

Power of Positive Human Animal Relationship for Animal Welfare

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INTRODUCTION

Relationship of human and animal is a significant factor of animal welfare. Domestic animals pursue and enjoy relations and companionship with humans, apart from depending on humans for nutrition. Animals from other classes such as zoo, laboratory and wild animals are also capable to develop positive relations with humans. Operationally human animal relationship can be expressed as animal spatial closeness, relaxation, pleasure, keenness or some other signs of rewarding experience that rise from relations with the human (Hunt et al. 1992). Positive feelings develop for short term through positive human animal relationship and stress flexibility, wellbeing outcomes for animal once or later related to human develop for long term. The relationship between animals and humans is continuous from past and has recognized into different facets associated to fear, appreciation, nutrition, subjugation, transportation, protection, security, company, utilization and fun, etc. Above the last few eras, this affiliation has settled into dissimilar facades which have risen fresh, therapeutic and some hygienic concerns. These concerns have created animal welfare groups, many relations form protest activities in several regions such as civilizations, trade, entertainment and transportation etc (Terlouw et al. 2005).

This chapter briefly discusses about the positive human animal relationship, its assistance, consequences, benefits, effects, domains and measurements of human animal relationship.

Ambition of animal welfare is that animal pass from good and bad experiences throughout its life. It is necessary to provide proper life, physical health and comfort sustaining needs as illustrated in Fig. 1.

Categories of Human and Animal Relationships

Human animal relationship categorized into affiliative relationship, animal assisted intervention and service animals. Animal assisted intervention is further subdivided into animal assisted activities and animal assisted education. Service animal is subdivided into animal assisted therapy (Waiblinger et al. 2006) as shown in Fig. 2.

Assistance of Human Animal Affiliation

Human animal relationship is significant and has long term effects on safety of animals. This affiliation is sometimes life threatening to the animals such as animal production, management, friendship and satisfaction for human. Human animal relationship is stress resilience such as positive relations to housing dogs can decrease cortisol level and unite with physical activity to increase adoptability through walking and patting dogs till fifteen minutes in a week for six weeks, but positive and negative human relations can also influence the dogs sleep (Rybarczyk et al. 2001). Weekly brushing for five minutes to milking heifers assist acclimation to milking routine. Back scratching for five seconds to sows till one week minimized piglet death in sows. This shows that positive relations with humans are advantageous to animal organization as well as animal welfare (Waiblinger et al. 2006). Positive human animal relationship can also defense aversive events such as veterinary examinations and administration involvements for cow, sheep, ostrich and pig by eliminating human related issues that provoke mechanisms. Furthermore, humans can also deliver social maintenance to animals throughout traumatic phase. Social maintenance efficiency can be moderated by the worth of human animal relationship (Hausberger et al. 2008).

Benefits of Human Animal Relationship

Positive relationship with humans gives several benefits as they typically occur every day and it does not need extra assets such as material. Chimpanzees preferred to live in their zoo arena where they can be nearby and notice guests and it represent that animal relations with humans are exciting (Fureix et al. 2009). Humans encourage positive emotive state

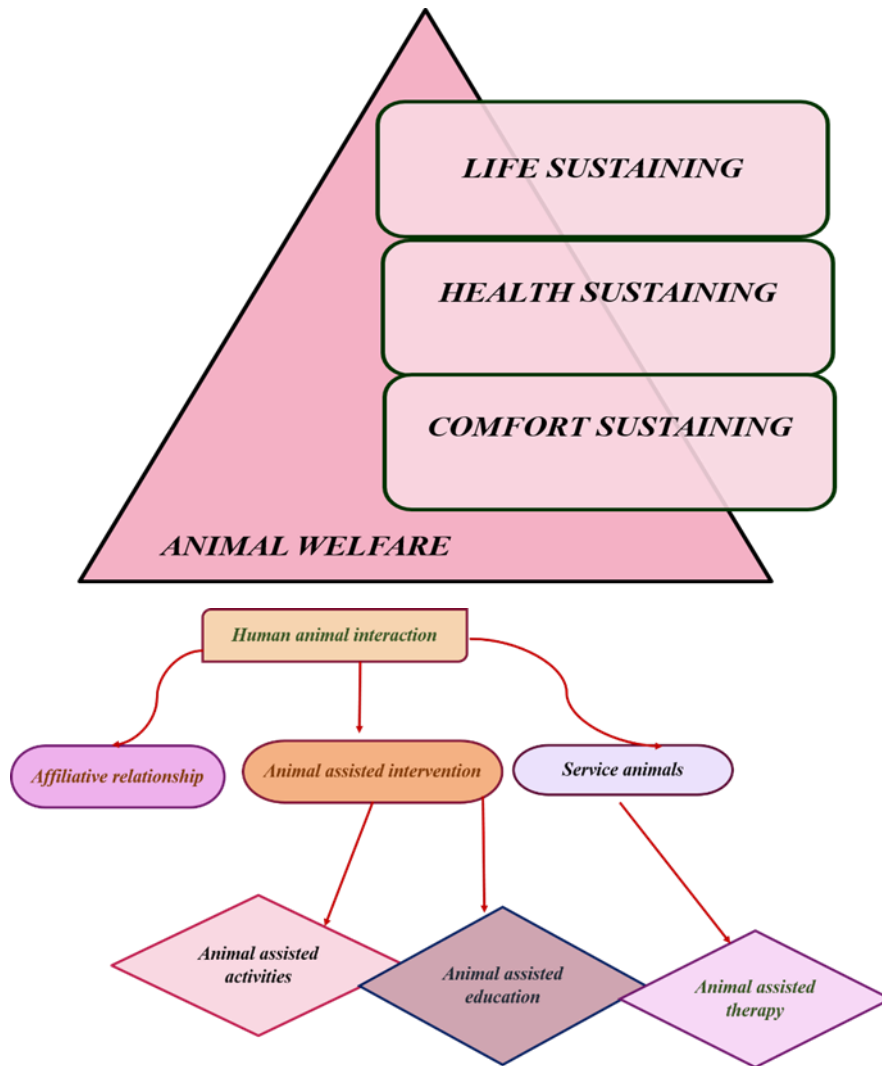


Fig. 1: Animal welfare necessities which include life sustainability, Health sustainability and Comfort sustainability

Fig. 2: Categories of animal human relationships

ambiguous and suggestive signals by rat tickling and contact with pigs. Positive human animal relationship development provides profits for long period. The persistence effect of positive human relations is five to sixteen weeks for pigs, six to eight months for dairy cattle, twenty-four months for beef cattle, twenty-five months for goat and six to eight months for horse makes it an intervention with lifelong effects. Hereafter, positive human animal relationship can provide positive welfare consequences, like better anxiety flexibility, social maintenance, ecological enrichment, positive affecting states and profits for human (Hausberger et al. 2002). The benefits of human animal relationship are briefly described below:

Social Benefits

When people involve in discussion or enter into social condition sometimes, they face anxiety and high blood pressure. Animals encourage our aptitude to link with others around us by boosting discussion and assisting in drop of uneasy approaches people may experience (Henry et al. 2005).

Behavioral Benefits

Animals introduce behavior and responsibility into survival of children as family. Animal is deliberated a child's child and it has been observed that 48% of relations reflect their pet as a family member (Sankey et al. 2010).

Emotional Effects

Animals are center of consideration as most of the animals, particularly pet and domesticated animals typically do things that make us laugh (Henry et al. 2006).

Physical Effects

Watching animals' physical activities and exercise, marks a better physical power in human beings. For example, common side effects of Alzheimer's disease are loss of appetite and weight. Patients of Alzheimer's sit in front of

fish tanks in mealtime. While watching fish through normal intake periods, patients establish metabolic achievements in their weight and experienced a rise in appetite. This study shows the impact of human-animal relationship upon the ultimate health of human (Sankey et al. 2011). Relationship between human and animal is illustrated below in Fig. 3.

Disadvantages of Human Animal Relationship

There are many advantages of positive human animal relationships, however there are some disadvantageous of this relationship as well. For example, contact of animal can be problematic to handle because of fear of individuals, though animals are in fear with unfamiliar handlers and handling site that take lengthy to move and walk than those who have positive human relations which represent an interaction and awareness of location between human and animals. Safety and trust of followers is necessary as animals with slight fright can be risky, specifically in case of wrong human attitude that can be dangerous or possibly aversive events such as bite of animal that can occur due to its close interaction or management. Proper animal's management can diminish risks of violence and injuries. Positive human animal relationship may set limits such as safe space and avoid dangerous interactions. Group animals normally learn to separate suitable social activities from unsuitable during their improvement that is part of socialization, development and improvement of social services. Development of socialization may also affect animal's actions toward individuals (Mason 2004).

States of Human Animal Relationship

States of human animal relationship are contact, appreciation and development of sensitivity toward animals, learnings through observation, protection and defense or animal assisted activities (Sherman et al. 2008) as described in Fig. 4. Contact of animal represent animal behavior. Appreciation and development of sensitivity toward animals is important state of relationship in which sensitivity is perceived by animals like dogs detect if we fear and birds realize if anyone approach to them warily. Learnings observation requires acquisition of new behavior, adaptation and existing one. Learning by animals requires us to imitate their behavior or relate their aptitudes to human lifespan.

Protection and defense is fourth state and play therapeutic role that is achieved by contact of animals, development of sensitivity of animals and learning through observation.

Assisted activities related to animals is the best recognized state while human animal association is mentioned from an informative or therapeutic point (Tallet et al. 2009).

The Five Freedoms of Animals

Freedom of animal must be kept in mind. There are five states of freedom of animals that are as follows:

- The animal must be free from hunger, malnutrition and thirst and animal must easily be approach to water and suitable diet (Fig. 5).
- The animal must be free from thermal and physical discomfort and it must provide proper shelter & comfortable resting area.
- The animal must be free from pain, disease and injury. It must facilitate with suitable prevention by using vaccine and deworming and treat in case of any diseases after proper diagnosis.
- The animal must be in a state to express its normal behavioral as animal must need adequate space, proper services and company of further animals.
- The animal must be free from any fear and distress in order to prevent mental health suffering (Hausberger et al. 2007). These five freedoms were established by the government of United Kingdom in a book named as "Animal Machines" written by Ruth Harrison in year 1964.

Consequence of Human Animal Relationship on Animal Productivity

Positive interaction can minimize human distress, like training may improve production of farm animals. According to a study human animal relationship may decrease resources that are required to animals to react connections of human and these can be consumed for productivity. In case of poultry, positive relationship improves the development in feed efficacy and weight gain in chickens. Though, positive interaction sometimes had insignificant or adverse effect on growing performance (Bourjade et al. 2009). Physical interaction involved pick up and patting of chickens seemed to be extra communicating than visual interaction in case of broiler hen. In case of laying chicken, regular visual interaction reduced upgraded egg production. Human fear may sometime be deliberated such as unfortunate growth and reproductive performance of different animals (Tallet et al. 2009). Gilts (female pigs under the age of 1 year) with pleasant treatment had improved weight gain and feed inefficiency than in the unpleasant management. Gilts in unfriendly atmosphere showed lesser pregnancy rate than those in friendly environment (Topal et al. 2003). Pigs raised up in huge clusters may take psychosomatic protection from colleagues in group. There may be few human interactions and productivity in farmhouse animals. Pleasant human interaction has insignificant effect on milk production and has less signs of anxiety in milking as compare to those cattle that are under stressed in new environment. It is summarized that human interaction is not satisfactory to diminish neuroendocrine response to isolate stress (Sherman et al. 2008).

Consequence of Human Animal Relationship on Animal Health

The immune system is an autonomous system and combined with other biological systems that is delicate to the brain.

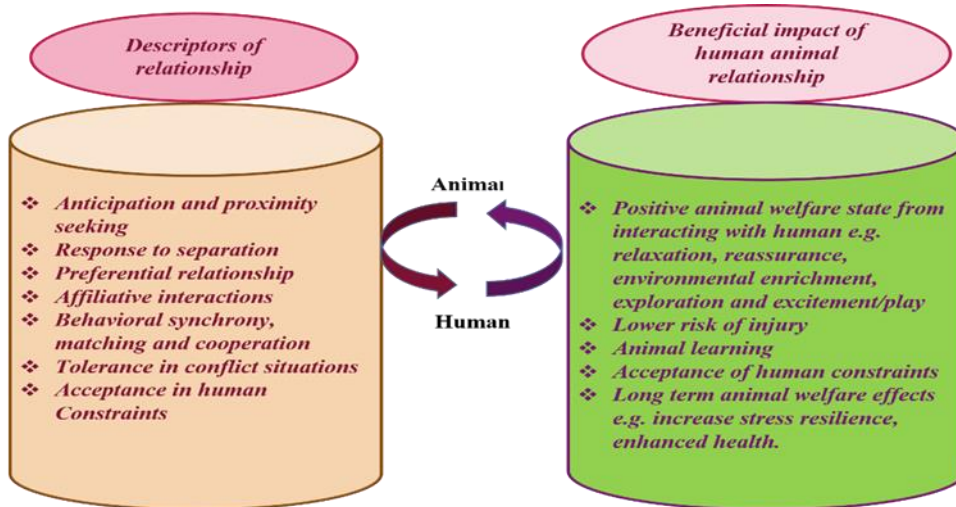


Fig. 3: Different dimension of positive human animal relationship for animals. Arrows represents interaction between animals and human

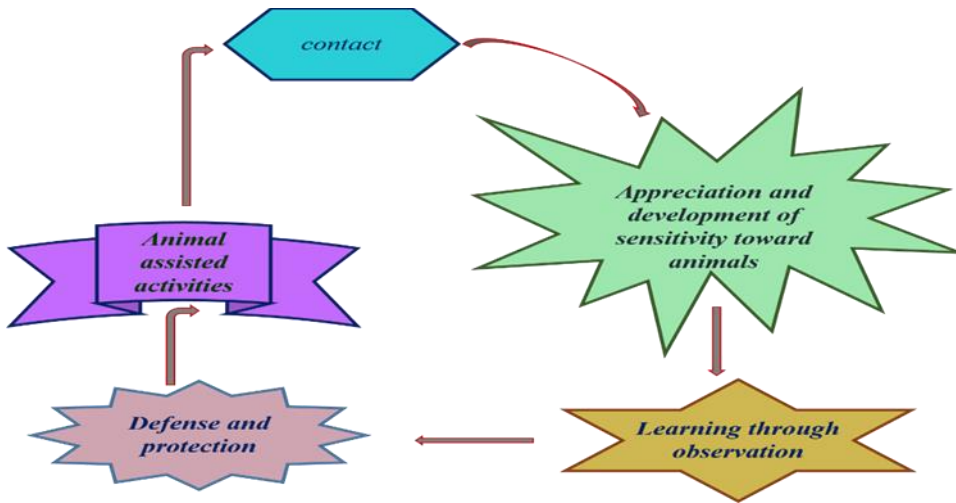


Fig. 4: States of the human-animal relationship



Fig. 5: Examples of animal welfare like proper feeding and watering

Human interaction alters the brain morphology and physiology. Farm animals sometime show certain degree of immunosuppression. Hypothalamic pituitary activation of adrenal axis and the sympathetic adrenal medullary axis leads

to chronic catecholamines and corticosteroids production respectively. Granulocytes, lymphocytes, macrophages and monocytes exhibit corticosteroids receptors and catecholamines that can change cellular transferring,

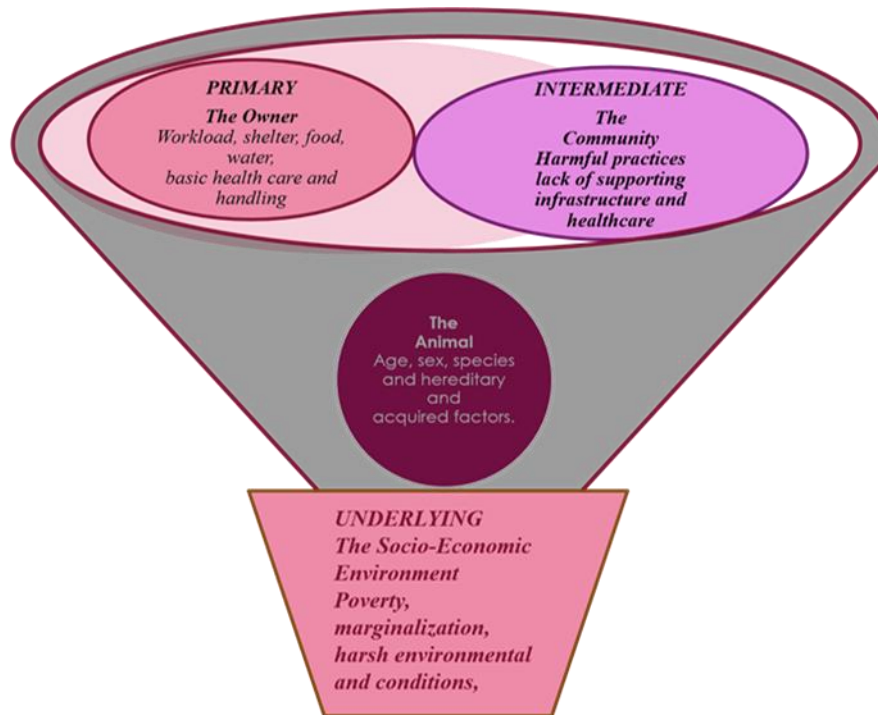


Fig. 6: Influence of Human interaction resource and environment on animal

secretion of cytokine, proliferation, cytolytic activity and antibody production. Positive human animal interaction in farm animals may boost animals' health (Parker et al. 2012). Visual interaction from zero to three and zero to six week of age may increase antibody production against Newcastle disease. Pleasant human interaction of hens can improve cell mediated immune response toward mitogen than those hens that received bad human interaction. The human interaction improves disease resilience and immune response that effect on physiological anxiety response (Purewal et al. 2017).

Influence of Human, Animal and Environment

Concept of animal welfare focuses on three main factors as mentioned in Fig. 6. First factor is the human attitudes and practices like traditions and the second factor is animal itself and resources that are available for example shelter must provide to animals, human to treat animal in case of any infection and information about prevention for example vaccination or deworming of animals. Third important factor is environment in which animal lives and surrounding area where animal need to work. Human, animals and environment are interconnected or have strong influence on each other (Schreiner 2016).

Domains of Animal Welfare

Animal welfare domains include behavior, nutrition, health and environment which emphasizes on physical difficulties.

The behavior domain emphasizes on surroundings such as environment, humans and animals which bounds appearance of natural behavior or stance a dare an animal has to respond. All these factors fall into the domain of emotional states (Rodriguez et al. 2018).

Effects of Human Animal Relationships

Effects of human animal relationship are categorized in to behavioral, educational, physiological, and psychological categories (Fiocco et al. 2017).

Behavioral

Human animal relationship is a social behavior because of its social nature. Affiliative connections to child pet ownership that support positive relations, responsibility, autonomy and decline aggression (Purewal et al. 2017). The obvious objective to assist social relationships can be helpful in treatment for autism, intellectual disability and dementia. Working animals aid social dealings and established experience of more positive social relations when their service pup is present than deprived of (Muñoz Lasa et al. 2015).

Educational

Human animal interaction provides motivational, emotional and social profits to students in all education stages. Prime

classrooms of education use dogs to encourage behaviors in order to develop performance and experience such as concentration, relaxation and motivation in classrooms through behavioral and reading programs. Furthermore, exam related tension, tension release periods, where scholars link up with animals for short time at their willpower and follow teaching space in campuses to spread large number of students (Busch et al. 2016).

Physiological

The physiological effects of human animal relationship related to stress, physiological activity and bonding. The physical profits can be direct, such as reduced blood pressure and indirect for example oxytocin hormone that elevate in bonding (Souter et al. 2007).

Less physical activity can be dangerous part of human fitness to induce diabetes, cardiac disease and several other diseases. The physical activity that dog's owner needs like dog walk is mutually advantageous and certify active lives for both holder as well as animal. Some animal related interferences that simplify physical activity, specifically for inactivated individuals. Walk improves nervous system damage, control limb and balance movement (Muñoz Lasa et al. 2015).

Bonding

Human animal relationship influences hormones that are associated with social activities. Oxytocin is hormone and a neurotransmitter that stimulates social bond and responds to relations in which both animals and humans are associated. Pet owners linked or look into eyes of dogs, which leads to an increased level of oxytocin in blood and urine of owner and dog (Coppola et al. 2006).

Psychological

Human animal relationship of different types produces positive psychosomatic effects in clinical and nonclinical people through lifetime. Pet holders are less lonesome, anxious and depressed. (Schreiner 2016). Human animal relationship not only improves over-all mood but can also decrease symptoms of emotive complaints such as anxiety, depression, behavioral illnesses, attention dearth, hyperactivity syndrome and some autism disorders (Busch et al. 2016).

Human animal Relationship Assessment

Animal welfare can be measured formally with the help of tools or informally with those findings that are built on knowledge. Both are very important and both should form by share of formal or informal involvement (De Meyer et al.

2020) Different ways are used to measure such relationship which are as follows:

Indicators

Biological alterations can occur after, before and during relations with humans. Indicators founded on structures of relations and reflect human animal relationship. Several indicators can differentiate different potentials of association and evaluate that animals have well affiliation than others however it is difficult to fix threshold where human animal relationship starts positively and indicators obviously reflect positive human animal relationship. The calculation of positive human animal relationship requires holistic investigation, given that numerous indicators must be measured together for understanding. Attention is mandatory in measurement of positive human animal relationship because the stimulus interrelate humans may be at time of contradictory with further stimuli (Normando et al. 2008).

Behavioral Changes

Behavioral changes are directly related with positive human animal relationship and their specificity toward it. Animal can show symbols of eagerness before the relations takes place, once human relations is expected and environment signal onset of human. These can be measured through appetitive symbols, like walking, communications and amplified behavioral transitions. For example, confined animal anticipate connection with humans, through enlarged surface observation and detection, these defensive behaviors associated with level of commitment in contact. These preventive signs can still be uncertain indicators as these can be representative of excitement in case of positivity & frustration in case of negativity depending on situation. The first response of an animal on entry of human at its location is an alignment reaction. Animal naturally turns consideration toward human, may be with many senses rest of visualization. The location reaction specifies that animal notices human presence, but is not obvious sign of relationship because its motivation reflects interest in case of positive and attention in case of negative state. On the other hand, body, head, ear movement and posture associated behaviors may aid to discriminate at least negative relationship and neutral to positive relationship such as cattle skull stays in normal position and ears not raised or even droopy while seeing to person and continuing rumination process (De Meyer et al. 2020). Once human enters animal's atmosphere attention seeking behavior is a sign of positive relationship. Approach is stimulus of situation and can be used with different signs. Though, a dearth of approach does not rule out positive relationship but may show low inspiration for physical communication at this phase and this accounts for conditions in atmosphere where many disturbances or challenges may follow such as feeding and

relaxation. In several cases, latitudinal proximity is indicator of human animal relationship. Duration and number of relations started by animal is sometimes used as quality indicator of human animal relationship however measurable metrics do not inevitably reflect association because animal may moderate cooperation with human according to requirement. In this concern, advance research is necessary such as study complementarity, mutuality and behavior exchanges synchrony have been revealed in quality of parent child associations (Waiblinger et al. 2004).

Behavior synchrony is related to association in humans and locomotors synchrony is detected between dogs and pet holders. Moreover, dogs with poorer level of oxytocin receive further patting from their pet holder and represent dynamic interchange of human animal relationship. Behaviors and body position show approach and interaction with humans, reflect animal's commitment in communication and provide data about awareness and motivation of animal. Moreover, solicitation activities like touching, scratching and nudging with human hand and vocalizations are signs of animal's to engage and can interpret symbols of positive awareness of relationship. Animals may also show body areas where they desire to be patted such as ventral neck area in case of cattle, front area in case of pigs, or back in case of dogs (Bertenshaw et al. 2008). These behavioral responses expose susceptible body area that may be involved for level of trust which reflects positive human animal relationship, in furthestmost cases, these behaviors reveal throughout intra-specific socio positive contacts, though there are various interspecies activities for example dog against wolf. Response of animal in human presence is clearly main symbol of positive relationship. Lack of anticipation reaction to humans is indication of animal's fear for human. Ears position changes such as frontward vs. lateral, reluctant and raised vs. flaccid are used to understand valence of human interaction like dog, horse, sheep and cow where as more delicate changes in facial appearance such as cat and parrot. Tail wiggling in dogs sometime mentioned as sign of amusement, it may be symbol of encouragement somewhat positive valence. In various species communications are sometimes linked with positive relations like buzz in cats. Rapid reduction in grief vocalizations and increased closeness looking for humans can understand as positive discernment of human presence such as goat and hand rear sheep. Dislodgment and delay behaviors in stretching dogs, licking of lip and muzzle observe in direction of upper limit may be negative signs that reflect unwillingness to interrelate or encounter motivations. (Muns et al. 2015).

Physiological Changes

Oxytocin is related to social procedures. Positive connections with humans increase oxytocin concentration. Positive human animal relationship and variations in concentrations

of oxytocin is complex and cannot be easily understandable. Concentration of cortisol changes positive relations with direction that reflect keenness of dog and easing dog. Change in concentration of cortisol is time and circumstance dependent. Change in cardiac rate and its variability due to cortisol measures indication of autonomic reaction (Foster et al. 2012). For advance research physical changes required specifically neurotransmitter like opioids, dopamine and some immune parameters. Positive connections induce collection of immune and physiological changes in both humans and animals. Rabbits receive regular human interaction that shows lesser prevalence of atherosclerosis. Hens has advanced immune reaction, disease resilience and visual interaction with humans improved antibody reaction to Newcastle vaccination and reduced heterophil toward lymphocyte ratio and limitation in life (Baker 2004).

Neurobiological and Cognitive Effects

Mental preference has been widespread as secondary evaluation of situations through reviewing affect. Scratching of animals by human brings to positive judgment of uncertain hints, signifies that it persuades positive emotional condition. Positive human animal relationship leads to positive responsive conditions involves further study. Further methodologies depend on animal's memory Horses that are skilled use positive consolidation training with human communications that evoke human and spent more time. Ewe can also be taught to discriminate human looks and think of those faces for above two years and sheep also identify their caretaker deprived of pertaining. These verdicts support that positive human animal relationship can be long-term. Neurobiological studies of optimistic relationship are still in initial stage with use of practical ultraviolet spectroscopy, electroencephalography, and autopsy brain actions in dog, pigs, and sheep. Humanoid animal relationships can grow with fresh methods like neuroimaging in case of dog that permit noninvasive longitudinal neurobiological studies (Rault 2011).

Post interaction Changes

Maximum studies are based on biological deviations from the time of mankind existence. There are sum of variations that can reveal positive effect such as relaxation, post-consummatory and negative effect like separation distress, and searching performance. These interactions sometime ignored to deviations during communication. Directories contain ear hanging position in cattle, lower heart rate, break or well sleep in dog and better parasympathetic action in various species that elevate oxytocin concentration in brain. Signs of efforts to re-establish interaction, after disruption of contact, as showed by symbols of separation suffer or examine behavior as in dog and hand raised ewes. Symbol of human animal relationship are marks of pain, negative

emotional conditions, incisive activities and sorrow when relation is interrupted. Advance research is necessary on optimistic human animal relationship that bring changes on animals. For illustration, temperate human contacts during benefitting or raising can clue to scarcer hostile connections between dairy animals once they return to flock and lesser adrenocortical action in calves (Mariti et al. 2018).

Why Should Animal Welfare be Measured?

Animal welfare should be measured due to following reasons:

- ✦ To monitor and evaluate impact of project running on animal's welfare.
- ✦ To match welfare position of animals between diverse locations or societies.
- ✦ To recognize welfare disputes, vary by dynamics such as season, work category, animal phase, sexual category or landlord practices. This material is then valuable to adapt program to specific cluster, period, mark animals with the poorest difficulties and public which is ready to involve with us.
- ✦ To ascertain welfare concerns which are happening within an animal population and community.
- ✦ To identify occurrence and harshness of different welfare problems i.e., what is going on to level of welfare in population
- ✦ To pick up if interconnection is making positive or negative modification.
- ✦ To allow targets to be produced at departure area, based on current welfare rank
- ✦ Re-assessment of animals can be directed at the end of a project or phase to provide animal's attentive constituent of project assessment.
- ✦ The animal centered data can be used to triangulate from further bases such as source, ecological and human based actions relevant to welfare (Wilson and Barker 2003).

Conclusion

Human animal interaction plays very important role in psychological health research, philosophy and practice mainly in family arrangements and social approaches. Animals provide many vital physiological, relational and psychological benefits. They influence by curing, animal support programs development, Community involvement and anticipation initiatives. Up till now, there is less study in field of animal mental health, healing value in health, human animal relationship, animal research and importance of this relationship in our current lives. Animals provide preference, recreation, deep affection, steadfast faithfulness, safety and reliability in our lives. These affections bring happiness, luxury to child and adults and also contribute to improve lives. Advance study is required to recognize how much variations in structures of relations reveal value of affiliation.

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