse emotional impact of such stimuli during ongoing health care and physical maintenance procedures.[20]

During the sensitive period in which fears may be permanently instilled, psychological trauma, fearful experiences, and other emotional distress should be avoided.[20,27] Visits to the veterinarian, bathing and grooming, car rides, changes of ownership, exposure to aggressive animals, interaction with harsh or abusive people (children or adults) should be avoided if possible. For events that cannot be avoided, such as veterinary visits, the experience should be as positive as possible, avoiding specific traumatic events such as injections.[20]

Protection—Minimize unpleasant feelings. All unpleasant feelings of physical and emotional origin may adversely affect mental health and well-being. Thus, efforts should be directed at protecting the animal from all forms of unpleasant feelings, whether physical (eg, pruritus) or emotional (eg, separation anxiety). This encompasses the idea of meeting emotional needs. However, total elimination of unpleasant feelings is neither possible nor necessarily desirable, and the goal is to minimize such feelings. Straightforward measures would include providing positive stimulation (eg, play, games, toys, recreation, challenges, opportunities for exploration, variety, and novelty) to combat boredom, social companionship to alleviate feelings of social isolation, and proper health care to minimize discomforts of disease and injury. Other steps may not be as evident but address specific sources of anxiety and fear. For example, because an unstable dominance hierarchy may contribute to anxiety in dogs, obedience training to establish a clear hierarchy among the human and canine family members will minimize chances for this specific emotional distress. Another example is the emotional distress associated with separation of a pet from its bonded human companions, that is, the pet becoming lost. Measures taken to facilitate reestablishment of the social connection, such as identification tags, tattoos, and microchip implants, will help protect the pet from the emotional trauma of being separated, potentially permanently, from the security and comfort of its human family.

Spaying and neutering appear to have protective effects for mental well-being by alleviating the highly motivating feelings associated with the sex drive and lessening the risks of several diseases and their associated discomforts. The evidence that neutering male dogs is associated with a higher rate of progression of cognitive impairment[29] raises a new concern for mental wellness programs. However, weighing the benefits versus the risks, it would seem, at this time, that spaying and neutering would have a net benefit for mental health and well-being.

Specific nutrition may offer protection against certain mental health disorders associated with aging.[72] Preliminary research suggests that elderly animals with cognitive dysfunction may benefit from being fed foods formulated with blends of antioxidants.

Provide tools for effectively coping with stress, including a sense of control over stress. Good mental health and well-being appears to be associated less with an absence of adversity (stress, unpleasant emotions, and experiences) than with an ability to respond to and cope effectively with stress. The promotion of good mental health and well-being therefore includes the objective of providing the means to cope with the challenges and stresses of life.

Coping refers to the array of responses that help an individual lessen the negative impact of stressors. Physiologic coping mechanisms could be assisted by pharmacotherapy,[79] but most practical for a wellness program is to equip and assist the animal with behavioral coping mechanisms, either through environmental enrichment or enhancement of the animal's opportunities to adapt to the stressor. Specific behavioral coping mechanisms are assisted by providing places to escape from stressors (eg, having a safe place to hide when frightened), opportunities for play and exercise, social support (human presence and conspecific companions), and the ability to increase or decrease the degree of stimulation experienced.

A sense of control over one's circumstances is an important tool for coping, a basic emotional need, and highly beneficial to mental well-being of companion animals.[15] Providing the animal with a perception of control is achieved by examining the pet's situation and seeing that the animal has some ability to lessen the intensity of unpleasant feelings or to improve an unpleasant situation, such as boredom, loneliness, frustration, fear, or pain (eg, by escaping or hiding, seeking out desired stimulation or better conditions, or actively easing its own discomfort), can make requests (signaling to the owner when it would like to go outside or on a walk, when it would like the owner to play with it, or which food it would like), or has meaningful opportunities to make choices (going outside or staying inside and which toy to play with). Each of these represents a different method of control that an animal can exert over the events in its life.

Some important qualifications regarding control deserve mention. First, total control is not desirable and may, because of the excessive psychologic burden imposed, be harmful to mental health and well-being.[16] Second, when given opportunities for control, some dogs—specifically, dogs with a dominant-type personality[19]—may respond by attempting to acquire an excessive amount of control, manifest as dominance and aggression. For these dogs, control must be rigidly structured, such that the dog must earn the right to exert any control by, for example, first obeying a command from its owner.[19,20] Finally, the benefits of control to well-being, especially control in the form of making choices, are predicated on the assumption that animals choose what is best for their own well-being. However, as previously mentioned, animals, like children, do not always choose what is in their best long-term interest. Therefore, control in animals, as in children, requires certain limitations to ensure optimal long-term well-being.

Promotion—Promote pleasant feelings and pleasurable experiences. Mental well-being, reflected by a preponderance of pleasant feelings over unpleasant, can be expected to be benefited by increasing pleasant feelings and experiences. Examples of enjoyable experiences include play, mental stimulation, social interaction, tasty foods and treats, and human contact. The interaction, exercise, stimulation, and freedom of outdoors appear to be highly pleasurable for companion animals; dogs enjoy walks and runs,[19] and many indoor cats appear to receive immense pleasure by being taken outside on a harness.[80] Here, also, because animals do not always act in ways beneficial to optimal long-term well-being, increasing pleasures has limitations, and the animal caregiver must use proper judgment when increasing the animal's pleasures such that immediate joys do not come at the expense of long-term mental well-being. This is especially applicable to the one area

where pet owners frequently overcompensate for what they judge to be an unfulfilled life for their pet and provide, in excess, the pleasure of tasty foods and treats, thereby contributing to the development of obesity.[77]

Provide opportunities for the animal to generate positive and pleasant experiences. Every environment in which an animal spends its life should be evaluated for opportunities for the animal to create pleasurable experiences for itself. If it appears that no or few such opportunities exist, it is important to enrich the environment to permit the animal to be able to generate its own enjoyment. Specific methods for enrichment include interactive toys, ongoing supply of novel objects to explore, hide-and-seek games (eg, food snacks hidden around the house), visual stimulation (videotapes and windows), and, if feasible, a door with access to the outdoors.[80]

Conclusions

Health and well-being are comprised of both physical and mental components[81]; these components interact as a single and inseparable unit in the animal.[2] Thus, physical well-being—the emphasis of modern health care—is only a part of comprehensive and effective animal care.[82] The mental well-being of animals, whether we call it welfare, quality of life, or happiness, is fully deserving of a comprehensive wellness program that offers the promise of the most pleasant and enjoyable life possible. Despite the paucity of research into these mental concepts in animals, nothing would seem more obvious but that a properly implemented mental wellness program would greatly enhance the care that veterinarians, as well as all animal caregivers, could provide animals. As research further elucidates the emotions and feelings of animals, mental wellness programs can be increasingly refined to more effectively deliver progressively better care. At present, promoting mental health and well-being puts the veterinary profession and animal caregivers on the right road to giving animals what they and their owners want, a healthy, happy life.

[a]Canine b/d, Hill's Pet Nutrition Inc, Topeka, Kan.
[b]Waltham antioxidant blend, Waltham Centre for Pet Nutrition, Leicestershire, England.

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