

CHAPTER 9

APPLICATIONS OF HUMAN-ANIMAL THEORIES IN ANIMAL-FACILITATED PSYCHOTHERAPY

9.1 Introduction

Theory without application will make no sense in an applied field such as psychiatry. The question is where a therapy which involves animals fits into a health system which is known for its high technology and potent drugs. Maybe the answer lies in the "Megatrends" predicted by John Naisbitt²⁶⁸ in the last part of this century - a century marked by a technological explosion. The trend is described as follows:

"High tech/high touch is a formula I use to describe the way we have responded to technology. What happens is that whenever new technology is introduced into society, there must be a counterbalancing human response - that is, *high touch* - or the technology is rejected. The more high tech, the more high touch.

The parallel growth of high tech/high touch took place during the last three decades, a period that appeared chaotic, but that really had it's own rhythm and sense".²⁶⁸

This chapter will deal with conditions and preconditions for animal-facilitated psychotherapy as well as a "prescription classification" of such a therapy.

9.2 Conditions for animal-facilitated psychotherapy

The conditions for using animals as therapy adjuncts in psychiatry refer to the minimum requirements before the therapy can be applied.

9.2.1 Therapist

A qualified therapist who is familiar with animal-facilitated psychotherapy and all the aspects associated with it, is required. Knowledge of a medical drug or procedure is always part of a therapist's choice for a specific treatment. The main reason why therapists do not use animals in therapy could specifically be that they are not trained in this aspect. If they do not know the "drug" or "procedure", they will obviously be hesitant to use it or they may even avoid it completely.

9.2.2 Patient

A psychiatric patient with a condition of which attention needs form part of the symptoms, either as a primary or as a secondary need resulting from the condition. Considering *attentionis egens* as basic as other physiological needs such as eating, sleeping and exercise, most psychiatric patients will benefit from attention, other than the formal contact during therapy.

9.2.3 Animal

Any suitable animal which can fulfil attention needs. Like in many other therapeutic approaches, there are also a wide variety of choices with regard to which animal for which patient with which condition and under what circumstances (therapeutic setting and staff).

9.3 Preconditions for animal-facilitated psychotherapy

If the preconditions for having a successful animal-facilitated psychotherapy programme are met, most of the problems which can arise during such a programme can be avoided. In other words, failure is usually due to preconditions which were ignored or not followed properly. If the preconditions for the use of drugs according to the MIMS Desk Reference Volume 25²⁶⁹ are considered, it is clear that no chemical therapy can be used indiscriminately. The same is true for surgical and other non-

invasive procedures. It is as important to meet the preconditions in animal-facilitated psychotherapy as those in any other therapeutic approach in the medical field. Some of the most important preconditions will be listed.

9.3.1 Preconditions pertaining to medical factors

The following four factors have medical implications:

9.3.1.1 Hygiene

Perceptions may have a determining influence on decisions. One perception about animals in a hospital setting is that animals will cause an unacceptable standard of hygiene. Animals cannot be seen as "dirty" per se, while all other factors are seen from a different perspective. Hygiene includes all steps taken to minimise infection due to an environmental build-up of potentially harmful microbes. Hygienic measures are thus mainly preventive in nature. If animals are used, they should fall within the general and standard procedures of keeping the environment as hygienic as possible. Reports on lapses in hygiene where animals were used in therapy, have not been received up to now, and it should at the moment not be seen as a particular problem which is separate or even more important than any other aspect of hygiene.

Perceptions of a "sterile" environment should also be discussed. Sterility means death, a lack of growth or infertility. Among microbes it often leads to the serious problem of resistance, causing greater threats to life than the non-resistant types. Apart from very special unnatural conditions for short periods of time, all people live naturally in the presence of microbes. The presence of animals, plants and other objects which are not sterilised, can thus be seen as "normalising" an environment - not only because such objects occur naturally in human environments, but also because they form part of the humans' natural execution of hygienic procedures such as washing hands after playing with an animal.

The precondition for hygiene during the use of animals in therapy should thus merely be an extension of existing hygienic regimes. It will also depend on the type of animal involved, eg a small aquarium fish bowl will have fewer hygienic implications than a farm animal yard.

9.3.1.2 Zoonoses

Disease transmissible from animals to humans may be the most serious criticism against the use of animals in therapy, from a medical point of view. This may be of even greater importance if animals are used for the aged, people who are infirm or handicapped. Schantz,²⁷⁰ who evaluated this situation, found that "so far, pet therapy has a good safety record". He concluded after an objective and comprehensive evaluation of all potential hazards, that most risks are preventable by carefully selecting the appropriate species and temperament of individual animals. In this regard medical veterinary involvement, educated staff, and where possible informed patients, should continuously be aware of potential dangers and how to avoid them.

Waltner-Toews²⁷¹ found in a survey of 42 hospitals in North America that the few zoonotic diseases that are a real concern, are easily controlled. This was despite the fact that his greatest concern was that very few programmes had printed guidelines, protocols or training programmes which would set out the simple steps necessary to prevent infection.

In a comprehensive study on zoonoses, McCrindle²⁷² said that a variety of different classification systems for zoonotic diseases have been proposed. One is an epidemiological approach divided into:

- direct zoonoses perpetuated by a single vertebrate species, e.g. Rabies and Brucellosis;
- cyclozoonoses which require more than one vertebrate species for maintaining the cycle, e.g. Taeniasis and Hydatid disease;

- metazoonoses where maintenance of the cycle requires both vertebrate and invertebrate species, e.g. Arbovirus and Trypanosomiasis; and
- saproozoonoses which are dependent on inanimate reservoirs as well as vertebrate hosts, e.g. Sporotrichosis and cutaneous larva migrans.

Another classification is according to primary host:

- anthroozoonoses where the primary host is an animal, e.g. Rabies;
- zoo-anthroozoonoses, where man is the primary host, e.g. Tuberculosis; and
- amphizoonoses, where animal and man are primary hosts, e.g. Staphylococcus.

Zoonoses can also be classified according to the aetiological agent of the disease:

- viral, e.g. Rabies and Herpes virus;
- bacterial, e.g. Leptospirosis and Salmonellosis;
- rickettsiosis, e.g. Typhus and Q-fever;
- protozoal, e.g. Toxoplasmosis and Giardiasis;
- mycotic zoonosis, e.g. Candidiasis and Cryptococcus;
- helminths, e.g. Cestodes, Trematodes and Nematodes; and
- ectoparasites, e.g. Cordylobiosis.

From a practical point of view, zoonoses between adult companion animals and adult people are rare. This is especially true where animals selected for therapy are under constant veterinary care and if routine hygiene principles are practised. If animals are dewormed, vaccinated regularly and if they are clinically healthy, two zoonoses may still pose a problem. One is dermatomycosis from cats, because cats may be carriers without any clinical signs. The other is psittacosis caused by *Chlamydia psittaci* of which the host is mostly (70%) cage birds from the parrot family. In both cases effective treatment is available if diagnosed in time.²⁷²

A precondition should be to regard these possible hazards to be as serious as any other possible hazard that may accompany any other therapeutic approach. The type of animal can also make a difference in the probable occurrence of zoonoses and if all the necessary steps are taken, zoonoses could be prevented to a great extent.

9.3.1.3 Injuries

In the survey of Schantz,²⁷⁰ many figures regarding animal bites were quoted. Bites occurred from own dogs, stray dogs, cats and wild carnivores, in this order of frequency. In most cases children under 14 years were involved and large breeds of dogs caused the most severe and fatal attacks. One to two percent of cases required hospitalization and in the decade between 1979 and 1988, there were 183 to 204 dog-bite-related fatalities per year in the USA.

It is obvious that the population situation is not comparable to an institutional setting, but it is appropriate to take note of the relatively low incidence of serious dog bites even in the given population.

The precondition is obvious - select a suitable species, breed and individual animal for every situation. It would be easy to meet

this requirement and it is no wonder that this was never reported as a problem in animal-facilitated psychotherapy.

9.3.1.4 Allergies

Allergies can be caused by a plethora of allergens (foreign protein). Animals as carriers of such allergens form a small part of all the possibilities. Respiratory symptoms can vary from light to severe and sensitivity can vary from none to very sensitive. It was found that cats, guinea pigs and horses, in that order, cause the most allergic reactions, but dogs and pet birds are also high on the list. Some people are only allergic to certain breeds of cats and dogs.²⁷⁰

Dog and cat breeds with a curly coat generally cause fewer or no allergies, because shedding of hair is limited. If patients are in need of animal companionship, therapists can thus consider substituting breeds or even species. Sensitivity to cats, for example, can lead to a decision to replace cats with cage birds or fish. If a patient is multi-allergic for most animals used in therapy, the use of animals could become a contra-indication for therapy, as could happen in the case of certain medicines. The precondition is to attempt to establish a specific cause of an allergy and then to act accordingly.

Following a national survey in the USA, Stryler-Gordon, Beal and Anderson²⁷³ came to the conclusion that animals involved in therapy programmes pose fewer health risks to patients than human visitors. In a study conducted over one year in 284 nursing institutions, it was found that for every one million hours of exposure, there was only one animal-related incident compared to 506 non-animal incidents. The researchers concluded that the common fears related to having pets in nursing homes have no basis in fact, if this data is a reflection of other studies. Schantz²⁷⁰ found that bites, zoonoses and allergies are the main pet-associated human health hazards among human populations:

"However, it should be easier to control pet-associated health problems in supervised institutional settings than it is in the community at large".²⁷⁰

9.3.2 Preconditions pertaining to patient needs

The following two factors have implications for the patient:

9.3.2.1 Matching patient and animal

Just as it is necessary for psychiatrists to evaluate the effect of a specific therapeutic approach or dosage on an individual patient, it is also of importance to match animals used in therapy to every individual patient. Furthermore, some patients may have no affiliation for animals in general. Animals should not be forced upon such patients. On the other hand, those patients who enjoy the company of animals should not be denied such interaction.

In a study of 176 pet owners it was found that people who are relatively more compatible with their pets reported better mental health overall and fewer physical symptoms. Social support and pet attachment were positively associated with mental health.²⁷⁴

The precondition is thus that selection of patient and animal should take place prior to the beginning of therapy.

9.3.2.2 When animals, that patients have become attached to, die

The loss of a loved one is possible, not only with regard to an animal, but also to family, nursing staff and therapists. If a close bond has been formed between patient and animal, it is important to acknowledge it as a matter of concern and it should be dealt with accordingly.^{275,276} One should also keep in mind that animals in general have shorter lifespans than humans.

The precondition is thus that the necessary emotional and psychological support should be provided if such an animal should die.

Wilson, Netting and New²⁷⁷ compiled a Pet Attitude Inventory which was designed for animal owners and non-owners to be used in community settings. It was intended to measure pet ownership attitudes and attachment levels, as well as to answer questions related to the fields of medicine, psychology, social work and ageing. The Inventory can be administered by an interviewer or by the person himself/herself in approximately five to ten minutes. Johnson, Garrity and Stallones²⁷⁸ developed a scale for the assessment of emotional attachment of owners to their pets, known as the Lexington Attachment To Pets Scale. Although continued psychometric evaluation is suggested to improve the Scale, this and the aforementioned Inventory could be helpful in establishing the bond between patient and animals in therapy.

It was also pointed out that there could be a distinct difference between attitudes towards animals in pet owners versus non-owners. It was said of those who had been pet owners that:

"These participants produced significantly more descriptions of the dogs' behavior in terms of desires, feelings and understanding than those with little or no experience of pets".²⁷⁹

Inventories and scales can help match people and animals before animal therapy is considered. The danger is that the phenomenon of positive interaction between people and pets is so common that the possibility of accepting this interaction between patient and animal is seen as obvious and that no proper matching is done beforehand. An evaluation of the psychological effect of the animal on the patient should be done continuously during therapy.

9.3.3 Preconditions pertaining to the needs of animals used in therapy

The following three factors have implications for the animals:

9.3.3.1 People can abuse animals

Although patients abusing animals in therapy have not been reported yet, the possibility should always be kept in mind. The opposite is also true. Patients sometimes get so involved with animals that they take great care of the animal's welfare.

The precondition is that whenever animals are used, their welfare should also be considered and that control over animal therapy programmes should also include the animal's well-being.

9.3.3.2 Sources and selection of animals

The source of animals for therapy should be part of the selection of animals. If the source from which animals are obtained is unknown, it is difficult to establish important information such as behaviour tendencies of animals related to the animal of choice, whether proper socialisation has been done and why the animal is available for therapy.

A precondition is that the more is known about the animal selected for therapy, the more accurate the prediction of the animal's interaction with patients could be.²⁸⁰

Horvath²⁸¹ reported on Corson, who did a prospective long-term study in several breeds of dogs. He established two major genetically determined types, namely the low adaptation dogs which exhibited a complex pattern of persistent psychophysiological and neuro-endocrine reactions. Analysis of cardiac and respiratory orientation reactions could serve as predictors for this classification. The first group had more intense, persistent and highly fluctuating orientation reactions and the second group

showed rapid orientation reaction habituation. Such evaluation could be valuable in selecting suitable dogs for therapy. Corson, one of the pioneers in using dogs for psychiatric patients, was also involved in evaluating and selecting suitable dogs for therapeutic purposes.

9.3.3.3 Patients unable to care for animals any longer

It is important to see the animal as a social being and not as an "expendable tool" in therapy. Patients may not be able to continue caring for animals which are used as companions and patients may even die before the animal. Although it is well-known that dogs can become very dependent and attached to their owners, Heath²⁸² warned that even cats, which are often seen as individualistic animals, can become overdependent on their owners.

The precondition is not to expect too much of the patient whose condition may deteriorate. It is important to decide beforehand what should happen to the animal if the bond between patient and animal is broken.

It should be clear that animal welfare should be part and parcel of animal therapy, especially because there are people who are very sensitive to issues relating to the use of animals for the benefit of humans. Ethics committees involved in controlling therapy programmes to protect human patients should also consider the well-being of the animals. In this regard, a coopted veterinarian could help with the selection and care of animals.

9.3.4 Staff and management involved in animal-facilitated psychotherapy

The following factors have implications for the management of the programme:

9.3.4.1 **Success of an animal-facilitated programme**

It is possible that animal therapy programmes that had failed might not have been reported (this does not refer to clinical success or failure). However, it is very important to plan properly for such programmes. When the strict controlling and monitoring of other therapeutic approaches are considered, one of the reasons why animal therapy programmes could fail is the half-hearted way in which the therapy is planned.

The precondition is to plan the programme in the same way as other therapeutic regimes, with continuous evaluation and adaptation where necessary.

9.3.4.2 **Staff**

Authorities and staff involved should understand what they can expect and that the approach, from a professional point of view, will be no different than in any other therapeutic approach. Staff involved in such programmes should also be selected on the basis of their knowledge of animals, liking for animals and willingness to help in taking responsibility for the programme. Whether an animal programme will cause more work for the staff will depend on the type of animal (eg fish bowls versus horse-riding programmes), the way in which animals are applied (visits from outside versus a full-time programme) and whether the staff love animals (animal-loving people do not experience animals as a burden). Animals may occupy patients in such a way that the workload of nursing staff actually decreases.

The precondition for ensuring that the planning of animal therapy programmes succeed, is that everybody should be well-informed in advance. Lack of detailed information about the programme may pose a real threat to the outcome of the therapy.

Barnett and Quigley²⁸³ offered a Needs Assessment Model to be used for animals in long-term care facilities. Such a model can

help to identify the needs which may develop during the programme and solutions to solving the problems can be implemented.

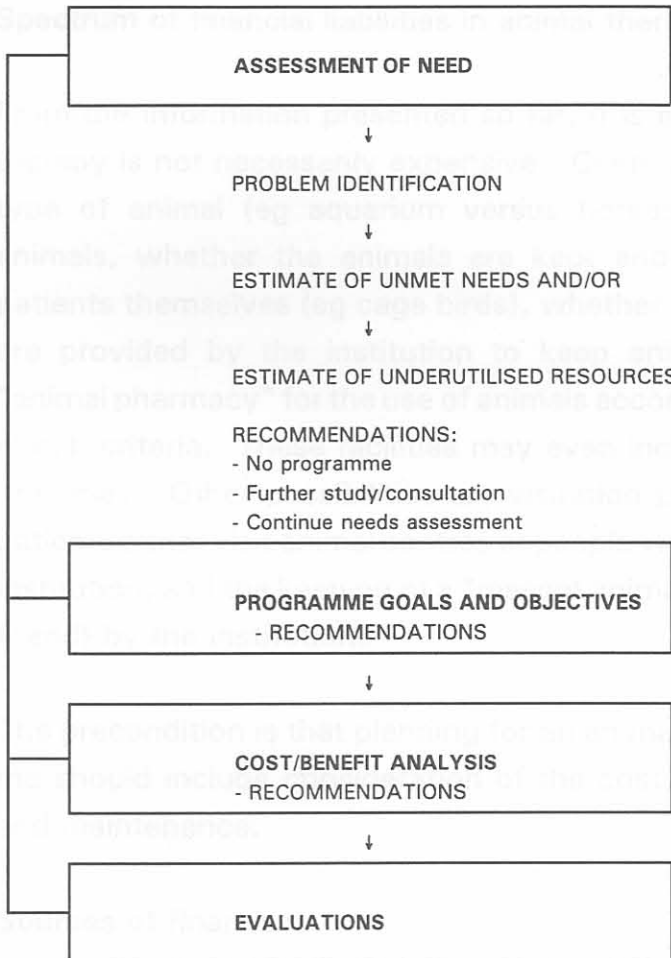


Fig 9.1: Needs Assessment Model
according to Barnett & Quigley, 1984, p4²⁸¹

The latest manual for animal therapy programmes by the Delta Society,²⁸⁴ USA, is known as "Standards of Practice for Animal-Assisted Activities and Therapy". It is of the utmost importance that these already available guidelines be studied before any programme is initiated, because they are based on a wide spectrum of practical experience.

9.3.5 Financial aspects

Finances have implications for every therapy programme.

9.3.5.1 Spectrum of financial liabilities in animal therapy

From the information presented so far, it is evident that animal therapy is not necessarily expensive. Costs will depend on the type of animal (eg aquarium versus horses), the number of animals, whether the animals are kept and cared for by the patients themselves (eg cage birds), whether extensive facilities are provided by the institution to keep animals, such as an "animal pharmacy" for the use of animals according to select-and-match criteria. These facilities may even include breeding programmes. Other possibilities are visitation programmes where patients either visit animal centres or people with animals visit the institution, and the keeping of a "mascot animal" (an everybody's friend) by the institution.

The precondition is that planning for an animal therapy programme should include consideration of the cost of implementation and maintenance.

9.3.5.2 Sources of finances

Although studies rarely, if ever, reflect the financial implications of animal programmes, it is obvious that these should be part of the decision-making. Fortunately, there are a wide spectrum of choices, as described under the heading above, and such a programme may cost next to nothing, depending on the choice of animal contact. It can also cost much less than most other therapeutic approaches. The only expensive approach is an "animal pharmacy" and breeding unit, although this has its own advantages.

The precondition is that animal therapy programmes should be affordable and if an expensive unit is used, sponsors can be approached for funds.

The conditions and preconditions to be considered for an animal-facilitated psychotherapy programme can be summarized as follows (Table 9.1):

Table 9.1: Application of animals in psychiatric therapy

Consideration	Factors involved
Conditions	Therapist → Qualified
	Patient → Needs attention
	Animal → Specifically selected
Preconditions	Medical factors → Hygiene
	→ Zoonoses
	→ Injuries
	→ Allergies
	Patient needs → Matching with animals
	→ Attachment
	Animal needs → Animal welfare
	→ Selection and sources of animals
	→ Support
	Management and staff → Planning and facilities
→ Communication/Information	
Financial factors → Variety of possibilities	
→ Sources of finance	

9.4 Applied animal-facilitated psychotherapy

In a recent article Brian Kirkpatrick²⁸⁵ of the Maryland Psychiatric Research Center, Department of Psychiatry, University of Maryland, exposed the opinion that affiliative behaviours are relevant to several neuropsychiatric disorders. Loss of relationships, or critical relationships, increases the subsequent risk of recurrence of major depression, a neurobehavioural syndrome with complex biological changes. Living with a critical, intrusive person increases the risk of exacerbation of psychotic symptoms in patients with schizophrenia and there are also disorders in which it is the nature of the person's affiliative behaviours that is abnormal.²⁸⁶ Childhood autism is defined at least in part by a lack

of seeking social relationships, whereas borderline personality disorder is characterised partially by the particular nature of the person's relationships.²⁸⁷ The deficit syndrome of schizophrenia is also defined in part by a lack of interest in relationships:

*Drummett and Willcox*²⁸⁸ found that the research with explicitly

"Thus, the neurobiology of social behavior is one of the 'basic sciences' of psychiatry. However, changes in complex behaviors can often fruitfully be studied by considering somewhat simpler functions, such as temperature regulation, exchange of nutrients, or attention. A similar situation may be emerging in the study of patients with the deficit syndrome of schizophrenia".²⁸⁵

*Drummett and Willcox*²⁸⁸ found that the research with explicitly

Kirkpatrick²⁸⁵ stated that from the perspective of human suffering and costs to society, schizophrenia is one of the most burdensome illnesses of humanity. It is usually a chronic condition which may stretch from childhood to late adult life, with many patients unable to work. In the USA, schizophrenia may account for 2,5% of total annual health care expenditure, 10% of the permanently disabled population and 14% of homeless people in big cities. Furthermore, its 1-2% lifetime prevalence makes it one of the most common serious diseases.

A marked decrease in affiliative behaviours is found among patients with schizophrenia who exhibit "destruction of the personality" symptoms. These patients exhibit a group of clinical features that, within a chronic schizophrenia sample, are robustly intercorrelated. It is called the deficit syndrome. These patients show a decrease in affiliation, they lose their ability to experience pleasure and they take part in fewer goal-directed activities which extend to areas other than affiliation, e.g. they report increased physical anhedonia. However, these patients exhibit a decrease in affiliative behaviours that is quite striking and its clinical features are unique. It was found that typical neuroleptic antipsychotic drugs had a less pronounced effect on the social

withdrawal of deficit patients than on other people with schizophrenia. The negative symptoms of deficit patients could not be attributed to neuroleptic side-effects.²⁸⁵

Brummett and Williams²⁸⁸ found that recent research exploring the association between hostility and risk for disease is generally supportive of the previous literature that suggests the existence of a link between hostility and health. If such hostility between patients and other people can be substituted by possible positive animal interaction (attention), it indicates another area where animals can attribute to health in general.

The information leaves the door wide open to positive human-animal interaction as an indication for therapy. Where affiliative, communication and social disorders occur, animals should be considered as substitute attention as part of the therapy.

9.5 Animals on prescription

In order to place the application of animal therapy in perspective, it would be possible to compare a "pharmacological" information leaflet with the standard information given for drug therapy (Table 9.2).

Table 9.2: An example of an information leaflet on the use of animals in animal-facilitated psychotherapy in the format of a leaflet for the use of prescribed drugs

Animals used to facilitate psychotherapy

Scheduling status: S4

Proprietary name (and dosage form): Animal-facilitated psychotherapy

Composition: Any suitable animal for use in therapeutic situations. Suitability is determined by the choice of species, breed, gender (intact or sterilised) and age of the animal. Biological factors such as size, hair coat, facility needs, health demands and behavioural traits can be considered in relation to the therapeutic situation and the patient.

Pharmacological classification: 1.1.1. Also see 3.1 and 17.3.

Pharmacological action: Positive human-animal interaction evokes natural physiological changes which may include decreased blood pressure, increased plasma levels of phenylethylamine, dopamine, endorphins, oxytocin and prolactin. By fulfilling basic affiliation or attention needs, the experience may act as an anxiolytic in patients who are in need of attention as well as a feeling of elation. The complete action of positive human-animal interaction may not be known.

Indications: Specific indication would be to use animals to fulfil attention or affiliation needs in psychiatric patients, especially in cases where human contact, environmental stimulation and chemical intervention did not control attention deficits completely. Animals can be used as adjuncts to any other therapeutic approach.

Contra-indications: Never force an animal upon a patient. Never initiate animal therapy before a well-planned programme has been submitted. If suitable selected animals are used, there is no specific contra-indication to use animals for approved psychiatric patients.

Warning: Provision should be made for the survivor in case an animal in therapy should die or a patient should die, or become unable to maintain the care of the animal.

Dosage and directions for use: Animals can be used in different ways

- provide animals to patients, eg cage birds or an aquarium on a one-to-one basis or an aquarium in a common room
- a mascot animal of the institution for everybody who wants to interact with it on an informal basis
- visiting scheme where people with trained animals visit the patients in the institution on a regular basis
- outside visits where patients are taken to make animal contact in a structured way, eg visits to an animal shelter or zoo
- patients keeping their own personal pets
- outside facilities with animals such as a step-in aviary, pens with farm animals and poultry, or with exotic pets such as tortoises, rabbits and guinea pigs. In certain circumstances horse-riding could also be provided
- animal programmes as part of a post-therapy rehabilitation effort.

Contact can be provided

- on request
- unlimited without supervision
- specific contact sessions with set intervals and for a predetermined period of time in the presence of a therapist
- during visiting schemes
- continuous when personal pets are kept.

Interaction could include

- visual stimuli
- auditory stimuli
- tactile stimuli
- olfactory stimuli
- exercise stimuli
- animal subject communication.

Contact could be of an active or passive nature and should last about 15-25 minutes per session.

Side-effects and special precautions: Precautions should be taken regarding the zoonoses per species of animal, possible trauma, confirmed allergies and hygienic considerations. The welfare of the animals concerned should also be ensured.

Special note: Pregnant woman should be tested for immunity against Toxoplasmosis and children should be dewormed for Ascariasis and Ancylostomiasis as a rule.

Known symptoms of overdose and particulars of its treatment: A threshold of contact between human and animal can be exceeded. Discomfort shown by any of the two species could be an indication to terminate the human-animal interaction. Sometimes there could be an indication to alternate such interaction with another stimuli.

Overdependence may develop in the patient as well as the animal. Since this is known to occur, therapy programmes should be structured in such a way that overdependence does not develop, otherwise it would be necessary to treat withdrawal symptoms in either or both species. Such treatment could include social support, substitutes and anxiolytic drugs for separation anxiety.

Conditions of registration: Animals used as facilitators in psychiatry should be prescribed by a qualified therapist and a veterinarian should certify the animal for suitability and health.

Identification: Any suitable animal as described under Composition.

Presentation: Any suitable animal as described under Composition.

Storage instructions: Animal facilities should meet the needs of the particular animal. This information can be gained from a veterinarian. It is important to be careful when new animals are obtained. Obtain exact information on the animal's family traits, socialisation history and the reasons why it is available for therapy.

Registration number: Breeding records.

Name and business of the application: Obtain animals from approved sources.

The layout and sections have been taken from a medicine information leaflet, and are exactly the same as they appear on the leaflet. Adaptations could also be made for specific animals and different programmes. If this information is compared to many other medicines on the market, such a presentation seems to be quite appropriate. Animals in psychiatry are placed under Schedule 4 because these should be prescribed by a psychiatrist and the animals should be under the supervision of and selected by a veterinarian. The classification numbers are for amphetamines, endorphins and oxytocin.

It is clear that, like drugs, animals may not be the only suitable treatment to obtain the same effect. Hart²⁸⁹ referred to a study where a comparison was made between animals used for therapy and other attention. The researcher compared the behaviour of nursing home residents under three different visiting conditions; no visit, human visitors, and human and dog visitors. The last types of the visiting programmes were equally effective at increasing alertness and smiling for many nursing home residents, whereas the group with no visit did not show any improvement. Visiting with a dog may, however, be more rewarding for the visitor, given the social lubricant effect of the animal. In cases where human contact is limited, animals can play a therapeutic role by giving attention on their own.

9.6 Discussion

Although the belief²⁹⁰ that animals are beneficial to health is generally growing, the medical profession is still cautious to get involved in this field on a broad spectrum. During an award presentation by the Delta Society, USA, Dr Katcher (a psychiatrist) received the Michael McCulloch Award (another psychiatrist). In Katcher's address he honoured another psychiatrist, Dr Boris Levinson. This all appears to be very positive, but unfortunately it seems that not many psychiatrists are prepared to become known for the applied use of animals in therapy.

However, many may already use animals without publishing results and that may be another problem. It was pointed out that Levinson's publications were cited only 55 times between 1962 and 1972. In the Science Citation Index for the period between 1970 and 1993, 89 citations were found from 45 authors to the five publications of Levinson and one of Friedmann and co-workers. About one-third came from veterinary literature and another third from the psychological and psychiatric literature.²⁹¹

The two main reasons why animals are not used and studied more by psychiatrists are a lack of knowledge and a lack of acceptance of the concept of animals in hospitals. Animal-facilitated psychotherapy is not yet part of the mainstream curricula for psychiatrists and this means that this approach is unknown to most psychiatrists. There may also be a psychological resistance against the use of animals in psychiatric institutions. The "idea" is a contradiction with the standard regulations for a sterile, clinical approach. There may also be a feeling that animals as lesser species are not acceptable as adjuncts in human therapy. However, if one considers that the medical profession is experimenting with organ transplants from animal tissue, there should be no reason for not using animals in other ways. Many animal-related research eventually helps humans to regain their health and most of the pharmacological medicines are tested on animals before being used on humans. This includes drugs for psychiatric conditions. It seems that, if the existing human-animal connection is considered, the application of animals in psychiatry is a small step to take in making such an approach acceptable.

In a textbook written for students to prepare themselves for the membership examination of the Royal College of Psychiatrists, Weller and Eysenck²⁹² pointed out that numerous scientific disciplines underpin and inform the practice of psychiatry. They stated:

"The purpose of this book is to present a concise survey of the principal contributions made by these disciplines. Within so vast a field of study the aim has been to emphasize care concepts and interconnections".²⁹²

They noticed that clinical psychology had taken two paths, namely psychometric testing and personal therapy, using both behavioural and psychotherapeutic procedures. Practising psychiatrists could also learn from this. In the chapter "Changing Frontiers" they said that, like the homeostatic processes in the body, the activities of the brain can be compared to the operation of a complex feedback system.²⁹² Such a system actually makes provision for a physiological and psychological needs system, including *attentionis egens*.

Under the heading "Social interaction", it was confirmed that poor integration of the individual in society and anomic social cohesion are conducive to illness. Furthermore, it was also compared to the social life of animals as described by Nobel prize winner and ethologist Konrad Lorenz, indicating a common need among humans and animals. These social factors can alter perceptions and moods and behaviour is modified by a host of subtle indications given unconsciously in a number of non-verbal ways, including autonomic changes.²⁹²

What is notable in this textbook is a chapter on "Ethology".²⁹³ Although no mention is made of animal-facilitated psychotherapy (or any of the other terms used for this therapy), the study of animal behaviour is seen as an integral part of the curriculum in psychiatry. Ethology is defined by the authors as the biological study of behavioural processes, often social, that are not explained by "learning theory". This allows an interpretation that the unlearned behaviour could be basic physiological and psychological needs (or species-specific behaviour) because the term "instinct" has fallen into decline in certain circles. Although the phenomenon of human-animal interaction was not described,

it was indicated that ethological models had been used to understand human behaviour and that psychotropic drug research relied on strategies for modifying animal behaviour. A few examples of parallel behaviours were also mentioned, viz the imprinting effects of maternal deprivation, displacement activities as seen in repetitive behaviour, social hierarchies and releasers of behaviour.

In their concluding remarks, the authors said that it is now recognised that humans are social organisms within the family, and in the wider society, operating in a social order with a system of social signals "in alignment with other animals". Ethology has contributed to this change in attitudes and emphasised particular avenues of therapeutic approach in psychiatric care. The importance of detailed attention to the therapeutic environment is increasingly being recognised:

"Unfulfilled needs may exaggerate maladaptive behaviour rather than reduce it, and patients may be helped by efforts to reduce motivation and techniques of behavioural modification. Ethology is a fascinating field of study, which until recently, has been relatively neglected by psychiatrists, but which, in time, should prove a fruitful source of new ways of understanding and helping our patients".²⁹³

These positive predictions, which were made in the publication of 1992, are coming close to fulfilment with this study. The only outstanding step by psychiatrists who saw the connection between Ethology and Psychiatry was to apply the knowledge on an interspecies level. This is where animals can fulfil social (attention) needs and help the patients.

The famous physicist Carl Sagan²⁹⁴ said that science is a way of thinking much more than it is a body of knowledge. Archimedes, recognized as one of the top three mathematicians in the history of man, disclosed in his Method that his mind proceeded towards

mathematical truths, well before he was able to prove them.²⁹⁵ Even Einstein believed that pure thought is competent enough to comprehend the world and its realities before experimentation could prove anything.²⁹⁶ Maybe, if the theory about animal-facilitated psychotherapy becomes acceptable in peoples' mind, the scientific application thereof will follow without hesitation.

The next chapter will conclude the study.

Summary of objectives

In terms of the objectives set for this study, the following objectives were set for the study: the objective was to:

1. Investigate interaction theories in personality.

The objective was to illustrate the importance of the concept of human interaction in personality. By doing so, it was to determine how interaction was valued in the 10 theories of personality, and the degree of the psychological, emotional and behavioural change of an individual. The latter part of the chapter was to discuss how interaction theories could be used in the development of a relationship between a being or species to the person or animal. It refers that species should be able to help each other. It also states that species have a tendency to help each other in different ways. It is either a positive approach or other approach which is simply "innocent" rather than being based on any emotional measurement. The aim is to find out how interaction occurs and dynamics.

10.2.1 Human-animal interaction in human-human context

The objective of this chapter was to indicate that the need for attention is a basic need and the many of the therapeutic