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THE EFFECTS OF PET FACILITATED THERAPY ON THE SELF-ESTEEM AND SOCIALISATION OF PRIMARY SCHOOL CHILDREN

by

FREDA JEANNETTE BERGESEN

Dissertation submitted to the Faculty of Education, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the Degree of Master of Education

March, 1989

DECLARATION

I declare that this dissertation is my own, unaided work. It is being submitted for the degree of Master of Education at the University of the Witwatersrand, Johannesburg. It has *not* been submitted before for any degree or examination at any other university.

_____

F.J.BERGESEN

. . . day of . . . . . 1989.

ABSTRACT

THE EFFECTS OF PET FACILITATED THERAPY ON THE SELF-ESTEEM AND SOCIALISATION OF PRIMARY SCHOOL CHILDREN

Purpose

The purpose of this study was to investigate the effect of close contact with animals and the "caretaking" of these animals on primary school children within a normal school environment. The influence of the pet-child bond in particular on the children's self-esteem as well as the children's social adjustment with regard to relationships with peers and parents was investigated.

Methods and Procedures

The total sample of 100 was selected from a group of 130 pupils whose parents had given permission for them to participate in this study. These children, from a single primary school, were between the ages of 9 and 12 years. The self-esteem of these pupils was assessed and they were categorised into high and low self-esteem groups. Considering the limitations of the biology laboratory, which could only accommodate 50 pupils, 30 low self-esteem pupils and 20 high self-esteem pupils were randomly selected for the experimental group, and similarly for the control group.

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Self-esteem and social adjustment tests were administered before and after the intervention and the results were analysed statistically. The experimental group was introduced into the Pet Therapy programme which involved 'pet ownership', and the children assigned responsibilities for the welfare of their chosen animals in the laboratory for a duration of 8 months.

Results

The analysis of the data confirmed that the pupils' contact with animals significantly improved their self-esteem. This is particularly evident in the case of pupils with low self-esteem, the level of significance being $p<0.0005$; whilst in the case of the high self-esteem pupils the significance level is $p<0.01$. In contrast with the majority of Pet Therapy literature, in this investigation improvement in social relationships is inconclusive, although there are some indications that the low self-esteem pupils have benefited from the Pet Therapy programme.

Conclusions

Previous research indicates that self-esteem and adequate social adjustment of children are vital factors involved during the developmental years. Pet Therapy is a valuable intervention technique which should be further explored by

educationalists in dealing with emotional and behavioural problems. In particular, they can contribute favourably through similar programmes, especially in cases *where support systems* in the home environment have broken down. The need for further research in the field of Pet Therapy within the milieu of the normal school environment is imperative, *particularly in this modern* era where many children are growing up in stressful circumstances.

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DEDICATION

This study is dedicated to
my husband
Arthur Bergesen
who has lovingly and unselfishly
encouraged and supported
me throughout.

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CHAPTER ONE

INTRODUCTION

> *How people see themselves* (their self-images) and what value they put upon themselves (their self-esteem) clearly are crucial in determining the goals which individuals set for themselves, the attitudes they hold, the behaviours they initiate and the responses they make to others. (Reid, 1981, p.178).

There has been a vast amount of research effort since the 1940's in the area of the self-concept. Byrne (1984) estimated that over 2000 publications appeared between 1961 and 1971. James (1890), the first psychologist to elaborate on the self-concept construct, viewed self-esteem as a ratio between actual accomplishments and inner aspirations (in Burns, 1982). However, it was not until the work of Diggory (1966) that the particular aspect of the Self known as self-esteem became a common object of study (Lawrence, 1981).

Despite the large volume of research identified by Byrne (1984), there is still a lack of consensus regarding the definition and structure of the self-concept construct, its correlates and the methodology for assessing self-concept

(Lawrence, 1981). A number of researchers appear to use self-concept and self-esteem interchangeably (e.g. *Chapman*, Silva and Williams, 1984; Maqsud, 1982; Ellerman, *1980*). A widely accepted view of self-concept is that it is a multi-dimensional construct with self-esteem being the affective aspect, reflecting the 'internal needs' of the child (Scheirer and Kraut, 1979; Burns, 1982; Byrne, 1984). It is with this latter affective component, which Scheirer and Kraut (1979) describe as a person's 'emotional' attitude, that this study is concerned.

The *above-mentioned* lack of consensus is highlighted in reviews *by researchers* such as Shavelson and Bolus (1982); Hansford and *Hattie* (1982) and Byrne (1984). It is clear from these reviews that *much* less attention has been given to research into other *aspects of* the self-concept, such as the consequences of low *self-esteem* (Ellerman, 1980; Reid, 1982), and the ways of improving *self-esteem*, i.e. by intervention or compensatory programs (Curtis *and* Shaver, 1981).

Scheirer and Kraut (1979) describe various intervention studies. They sum up the importance of self-concept (p.131) by quoting Thoreau (1854) ". . . public opinion is a weak tyrant compared with our own opinion. What man thinks of himself, that it is which determines . . . . his fate". Thus Shavelson and Bolus (1982) stress that the enhancement of a student's self-concept should be a valued goal of education, whilst Reid (1982) states that an accurate

picture of a student's self-concept is just as vital for the modern teacher as the assessment of his/her intellectual potential and academic progress. Therefore it is important to understand the rationale behind this present study and how it is possible for animal contact to ameliorate self-esteem. In addition, it is necessary to examine the factors involved in constructing an intervention for improving self-esteem.

Two important factors concerned with the construction of the intervention program involve, firstly, an understanding of the influences underlying the formation of self-esteem and secondly, its far-reaching effects. The theories of the antecedents of self-esteem and the formation of self-concept (Coopersmith, 1967 and Burns, 1982), provide an insight into how low self-esteem can arise, ". . .the major determinants of the self-concept are generally held to lie in those early and enduring patterns of the parent/child relationships that underpin the emotional security of the growing child" (Burns 1982, p.72). Thus a breakdown in these relationships can lead to poor self-esteem. These determinants, as well as the other aspects of self-esteem, provide a foundation for many of Levinson's theories (1969, 1972, 1978) of the forces behind the therapeutic effects of Pet Facilitated Therapy. They also explain how and why Pet Facilitated Therapy has an effect on self-esteem.

Parents are the primary 'significant others' which influence children's self-concept whilst teachers and peers become the *second most* important 'significant others' (Metcalfe, 1981). *The developing self*-concept is influenced by school experiences. *Several studies* focus on classrooms as social settings (*Burns*, 1982). The attitudes and beliefs a child holds of himself *are* vitally important in the child's relationships with his *teachers, classmates* and others in his school and non-school *environment* (*Levinson*, 1978; Burns, 1982). Metcalfe (1981, p.66) *quotes Jersild* ". . .it is reasonable to assume that for many *young people* school is second only to home as an institution *which determines* the growing individual's concept of himself, *his attitudes* of self-acceptance or self-rejection".

The application of the knowledge on self-esteem by teachers has an important bearing upon the behaviours of their pupils e.g. absenteeism (Reid, 1980), and antisocial, deviant behaviours, affecting a child's social adjustment and even eventual dropout (Raviv and Bar-Tal, 1980). Mead and Cooley (in Kaplan, 1985) hypothesised that a high self-esteem will lead to a constructive, socially desirable behaviour and *conversely*, distorted, low self esteem will lead to deviant, *socially inadequate* behaviours.

Closely linked *with the above-mentioned* theories of 'significant others' are *further theories* involving 'symbolic interactionism' and 're-inforcement' *which* are said to

influence the formation of *self-esteem* (Scheirer and Kraut, 1979; Shavelson and Bolus, 1982). These factors are also argued for by the proponents of Pet Facilitated Therapy such as Levinson (1978), as well as Corson and Corson (1979b) in their work with geriatrics and psychiatric patients. Their studies conclude that the interaction of patients with various pets leads to improved social interaction amongst the patients and cooperation with the therapists.

Several researchers investigating the effects of attitudes, have linked self-esteem with factors such as locus of control, anxiety and personality traits (Kawash and Clewes, 1986). Rushton (1986) and Chapman (1984), who studied depressed children, have coupled anxiety with low *self-esteem*. Gibbs and Norwich (1985) also found that *children* labelled 'neurotic', having emotional *problems and* behavioural difficulties, had low *self-esteem scores*. Locus of control has been studied by Maqsud (1983), and Raviv and Bar-Tal (1980) who found a positive correlation between self-esteem and external locus of control. Children with external locus of control attribute their successes and failures to factors outside themselves and beyond their control. Maqsud (1983) argues that externals limit themselves in what they are prepared to try and the extent of the tasks in which they will engage. Calsyn (1973) recommends that educators should include in their curriculum studies compensatory programmes to help children change their attitudes to the control of

their outcomes. This implies the necessity to improve self-esteem.

Many of the above-mentioned researchers have recommended therapeutic or compensatory programmes of some sort in their studies. The intervention programme *for improving* the self-esteem of *slow learners* (Curtis and Shaver, 1981) has *direct bearing on* the design of this present study. The rationale used, namely that the confidence gained by the students successfully accomplishing the set tasks plus the positive reinforcement by 'significant others' will raise their self- esteem, is important to this study. It is similar to the rationale behind *Pet Facilitated Therapy* (Levinson, 1976). *Levinson , a child psychologist,* is the *first researcher* to provide detailed reports about the therapeutic effects of human-pet contact.

Levinson's first paper (1969) describes the way in which his dog became "co-therapist" in his treatment of emotionally disturbed children. Levinson's work consisted *largely of* detailed case studies out of *which basic principles* of Pet *Facilitated Therapy have* been derived. These have formed *the* rationale for many other Pet Facilitated programmes and investigations (Netting, Wilson and New, 1987). Most of the research done in this area consisted of case studies (Beck and Katcher, 1984) which explain the principles behind Pet Facilitated Therapy, but little quantitative data of controlled studies has been collected (Netting et al, 1987).

Stimulated by Levinson's work and his appeal for "rigorous research" (Levinson, 1978), Corson and Corson (1978b) conducted one of the earliest controlled studies to evaluate the effects of animals in an institutional setting i.e. in a hospital psychiatric ward. In this experiment the patients acted as their own controls as they had not responded to any previous traditional therapeutic treatments. The results showed that the patients improved in their socialisation and self-regard. The animals acted as "social catalysts".

Professional therapists in the 1980's have come to value animals as therapeutic aids in the treatment of either physical and/or emotional disabilities. In other words animals provide physiological and/or psychological benefits (Brickel, 1986). In discussing the physiological benefits, Brickel (1986) describes various research projects in which children's blood pressure and heart rate were monitored under various conditions such as reading, watching a blank wall, or watching tropical fish or a dog. Lowest blood pressures were recorded both in hypertensive and normotensive children under those conditions involving animals.

An example of the psychological benefits derived from animals is the study conducted by Polt (1985) which describes how children in the Hope Centre with developmental disabilities developed skills, learned cooperation, and gained self-confidence and self-esteem through their daily

contact with a chosen pet. A further example is the study described by Ross (1983) of the work done at the Green Chimneys Farm with handicapped children, aged 6-18, with emotional problems and learning disabilities. He describes how "peer tutoring", involving the farm animals, built self-esteem, self-confidence and a sense of responsibility. These programmes led to the eventual reintegration of the children into their schools and the resuming of their lives at home. In other words, there was a 'normalising' effect.

The care of pets/animals thus aids in the development of sound personality traits, releases tensions and anxieties and serves as a catalyst for human contact with others (Ross, 1983). These findings are confirmed by the studies conducted by Salomon and Comeau (1984) with autistic children. Many other studies are described in the Humane Education Projects Handbook (1982), including more than 20 junior league projects in 18 States within the U.S.A. Specific sections cover animal therapy with victims of child abuse. Veevers (1985) concludes that it is clear that animals/pets play an important humanising and socialising role in human interactions.

A variety of animals including pets have been used in a diversity of situations (Brickel, 1986). This has led to many different terms for animal therapy programmes, as described by McCulloch (1986). However, an all encompassing term, Pet Facilitated Therapy, has been coined and its

definition stretched (Brickel, 1986). For the purposes of this study Pet Facilitated Therapy and Pet Therapy are used interchangeably.

The study conducted by Davis and Juhasz (1985) on the pre-adolescent/pet bond analyses the factors involved in Pet Facilitated Therapy interventions which contribute to the success of animal therapy, especially with children. Their study is of particular interest since it deals with the 10 to 12 age group which is the most impressionable group to respond favourably to an intervention programme. Their conclusions, as well as those of Levinson (1969; 1978), provide a framework for the hypotheses of the present study.

Davis and Juhasz (1985 p.88) suggest that the ". . . pre-adolescent period provides a rich background upon which the significance of pets can be examined", because it is during this specific stage that the individual learns feelings of achievement from completing tasks well. The young person who is able to demonstrate competence to his parents, etc., namely 'significant others', by taking on the responsibility of pet care, can develop a sense of pride in his/her accomplishments (Van Lesuwen, 1981). This is positive reinforcement. The child feels 'master' of the situation since the ability to meet the needs of a dependent creature is an important achievement (Guttmann, Predovic and Zemanek,

1983). In a school environment *this* success would lead to social reinforcement (Burns, 1980).

The Pet Facilitated Therapy theories are supported by Erikson's concept (1963) of the stages of personality development which address the *pre*-adolescent period and reflect a psychodynamic influence through its *concern* with ego maturation. During this stage, known as "industry *versus* inferiority", a crisis in ego identity can occur if the individual *fails* to develop a sense of pride in personal achievements. If a pre-*adolescent does* not achieve a sense of "industry", he is ill-prepared to meet *the demands* of adolescence (Erikson, 1959). Based on these theories it *has been proposed* (Davis and Juhasz, 1985) that the interaction with pets *serves* specific purposes in fostering healthy psychosocial development.

Davis and Juhasz (1985) also state that an adolescent's *self esteem* may be positively affected by a relationship with a pet *which, unlike human* beings, is unable to perceive human inadequacies and *given unconditional* acceptance (Levinson, 1969). It also does not make interpersonal *demands* which the young owner cannot fulfil. Levinson (1972) states that *the animal's* uncritical acceptance of the person creates an non-threatening, *calming* environment which can facilitate learning and social interaction. *In the school* setting this can be a useful tool for the teacher. The animal *very often* satisfies the need for physical contact which human

relationships have not provided. In fact, this animal/child contact can provide, in an anthropomorphic form (Vesvers, 1985), factors which Burns (1982) describes as the role of the family in the development of the child's personality .

The previously described studies on self-esteem and Pet Facilitated Therapy overlap in their emphasis on the importance of self-esteem and making the improvement of self-esteem a priority. They also provide insight into how Pet Therapy can be used as an intervention in a normal educational setting. Lastly, these studies lend credence to and support for the present study which investigates the effects of Pet Therapy on the self-esteem of primary school children.

Background to the Study

The researcher was head of the science department of a primary school from 1978 to 1983 and was involved in teaching biology to Standard 5 pupils. As part of the lesson, animals covering a wide spectrum of the syllabus to be studied, were introduced into the laboratory. This resulted in a 'living' laboratory being established and the consequent need for animal care. Pupils were encouraged to choose a particular animal for which they would take responsibility. Thus a science club was formed. The club functioned during breaks and extramurally when the pupils attended to the requirements of the animals.

As time progressed certain observations were made by the researcher on the unexpected effects of pupil-animal contact on the various 'pet owners'. Based on these observations, and the positive feedback from parents, patterns began to emerge and subjective conclusions about improved attitudes, self-confidence, leadership, reliability, sense of responsibility, increased peer recognition and sociability were reached. The contact with animals in the science club came to be recognised by the teachers and headmaster as valuable and of therapeutic benefit. It was believed that the animals provided the positive reinforcement that many pupils require. Letters from parents included in the Appendix confirm the value of this pupil-animal contact.

The motivation for this study was the realisation that controlled experimental data was required to confirm the subjective observations and to investigate the questions that arose on the effect of the animals in the classroom context. The following quote from Levinson confirms the need for empirical studies:-

> We at present have only the remotest awareness of the therapeutic implications of pets. Do we possibly in Pet Therapy have a tool which permits us to examine ..... the elusive something which promotes healing? I believe we do. The possibilities for research are great. I am sure that the

> majority of people ..... would agree that our precious 20th century youngsters will probably mature in a chaotic, disturbed environment. If we have a therapeutic tool such as the use of pets, it behoves us to explore and develop fully the possibilities of this adjunct. (Levinson, 1974, p.17).

Research Questions

The following questions are explored in this study :

1. *Does* Pet Facilitated Therapy as an intervention programme have a significant *effect* on improvement of the self-esteem of primary school pupils?
2. *Does* Pet Therapy specifically improve the self-esteem of pupils with low *self-esteem*?
3. Do pupils with high self-esteem show *less* improvement in *self-esteem* with Pet Therapy than pupils with low self-esteem?
4. Does Pet Therapy facilitate an improvement in a pupil's *overall* personal/social adjustment?
5. Does Pet Therapy result in improved relationships of the pupils with
   a. *peers*?
   b. parents?

Research Hypotheses

The following hypotheses were examined in this study :

1. Pet Facilitated Therapy, the intervention programme, has

a significant effect on the improvement of the self-esteem of primary school pupils.

2. Pet Therapy specifically improves the self-esteem of low self-esteem pupils.
3. Pupils with high self-esteem show less improvement in self-esteem with Pet Therapy than pupils with low self-esteem.
4. Pet Therapy will facilitate an overall improvement in a pupil's personal/social adjustment.
5. Relationships of pupils undergoing Pet Therapy will improve in the following areas:
   a. with their peers
   b. with their parents

Statement of the Problem

More and more pupils come to school anxious, full of complexes and lacking in self-confidence. This permeates into all facets of their lives at school, for example absenteeism, antisocial behaviour, inability to concentrate during lessons, etc. (Raviv and Bar-Tal, 1980; Reid, 1982; Ellerman, 1980). Teachers are increasingly faced with these social and psychological problems. (Bar-Tal, Kfir, Bar-Zohar and Chen, 1980; Reid, 1982).

The increasing divorce rate, one-parent families (Berelowitz, 1986), both parents being away all day, or perhaps the breadwinner being unable to find employment, are

circumstances which can lead to the breakdown of vital parent-child relationships (Wallerstein and Kelly, 1975, 1976; Framo, 1975). Reports of social workers indicate that child abuse is increasing (Die Vaderland, 1986). Many of the factors necessary for the development of positive self-esteem appear to be lacking in the family or nuclear unit (Kaplan, 1986).

These problems are stressed by Levinson in several of his books, e.g. Pet Orientated Child Psychotherapy (1969) and Pet and Human Development (1972). Also Odendaal, head of the Onderstepoort Department of Animal/ Human Therapy, very clearly describes the problems of society in his paper: "The Role of the Pet in Rehabilitation", published in the magazine 'Rehabilitation in S.A.' (1985). The figures gathered by the Head of Department for Guidance in one of the Northern Suburb schools of Johannesburg show that 15% of the pupils come from one-parent homes. Each year several of these pupils are recommended to the Transvaal Education Department Psychological Services for therapy. It is argued that if the problems are not dealt with at the primary school stage, they are compounded in the adolescent and teenage stage, which may lead to dropouts (Reid, 1982).

In this respect Pet Therapy is seen as a means or intervention to alleviate the emotional problems of many of these young people and possibly produce better all-round adjustment, i.e. a "normalisation" (Odendaal, 1985).

Importance of the Study

The importance of this study is its attempt to investigate whether a therapy such as Pet-Animal Therapy, used in a normal school environment, can have a beneficial effect on the confidence and self-esteem of pupils. Pupils with low self-esteem are of particular interest, since self-esteem appears to be the central organising force in a person's personality (Curtis and Shaver, 1981). According to a Human Sciences Research Council on-line bibliographic search, conducted on the 15 April 1986, this investigation is the first empirical study to be undertaken in South Africa where Pet Facilitated Therapy has been tried in the ordinary school environment. Pet Therapy has been used with success in special schools such as those for physically and mentally handicapped children and in rehabilitation centres Odendaal, 1985). There is some evidence for its application in ordinary schools. For example, an article was published by the 'Human/Animal Contact Group', in which Coetsee (1985), a teacher in the Cape, describes the effects that the presence of her dog, Dassie, had on the cooperation, motivation, and self-confidence of her pupils.

Further confirmation of the importance of this study is that the ERIC Searches performed in 1986, 1987 and August 1988, indicated that only limited research on the use of Pet Facilitated Therapy in normal educational settings has been documented internationally. The literature survey indicated that the majority of the research in Pet Therapy has been

undertaken in special institutions for children with various types *of* disabilities. Furthermore much of the data collected from *previous research* has been largely of a subjective kind, including anecdotal *reports* of observations (Brickel, 1986). The present study *has been conducted* under controlled conditions with a quasi-experimental *design* involving an experimental and a control group. The animals, *regarded* as pets by the experimental group of pupils, were the "sole therapist" (Levinson, 1984; Brickel, 1986). Finally, it is concluded that there is a gap in research on the uses of Pet Therapy in the classrooms and the school context, towards which this study may contribute.

Limitations of the Study

1. The *study was confined* to one school and therefore this limits the *generalisability* of the findings.
2. Due to the selection criteria, the sample of pupils for the experiment, originally *obtained from* Standards 3 and 4, comprising the pre-adolescent stage, *was too* small. A further sample was added from Standard 5 which *meant* that several young adolescents were included. It is not certain to what extent the inclusion of older pupils would affect the results.
3. It was not possible to conduct a pilot study to try out the appropriateness of the measuring instruments and to *assess* possible administration difficulties. Problems *were experienced* with the Rogers Personal Adjustment Inventory as *this contains* a few highly emotive items

which caused some concern, especially with Standard 3 pupils. These items were thus excluded from the scoring.

4. The influence of the teacher in charge of the laboratory and supervising the project could not be controlled. How the experiment was administered is not documented since the researcher was transferred to England. However, the teacher in charge was experienced in the care of the animals.

5. Some animals either died or escaped during the course of the project, in spite of great care being taken. Pupils were given replacement animals but the effects of the initial loss is an uncontrolled variable which could have affected the results.

6. There is no doubt that an emotional project such as this created excitement and there was a certain amount of Hawthorne effect which further limited the study.

7. Triangulation with the data collected on the relationship with parents was not carried out as it was not possible to interview the parents or to administer the questionnaires.

8. A potential limitation in this study may be the absence of a second control group which was exposed to some other organised activity, so that their results could be compared to the experimental group involved in the Pet Therapy programme.

Statement of Assumptions

The following assumptions have been made :

1. The instruments used in this study for measuring self-esteem and social adjustment are reliable and valid.
2. There are primary school pupils with low self-esteem.
3. Pet Therapy is an intervention which can be used in the normal school environment.
4. An interaction (relationship) between the pupil and his chosen animal will occur and that there is meaningful communication taking place between "master" and animal (Levinson, 1984).

Delimitations of the Study

1. This study was limited to white, middle-class school pupils.
2. Only one school was involved.
3. Pupils constituting the sample size were selected from Standards 3 to 5 and the age range was 10 to 12 years.
4. The sample for the experimental and control groups contained a larger proportion of low self-esteem pupils than high self-esteem.
5. The science teacher in charge of the laboratory was replaced and the researcher who supervised the experiment transferred to England in the middle of the experiment. This factor posed a further limitation to the study.
6. The project i.e. the intervention study, had a duration of 9 months.
7. The two instruments for measuring self-esteem and social

adjustment were administered in both pre- and posttest situations to the experimental and the control groups.

8. Only those aspects of social adjustment relating to the pupils' relationships with their peers and their parents were investigated.

Definition of Terms

Self Concept

The self-concept construct can be broadly defined as a person's perceptions of himself or herself (*Shavelson and Bolus, 1982*). In the present study, self-concept and self-esteem are used interchangeable and are defined as personal judgement or evaluation about the 'Self' which expresses an attitude of approval or disapproval for the individual's perceptions of his ability, importance and his perceived value to others.

Self-esteem

Coopersmith's definition (1967, p.10) has been accepted for the purposes of this study. He states that self-esteem *is* the affective dimension of self-concept which indicates a personal judgement of the person's own worthiness by examining his performance capacities and attributes. This is *expressed in attitudes* the individual holds about himself and about how people 'see' him. It indicates the extent to which the individual believes he is capable, significant, successful and worthy.

adjustment were administered in both pre- and posttest situations to the experimental and the control groups.

8. Only those aspects of social adjustment relating to the pupils' *relationships* with their peers and their parents were investigated.

Definition of Terms

Self Concept

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Significant Others

This term refers to persons who have influence on the child through their ability to reduce the child's insecurity or to *intensify* it, to increase or decrease the child's helplessness and to promote or diminish his/her sense of worth. Significant others play a confirming role in defining the 'Self'. Parents are *presumed to be the foremost* significant others in the child's development (Levinson, 1974) but later teachers and peers become important (Burns, 1982) .

Symbolic Interaction

This is a model of self-concept formation derived from Mead's (1934) formulation that symbolic meanings are learned *by interaction with others,* especially 'significant others', (Scheirer and Kraut, 1979), and also by evaluation of oneself by these 'others'. The meaning and evaluation of symbols, including *labels applied to oneself,* are learned during daily interaction within one's network of social relationships and interpretations of one's environment, e.g. in the nuclear family in which 'interactionism' *takes the* form of positive reinforcement (Burns, 1982; Kaplan, 1985).

Positive Reinforcement

Positive Reinforcement is involved in feedback which is pleasant and agreeable, informing the child that he is competent and of worth, thus encouraging positive responses from the child (Burns, 1982).

Pet Facilitated Therapy

Pet Facilitated Therapy is the term first used by Levinson, (1967) for the use of companion animals in therapeutic situations, the pet acting as a bridge between the therapist and the patient. Later it came to be used for any therapy involving any type of animal, whether requiring the presence of a therapist or using the animal as the "sole therapist" (Brickel, 1986). In the normal classroom context the word therapy takes on a different connotation. It is not therapy in the true sense but an intervention used to correct an 'ill' connected with pupils' behaviour, social adjustment or self-esteem. In this sense it is considered as therapeutic.

Procedures

The initial phase of the research was the identification of pupils having either low or high self-esteem. This was facilitated by administering a Self-Esteem Inventory to the pupils in Standards 3, 4 and 5, and then determining a cut-off point for low self-esteem. Also during this phase a letter was sent to the parents of these pupils informing them about the project and asking their permission for their children's participation.

The second phase consisted of selecting the samples for the experimental and control groups. These samples were randomly selected from the list of positive replies so that both groups contained a certain number of low and high self-

esteem pupils. At this time a Personal Adjustment Inventory was administered to assess the pupils' 'social index' or level of social difficulties.

The children in the experimental group were then introduced into the programme with the animals in the science club. Each pupil was given the opportunity to choose one animal which he/she would take care of during the duration of the experiment. The programme then proceeded as an extramural activity under the guidance of the science teacher. The children in the control group were told that they would be exposed to the same programme during the following year.

After 9 months the investigation entered its final phase. Both the Self-Esteem and the Personal Adjustment Inventories were again administered to the experimental and the control groups to obtain posttest scores. The pre- and posttest scores were then statistically analysed to assess if there was any significant difference between the experimental and control groups.

CHAPTER TWO.

LITERATURE REVIEW.

OVERVIEW.

This chapter presents a review of research studies on the self-concept, its determinants and correlates and related intervention programmes. In addition, the findings of studies using animals in therapeutic treatments is reviewed to establish whether Pet Facilitated Therapy can be successfully applied as an intervention programme for improving self-esteem within a normal school environment.

It is almost 100 years since James brought the 'Self' out of the realms of philosophy and defined it as a legitimate study for psychologists (Burns, 1982). Reviews conducted by Hansford and Hattie (1982), and Byrne (1984), indicate that since then a vast amount of research has been conducted by psychologists, sociologists and educationalists. Despite all this research, there is still a lack of consensus regarding many aspects of the self-concept construct and its assessment (Shavelson and Bolus, 1982).

Researchers, in their reviews of the various theories and approaches to the self-concept, have highlighted the complex nature of this construct. They stress that there is a need to clarify Global Self-Concept and specific aspects such as Academic Self-Concept, Self-Esteem, etc. In fact, Hansford and Hattie (1982, p.133) identified 15 dimensions in the

Self-Concept construct. It is with the evaluative aspect of the Self-Concept construct that this present study is concerned, namely Self-Esteem. However, it must be stressed that since much of the literature reviewed uses the terms self-esteem, self-concept and self-attitudes synonymously, these terms have been used interchangeably in this present study.

One fact which emerges from the self-concept studies is the importance of a positive self-esteem to an individual's successful functioning (Kaplan, 1975). Scheirer and Kraut (1979) state that positive self-concept should be a valued goal of education. The conclusions of researchers about the importance of self-esteem is summed up by Chapman, Silva and Williams (1984, p.284) with the following statement:

> Research efforts strongly suggest that self-perceptions and conceptions are important mediational influences which define for individuals the nature of their relationships with other people, the types of behaviours and tasks in which they will engage, the states of tensions they will experience, and in turn, how individuals will perceive themselves.

Many research studies have been concerned with the consequences of self-esteem or self-attitudes. For example, the symbolic interactionists hypothesise that a positive self-

concept will lead to constructive, socially desirable behaviour, and conversely, that distorted self-concept will lead to deviant, socially inadequate behaviour (Scheirer and Kraut, 1979). Burns (1982) has stressed that the behaviour correlates of self-concept as well as the personality traits linked with self-concept illustrate the ubiquity and potency of the self-concept. The studies of Kaplan (1975) on self-attitudes and deviant behaviour support this view. His findings suggest correlations between self-attitudes such as self-denigration and self-rejection with deviant responses, as well as behaviours such as drug abuse, aggression, delinquency, withdrawal and even mental illness.

Further posited correlates with low self-concept are variables like persistent absenteeism and dropouts (Reid, 1982), inadequate social adjustment with peers, teachers and others (Burns, 1982), and poor academic achievement (Hansford and Hattie, 1982). In addition, Kawash and Clewes (1986) indicate that personality traits such as anxiety, neuroticism, depression, pessimism and external locus of control have correlations with low self-esteem. These conclusions are supported by researchers such as Rushton, (1988); Chapman et al, (1984); Raviv and Bar-Tal, (1980); Maqsud, (1983) and Fischer and Leitenberg, (1986). When taking the various correlates of low self-esteem into account, the importance of self-esteem is summed up by Curtis and Shaver (1981 p.217), who assert that ". . .self-esteem appears to

be a central organising force in each individual's personality".

There is increasing concern amongst behavioural psychologists, sociologists and educationalists about the consequences of low self-esteem and the need to find ways of ameliorating self-esteem (Scheirer and Kraut, 1979; Byrne 1984). This has led to the development of intervention and compensatory programmes. The Curtis and Shaver study (1981) has shown that it is possible to improve the self-esteem of slow learners through the positive reinforcements gained from a community-orientated intervention programme. However Scheirer and Kraut (1979), conducting an investigation into different educational interventions in a variety of settings and age groups, state that, although there has been vast federal effort within the USA in compensatory education to humanise public schools, their findings have raised doubts about the efficacy of the intervention programmes.

In view of this apparent lack of lasting success of various intervention programmes, several researchers are stressing the need for new empathetic and therapeutic interventions to raise children's self-esteem (Reid, 1982; Arkow, 1983). In order to develop these programmes, Reid (1982, p.185) argues that educators ". . . must start to understand and endeavour to eliminate or compensate for those processes which build up negative identities for pupils". Thus it is important to investigate and understand the underlying factors which con-

tributs to the formation of self-esteem. Pioneer work was done by Coopersmith (1967) in his work 'The Antecedents of Self-Esteem' which was later supported and expanded by Burns (1982). It was concluded that the major determinants of the self-concept are to be found in the early and enduring experiences of the parent/child relationships which underpin the emotional security of the developing child. This theory also finds support in Erikson's studies (1963) on the formation of the 'alter ego'.

In today's modern society there is a growing breakdown of the relationships within the nuclear family unit, which no longer has deep roots in the community, and maladaptive behaviour of young people is on the increase (Levinson, 1974; Kaplan, 1985). Marital discord and divorce, with its consequent effects on the child, is also on the increase in the Western world as well as in South Africa, which has a society of severe stresses (Berelowitz, 1986). Increasing economic hardships in the 1980's, depressed socioeconomic conditions, both with white and especially black children, often result in unsupportive home conditions, lack of communication leading to insecurity and low self-esteem (Matoti, 1986). "Latch-Key" children who come home to an empty house are on the increase (Phillips, 1987).

Distortions in the formative childhood learning situations lead the child to interpret himself as unloved, rejected, neglected, unaccepted or incompetent, or as combinations of

these attributes (Burns, 1982). Kaplan (1975) hypothesises that if a child has a long history of perceiving himself as an object of negative attitudes by his 'significant others' and perceiving himself as possessing negatively valued attributes and behaviours, he will tend to develop negative self-attitudes. Levinson (1974), the forerunner and foremost advocate of Pet Facilitated Therapy, stresses the vital role of parent/child relationships in influencing how a child feels about himself, ". . . the genesis of child problems is in the home" (p.8).

Deterioration in parent/child relationships has led to child abuse, both physical and psychological, neglect and rejection (Levinson, 1974). Kaplan and Sadock (1985, p.834) state that "Child abuse is a social medical disease that is assuming epidemic proportions". An article in 'Die Vaderland' (January, 1988) titled "Child Abuse : Medicals Protect" supports this. The child comes to reflect the attitudes of his parents towards himself, as he perceives them, in the feelings he has about himself and his own worth. Negative reinforcement leads to negative attitudes and low self-esteem (Reid, 1982; Oates et al, 1985). This is reflected in the 'mirror image' theory (Mead and Cooley in Burns, 1982). In addition, abused children become less ambitious, see themselves as having few friends and have problems with interpersonal relationships (Oates, Forrest and Peacock, 1985). Franc (1975) states that whenever you have a disturbed child, you have a disturbed marriage.

The Boys' Town South Africa newsletter, published in June 1986, mentions a survey in which children were asked what gave them most pleasure. The findings revealed that it was not more toys, but "more time with mom and dad". Levinson (1980) states that a growing number of children come to school with feelings of anxiety and insecurity and are often unable to adapt to social interaction and the academic demands of school. Reid (1982) emphasises that the role of the school in influencing the child's self-concept must not be underestimated.

The importance of school in changing a child's self-concept is recognised by many researchers. Jersild (in Metcalfe, 1981) states that school is second only to the home in determining the growing child's self-concept and self-attitudes of acceptance or rejection. Lawrence (1981) argues that self-concept has great practical significance in educational psychology. He states that "Teachers are in the powerful position to influence a child's self-concept and should pay special attention to the child with poor self-esteem" (p.248). Reid (1982) has suggested that there is now a need for schools to relate to the unique features of pupils and take a more imaginative approach in the handling, prevention and treatment of their pupils' problems. Furthermore Guidibaldi, Cleminshaw, Perry and Moloughlin (1983, p.321) state that " We need to devise school-based services that can compensate for the declining support at home". Lawrence (1981,p.249) further argues that "Before we

can attend to a child's academic achievement we must attend to ways of raising his self-esteem. It may be useful to change the child's self-concept before attempting a more formal teaching of skills". Educators are urged (Burns, 1979) to devise programmes for creating a therapeutic climate in which children can learn to accept themselves and develop positive self-concepts.

Therefore there is a need for new empathetic, imaginative and therapeutic programmes. Levinson (1974) is convinced about the vital therapeutic role that animals play in a person's mental and emotional stability and his socialisation. He stresses the impact of pets upon the child's successful accomplishment of his many developmental tasks (Erikson, 1965). Levinson (1974) is of the opinion that educators and psychologists will have to take responsibility for the consequences of their neglect if they do not fully explore and develop every possibility of Pet Therapy as an adjunct to enhancing 'mental hygiene'.

Several researchers have investigated the importance of the human-pet relationship. Beck and Katcher (1983) argue that a pet can provide the elements of the primary symbiotic relationship of the child with its mother. In other words, it plays a type of 'surrogate role' (Veevers, 1985). According to Levinson (1980) pets can provide partial substitutes for loving parents, i.e.'significant others', by providing opportunities for giving and receiving affection which is so

vital to the child's adequate growth and personality development, particularly when these elements are not adequately available in the child's home. It is suggested by Robin, Ten Bensel, Quigley and Anderson (1983) that animals can substitute for human relationships, whilst Davis and Juhasz (1985) argue that pets serve as a responsive source of approval, enhancing and maintaining the preadolescent self-image. In addition, Ross (1983) claims that the bond between people and pets helps to satisfy the need to love and to be loved, and also the need to feel worthwhile to ourselves and others.

Care of a pet, whether in the home environment, within the school setting or in an institution or hospital of some kind, has many other beneficial effects in addition to 'positive reinforcement', in particular for the child who is given responsibility for the welfare of the animal. Levinson (1978) posits that the child develops characteristics of self-discipline, patience, aggression containment and awareness of others' needs and feelings of accomplishment. Furthermore, Levinson (1980) views pets as 'transitional objects' since the experience of love and empathy which is engendered through this non-threatening relationship can later serve as a bridge to transfer those feelings to people. Beck and Katcher (1983, p.159) sum up the role of pets as follows, "We believe that animals can make a unique contribution to therapy because of their capacity to make people feel safe, loved and worthwhile". They also state

that pets stimulate a love in people which is unambivalent and unaffected by distrust, by giving unoritical, unconditional acceptance. The pet does not perceive human inadequacies and does not make interpersonal demands which cannot be fulfilled (Levinson, 1969). "The nurturance of and companionship with a living creature can convince a child that life is worthwhile even under difficult circumstances" (Levinson, 1978, p.1035).

Reviews of the studies that have been conducted on the use of pets in therapy situations (Arkow, 1983; McCulloch, 1983 Moore, 1984, and the American Humane Association, 1981), indicate that a vast body of research has accumulated, especially in the early 1980's, and is rapidly increasing. In fact Beck and Katcher (1983) make the comment that many researchers are on the 'band wagon' and they issue the warning that Pet Therapy should not be seen as a 'panacea for all ills'. This is supported by Brickel (1986). McCulloch (1988) states that there is no systematic compilation of Pet Therapy failures and stresses that much can be learnt from negative results. This lack of documentation is very unfortunate. He summarises the possible negative effects of Pet Therapy. Brickel(1986) and Serpel(1988) discuss research studies regarding the negative potential of pet-person relationships and question the efficacy of Pet Therapy. However, Brickel (1986) argues that some dramatic examples of negative animal-related circumstances do not represent the "normal mode of pet involvement" (p.312).

Valuable research has been conducted on the uses of pets with positive results. The majority of this research has been done with the disabled, handicapped and elderly. There are few investigations into the uses of pets in normal settings such as schools and the ordinary home environment (Levinson, 1980). Ross (1983) states that in recent years, with little public or professional recognition, there has been increasing use of pets and farm animals in therapy situations both with adults and children. Examples of this are treatments for the medically ill (McCulloch, 1981), the emotionally disturbed (Corson and Corson, 1974, 1978a; Doyle,1975), the physically handicapped and retarded (Polt, 1985), therapeutic equestrian programmes (Bieber, 1983; Odendaal, 1985), autistic children (Salomon and Comeau, 1984), the socially maladjusted (Ross, 1983; Lee, 1979), the terminally ill (Muschel, 1984) and the aged (Corson and Corson, 1978b; Mugford and M'Comisky, 1975). In all cases the reported results include improved self-attitudes, social adjustment and self-esteem. Pet Therapy has proved to be most suc- cessful with children and the elderly (Beck and Katcher, 1983).

Unfortunately much of this research relies on descriptive case studies and anecdotal reports of situations in which animals have been used to alleviate human problems. Levinson (1969) was the first psychologist to document his findings of child psychotherapy using his dogs. His theories, although based on anthropological and sociological

data as well as clinical observations, have served as a basis for many projects. There is a paucity of scientific investigations and an urgent need for controlled experiments with scientific and quantitative data to support the effectiveness of Pet Therapy in comparison with more conventional therapeutic agents (Beck and Katcher, 1983; Brickel, 1986). "Further research needs to be done to confirm the numerous clinical observations and anecdotal reports of the efficacy of Pet Therapy" (McCulloch, 1983, p.25).

Corson and Corson (1974) were the first investigators to conduct a true scientific study into the benefits of Pet Therapy. Empirical studies have been conducted by Muschel (1984) on the efficacy of Pet Therapy in comforting and nurturing terminal cancer patients, and Katcher, Friedman, Goodman and Goodman (1983) on the effect of physical contact with animals, such as stroking and the related lowering of the person's blood pressure. A controlled experiment was conducted by Mugford and M'Comisky (1975) with elderly people. Some groups were given budgies whilst others received a T.V. set or a pot plant or combinations of these or nothing at all. Thus there were experimental and control groups. After five months the results indicated that only the groups with the budgies showed improvements in their psychological and socialisation constructs.

Although most of the investigations on Pet Therapy with children have been conducted in special institutions,

Veevers (1985) argues that if pets are beneficial for special populations, it is possible that they may be equally beneficial for normal, healthy populations. Thus in recent years researchers have started giving attention to the roles which various pets may play in ordinary families (Veevers, 1985) and for children in their learning environments (Humane Education Projects, 1982). It is precisely in this latter setting that the present study proposes to examine the possible improvement of pupils' self-esteem and social adjustment by using a pet care programme in the normal school curriculum as an extramural activity.

In order to understand how a child's self-esteem can be ameliorated and how it is possible that Pet Facilitated Therapy could provide a suitable intervention, it is necessary firstly to have a clear picture of Pet Facilitated Therapy and what can be achieved through its application (Levinson, 1980). Secondly, it is important to clearly determine the factors concerned in self-esteem formation (Reid, 1982) and to elaborate on these factors in order to evaluate whether there is any overlap or agreement with the theories expressed on the psychological effects of Pet Therapy.

PET FACILITATED THERAPY.

a. A Brief History.

Extensive overviews by researchers such as Beck and Katcher (1983), McCulloch (1986) and Arkow (1983) elaborate on the history of Pet Facilitated Therapy. They indicate that although there is evidence that man's discovery of the therapeutic value of animals goes back many centuries, the first deliberate attempt to use Pet Facilitated Therapy was in the York Retreat, England in approximately 1792, for mentally disturbed patients. In 1867 pets became part of the treatment for epileptics at Bethal, a residential centre, in West Germany. In both instances a variety of animals such as rabbits, birds, farm animals, as well as cats and dogs, were used. Unfortunately there were no systematic records on the effects of the animals on the patients.

The first documented therapeutic use of animals was the rehabilitation of airmen in the Air Force Convalescent Centre, Pawling, New York which was started in 1942 when 'K-9' dogs were used to bring patients out of deep depression. However, Levinson (1969) pioneered the use of animal therapy with children by using his dog 'Jingles' as co-therapist. His books (1969, 1972) and research papers (1974, 1978, 1980) provide detailed documentation of case studies on the roles pets played in the treatment of young patients and of his investigations into the dynamics of the human-pet relationship. He reported on the value of pets as

catalysts to human interaction. Besides Levinson, there were other earlier reports of work done in the Children's Psychological Hospital, Michigan, using a mascot dog, 'Skeezer' (Yates, 1973). These reports were purely anecdotal, based on case studies and clinical observations.

Until recently there was a dirth of empirical investigations into the uses of pets and the effects of the human-pet relationship. Levinson (1972) stated that " We need highly imaginative and extremely rigorous research to establish the principles and boundaries in the use of pets in psychotherapy". Some of the earliest quantitative studies using pets were conducted by Corson and Corson (1974, 1979a and b) to evaluate the effects of their dogs in an institutional setting involving psychiatric patients and with the elderly in a nursing home.

The current interest in the potential value of animals to human health, physical, mental and emotional, has been generated to a large extent by Levinson's findings and the systematic investigations of the Corsons. Based on the findings of these researchers, animals have been used in a large variety of therapeutic settings with children, adults and the elderly. Virtually hundreds of programmes throughout the world now utilise pets (McCulloch, 1983; Arkow, 1983) It is however only recently, possibly through the inspiration of Levinson's writings, that groups such as the 'Humane Association' (1982) have been involved in

investigating the use of pets in ordinary situations such as the home environment and schools, very often working in conjunction with social workers (Netting, Wilson and New, 1987).

b. The Dynamics or Underlying Principles of Pet Therapy.

The mechanism of the effects of pets on personality development and on mental and physical health are by no means clear (Davis and Juhasz, 1985). However, the various theories put forward by Davis and Juhasz, Veevers (1985) and especially by Levinson (1978) have given investigators some guidelines to the underlying psychological principles.

Veevers (1985) has identified three separate functions as extensions of a close association with pets, namely a projective function, a sociability function and a surrogate function. He argues that the projective function involves the extent to which pets may serve as a symbolic extension of the 'Self'. Beck and Katcher(1983) state that children unconsciously view pets as extensions of themselves and treat their pets as they want to be treated themselves, whilst Rosenberg (1979) posits that, as an ego extension, the animal is subjectively incorporated into the preadoles-*cent sense of the self-image. The pet has a positive* influence in decreasing the child's preoccupation with 'Self', especially in times of stress (McCulloch, 1983). "Pets can be all things to all people, a mirror image or alter ego of whatever its owner wishes to make it" (Arkow,

1983 p.2). It can be said that through the mechanism of displacement, projection and identification, a pet may be a major factor in the maintenance of a person's psychological equilibrium (Mumchel, 1984)

Several researchers have conducted studies on the sociability function involving the role of pets in facilitating human-to-human interaction (Veevers, 1985). Schowalter (1983), for example, describes how therapists successfully use conversations about their pets to gain an understanding about their fears, displayed feelings and problems. Veevers (1985) found that pets act as social lubricants, increasing the quantity and quality of social interactions. He also states that the pet often acts as a 'proxy' with whom the individual can practice a variety of interactions, developing empathy, patience and trust which can later be incorporated into other social relationships. Hyde, Kurdek and Larson (1983) found that college-age pet owners tended to have higher empathy and interpersonal trust scores than non-pet owners. Roohberg-Hamilton (1985) concludes from investigations of "Life in the Treehouse" that the ability to develop and maintain a relationship with a pet may be an indicator of a person's capacity for social interaction.

A key factor in successful social integration and adjustment is non-verbal signals from people. According to Corson (1982) and Guttmann, Predovic and Zemanek (1983), the relationship with a pet greatly influences a child's non-verbal

ability and thus his social behaviour and his sensitivity to non-verbal cues in social interaction. Hall and Richmond (1985) state that the ability to decode non-verbal communication plays a vital role in a child's social and academic status and hence his self-esteem. Levinson (1980) posits that children have a particular need for this kind of non-verbal learning and emotional interaction which comes from close contact with a pet, i.e. pets are a wonderful medium of non-verbal, body-mediated interaction. He also argues that this non-verbal interaction with a pet is most useful for the non-verbal, severely ego-disturbed child, as well as for children sadly deprived of love.

An investigation conducted by Gutmann et al (1983) focused on the extent to which contact with animals in a child's formative years contributed to the development of his non-verbal ability. Their findings indicate that pet owners achieve better performance scores in non-verbal communication measurements than the controls, i.e. they are better able to decode subtleties of human facial expressions. Also social interaction was assessed by measuring social behaviour in the classroom using sociometric methods. Children who have pets at home achieved statistically higher scores in the 'passive vote'. They were most often selected as confidants, companions or partners in a variety of situations.

The relationships with peers may also benefit if the child owns and successfully handles his pet (Levinson, 1978). This can enhance the child's prestige in his peer group and assists in improving his own self-esteem. The child feels 'master' of the situation and, in turn, his locus of control can be improved. Children with low self-esteem are orientated towards an external locus of control and these "externals" have difficulty in interpersonal relationships (Burns, 1979). Having the responsibility of a pet can help children out of depression and anxiety, which stem from feelings that they are powerless to change or control situations affecting their lives (Davis and Juhasz, 1985). This can lead to improved ability to interact with peers and teachers. "Changes in attitudes can only come about through changes in attitude to self" (Burns, 1982).

The third function which was identified by Veevers (1985), namely the surrogate function, involves the extent to which interaction with a pet may supplement human-to-human interaction as is indicated by the Rochberg-Hamilton (1985) study. Juhasz (1983) conducted an exploratory study on factors involved in the self-esteem of early adolescents. His findings revealed that the subjects ranked pets just below parents but above other adults regarding factors that made them feel satisfied and good about themselves. Very often the child attributes the animal with human characteristics in a type of anthropomorphism and the animal will fulfil many needs of the child's developing personality, especially

when support is not readily available in the child's immediate environment (Levinson, 1978). The presence of a pet may provide a sense of continuity, for example in cases of separation, divorce, or in residential treatment for emotionally disturbed children. A pet can ease the pain of separation and the therapeutic milieu becomes more reality-orientated (Rose, 1983). Schowalter (1983) states that the pet is often the one 'parent' that the child can count on.

In the case of pet relationships in a normal home environment, children becoming 'parents' of a pet develop a more realistic view of their own parents. It is a decisive role reversal for a child to accept the responsibility for the well-being of another living creature (Guttmann et al, 1983) The complete acceptance from, and dependence of, a pet provides the child with a sense of worth and lovability (McCulloch, 1983) and therefore, this pet ownership may aid in the development of personality traits (Levinson, 1978). Davis and Juhasz (1985) state that, based on the theories of Erikson (1959) and Rosenberg (1979) regarding the personality development of the preadolescent, interaction with pets serves a specific purpose in fostering healthy psychological development, since one of the important 'tasks' is the acquisition of autonomy and independence. This is satisfied by the child viewing himself as the one who is being depended upon rather than being dependent on, i.e. a form a positive reinforcement. Relating to an animal thus affects the development of self-concept by promoting factors

such as a sense of competence, self-confidence, overcoming fears, empathy for and from others, heightening the capacity to love and improving social adjustment. As the child begins to feel secure due to the enhancement of his self-esteem, he is prepared to try out new and more mature behaviour patterns (Levinson, 1978).

The vital question which still has not been answered by the above discussions is how and why contact with animals can have such a great influence on human beings. Researchers such as Levinson, Corson, and Davis and Juhasz have put forward several hypotheses which are briefly summed up by Levinson (1978). He states that the human-pet relationship is not stressed by the anxiety of personal inadequacy or failure which normally accompanies human relationships, since the pet gives unconditional acceptance, love and tactile reassurance without criticism. By their dependence, animals satisfy a person's craving to 'matter' to someone (McCulloch, 1961), i.e. their feeling of importance or feeling of acceptance. The pet is the trusted friend, always available, faithful, intimate, patient and non-competitive, thus fostering positive self-concept of its young owner (Davis and Juhasz, 1985). Levinson concludes by stating that " A pet is an island of sanity in what appears to be an insane world" (in Arkow, 1983, p.1).

c. Pet Facilitated Therapy and Children

Pet Therapy programmes for children have been examined from two aspects. Firstly, the uses of animals in special institutions and secondly, in schools.

Several investigators highlight the value of physical contact with animals. Robin and Ten Bensel (1985) stress the role of the pet in satisfying the child's need for physical contact and touching without fear of entanglements. They observed that touching is a highly effective means of reducing stress. In this connection Schowalter (1983) describes how a five year-old boy referred for psychiatric care had the habit of stroking his goldfish. The researcher observed a similar phenomenon with one of her pupils stroking his Salamanders in the biology laboratory. Davis and Juhasz (1985) describe research in which children experienced lowered blood pressure through the act of speaking to and stroking their animals. The touching, grooming and playing with pets were a vital part of a therapy programme for children with developmental disabilities in the Hope Centre (Polt 1985), where interaction and responsive behaviour was greatly enhanced. Similarly Salomon and Comeau (1984) reported how contact with hamsters reduced anxiety and re-established the socialisation process of autistic children. At the World Dolphin Foundation in Miami, autistic children were exposed to play sessions with the dolphins (Smith, 1982). The videotaped sessions revealed that the subjects demonstrated prolonged attention spans and

that several children showed increased verbalisation and interactive play.

In addition to mental health, the physiological benefits of pets for the young have been demonstrated by experiments in which there was no physical contact with the animals. The blood pressures and heart rates of children, average age 12, were monitored under various conditions, namely resting or reading with or without the presence of a dog, or watching tropical fish. The investigators suggest that the animals reduced anxiety in the subjects which resulted in lowered blood pressures (Friedman, Katcher, Thomas, Lynch and Messent, 1983; Katcher, Friedman, Beck and Lynch, 1983).

The question of how and why animals are effective as therapeutic agents, as discussed earlier, has been raised many times by researchers, especially in view of the fact that such a diverse number of animals are used. For example, Wolff (1970) recorded no less than 33 types, whilst Guttmann et al (1983) mentioned a whole range of animals including mammals, birds, reptiles, amphibians and fish. It is difficult to understand what forces are at work that can stimulate feelings of love for non-cuddly, cold-blooded animals. Nevertheless the beneficial effects of even these animals are indisputable and are clearly demonstrated in the study conducted by Ross (1983) in the Green Chimneys Rehabilitation Centre. This study confirmed that the programme not only facilitated the pupils' sociability but that there

was a vast improvement in self-confidence and self-esteem. He argued that a programme which required the children to take full responsibility for the welfare of their animals and to become competent 'farm guides', gave them a sense of mastery through completing the set tasks successfully.

Wallace and Reizenstein (1978) reported similar conclusions resulting from their remedial programme designed to meet the needs of a 12 year-old boy with a history of emotional withdrawal and socialisation problems. The therapy included involvement in the Knoxville Zoo. As a result of this project the boy eventually formed the Knoxville Zoological Club for children. His motivation, self-confidence, self-esteem, socialisation and even academic achievement had improved considerably.

In contrast to the above research studies, there are few documented studies which have been conducted in the normal school environment on the child-animal bond. Arkow (1983), in his review of animal therapy, reports on the activities of various Humane Societies in providing normal schools with animals, both with the aim of facilitating study and to monitor any other spin-offs of contact with the animals. Jones (1981) mentions studies which are in progress to introduce curricula into schools in the United States to develop the human-animal bond and to investigate the psychology of this bond. However, there is still little recorded evidence of the efficacy of such studies. Levinson (1980)

stresses the necessity for these studies by arguing that schools in large urban communities are facing an unprecedented crisis in this modern, technological age. They are being forced to re-evaluate their philosophy, curricula, methods and personnel training but, states Levinson (p.79), ". . . very little of this scrutiny has led to consideration of using animals for study, play or for training in responsibility and empathy". Odendaal (1985) argues that little attention has been given to to the role of animals in alleviating behavioural and emotional problems of pupils which could lead to their "normalisation".

Muschel (1981) recommends that agencies, including schools, should give more thought to Pet Therapy programmes and that research should be expanded to determine the effects on healthy people e.g. children in normal circumstances. However Levinson (1980) and Serpel (1986) stress that there is opposition to the use of animals, mostly due to a lack of understanding. Researchers and the public need to be more informed. Levinson (1980) also argues that as pets are symbols of the rehumanising of society and are aids to the upgrading of the quality of life, they should at least be considered as a "necessary evil" by the authorities.

One example of the use of animals in an elementary school environment is described by Alt (1985) in an article 'Fish Lab'. Aquaria were set up in various places in the school by members of the science club. One of the guiding

principles of the project was that the aquaria belonged to the club members to whom they had been assigned and became their sole responsibility. As the children learned to maintain their tanks and give reports about their animals (fish, sea-anenomes, crabs etc.) to their classes, the increase in self-confidence and self-esteem was amazing. Even mediocre pupils improved in various areas. The therapeutic value of aquaria has been recognised by a number of researchers. Levinson (1980) maintains that the aquarium is a potential projective device for some children, and that watching fish often releases tensions and becomes a bridge between the therapist (or teacher) and the child.

A further example of the use animals in the school laboratory is given by Orlans (1978) who suggests that a wide variety of animals should be kept and cared for by the children and should be handled with affection. Her conclusions indicate that stroking and handling of the animals, for example, can bring positive rewards both to the animal handlers and the animals themselves. Orlans (1979) states that the psychological effects are far-reaching, e.g. children with emotional problems are positively helped by physical contact with animals. This supports the theories about physical contact reported earlier.

d. Pet Facilitated Therapy in South Africa.

Professor Odendaal at Onderstepoort is considered to be a pioneer in the field of research regarding the role of the pet in human-animal relationships in South Africa. He has published several papers (1981, 1985) in which he stresses the importance of pets, not only for therapy in special institutions, but for ordinary relationships in people's everyday environment. In addition, the 'The Human/Animal Contact Study Group' are active in promoting interest in and bringing Pet Therapy to the attention of the professionals through the publication of their magazine 'Companion', and through their organised seminars. For example, on the 8th. July 1986 the study group organised a one-day seminar during 'Instructa' week on this vital relationship. Several presentations were made - for example, one by Sister T-uskie of the Bloemfontein municipality on the value of pets in nursing homes for the elderly in South Africa, and another by Professor Odendaal on the "Advantages and Disadvantages of animals in Institutions".

An article by Heleen Coetsee (1985), a teacher in the De La Bat school for deaf children, was published by the Study Group. She describes how the presence in the classroom of her dog, Dassie, facilitated learning, cooperation, social integration, motivation, and the improvement in the attitudes of anxious pupils. Since then she has added a second dog, Tsjaka, to her team of 'oo-teachers'. She states that the use of guide dogs is well established in South Africa

(Die Vaderland, September, 1985; Die Burger, November, 1985).

There is a open field for research on the role of animals both in the home and school as well as in institutions for *the disabled, ill, and elderly in South Africa.* Odendaal (1985), in his review of the use of Pet Therapy in other countries, states that the study of the human-pet relationship has been described as one of the revolutionary movements of our times. He stresses the need for researchers in South Africa to realise the value of Pet Therapy and to begin utilising it as an intervention technique. He states that the time has come for the human-animal relationship in South Africa to be studied on a multidisciplinary level. Odendaal commented that any researcher working in the field of Pet Therapy within the school environment is "treading on virgin soil". Levinson (1980) made similar claims about studies regarding the effects of relationships with animals and human psychological development.

SELF-ESTEEM AND IT'S FORMATION.

According to Burns (1982), most researchers view self-esteem as the self-evaluative component of the self-concept. Rosenberg (1979) defines it as as a personal judgement of worthiness lying along the dimensions of negative and positive ends, whilst for Lawrence (1981) self-esteem is defined in terms of self-attitudes having emotional and

behavioural components. However, Coopersmith's description of self-esteem (1967, p.4) refers to self-esteem as the ". . . evaluation that the individual makes with regard to himself; it expresses an attitude of approval or disapproval and indicates the extent to which the individual believes himself to be capable, significant, successful and worthy". Scheirer and Kraut (1979) state that a belief in the power of the self-concept is incorporated into all strands of psychological, sociological and educational theory which have emphasised that a person's belief about himself will influence all his decisions and actions.

In the study of self-esteem there are three main reference points, according to Burns (1982). One of these is the congruence between the known self-image and the ideal self-image, whilst the second reference point involves the view of oneself being 'master' of one's actions and having a sense of competence. A third point is the internalisation of the judgement of 'significant others' and society, the resulting self-evaluation being determined by the individual's beliefs about how others evaluate him and how he measures up to their aspirations. This latter aspect, involving positive reinforcement from 'significant others', reflects the original formulation by Mead and Cooley (In Scheirer and Kraut, 1979) of the 'symbolic interactionism' theory which states that meanings are learnt by interaction with others.

The theory of 'symbolic interactionism' appears to be a vital key around which all theories and studies of self-esteem formation and even some of the new empathetic interventions revolve. Researchers such as Coopersmith (1967); Erikson (1963); Rosenberg (1979) and Burns (1982) have investigated and reported the crucial role played initially by parents and siblings, and later by peers, teachers and other significant persons on the development of a child's personality and the formation of his self-concept. In describing the role of the family, Burns (1982) stresses that the parent/child relationship provides the initial indication of whether the child is secure, loved, accepted, wanted and successful. Burns (1982) emphasises that child-rearing practices are not only the bricks out of which the 'rising edifice' of self-evaluation is constructed, but also affect the attitudes a child develops towards others.

Kaplan (1975), studying the correlations between deviant behaviours and self-attitudes, bases his theories on a premise of a 'Self-Esteem Motive' which is universally and characteristically dominant in each individual's motivational system. This 'Self-Esteem Motive' is defined by Kaplan (1975,p.10) as ". . . a person's need to maximise positive self-attitudes and minimise negative self-attitudes". He clearly traces the origin of this 'Self-Esteem Motive' to infancy and the dependence upon the relationship with the significant adults, especially the mother's behavioural responses and attitudes. Through an association of the

early experiences, the child acquires the need to be the object of positive attitudes and to avoid being the target of negative attitudes. The child thus gradually adopts the role of the adult and perceives, evaluates and expresses attitudes towards himself from this point of view so that he can behave in ways which would evoke positive attitudes. Through a symbolic association between imagined attitudinal responses of 'significant others' and his own responses to himself, the child acquires the need for the 'Self-Esteem Motive' identified by Kaplan. The extent to which this 'Self-Esteem Motive' is satisfied determines the degree to which the child develops positive self-attitudes.

Kaplan (1975) concludes that the inability to achieve according to internalised standards of personal worth has adverse implications for self-evaluation and self-esteem. It is the motivation to cope with distressful negative attitudes that predisposes the person to adopt deviant behaviours. A breakdown in parent/child relationships and negative attitudes, which arise for whatever reason, can have serious consequences for the child's continued normal development (*Berelowitz 1988*). *Several researchers* have pointed out that sometimes 'perceived' negative attitudes of parents towards their children can result from imagined attitudes which the child interprets from his association with his parents who are too busy, thoughtless or unaware (Levinson, 1980). The need for parents to be educated to understand

the importance of their relationship with their children is stressed by Reid (1982).

A number of researchers have exploited the benefits of the parent/child relationships by designing therapeutic or intervention programmes which directly or indirectly generate the interest and cooperation of parents (Burns, 1982; *Curtis and Shaver*, 1981). *In* their review of intervention programmes. Scheirer and Kraut (1979) refer to the findings of a longitudinal study conducted by Brookover and Thomas (1964) which indicates that *only those experimental interventions* involving parents succeeded in increasing self-esteem.

Shavelson and Bolus (1982, p.3) sum up the discussion on self-esteem by stating that ". . . a person's perceptions of himself are formed through his experience with and interpretations of his environment and are influenced by reinforcements, evaluations by 'significant others' and by his attributions of his own behaviour". Therefore parents play the initial role in self-concept formation, but thereafter peers and teachers have an extremely potent effect. Standards set by parents and teachers are vitally important for the development of self-esteem. Lack of standards suggest to *the child that he is of no* concern and not worth bothering about (Coopersmith, 1967). Thus Reid (1982, p.232) comments that "For the modern teacher an accurate picture of a child's self-concept *is as vital a part of professional*

knowledge as is an assessment of their intellectual and academic progress". He also stresses that teachers should be made to realise their role and that of the school environment, as mediating factors in bringing about changes in children's self-concept.

The importance of teacher-pupil and pupil-pupil interactions in the classroom setting on a child's developing self-concept is argued by researchers such as Rushton (1988) and Metcalfe (1981). The feedback that children receive from their parents, teachers and peers affects self-concept both through verbal and non-verbal communication. This theory is echoed by Levinson (1974, 1980) and the various researchers of Pet Therapy, mentioned earlier, describing the supportive role of pets. Burns (1982) argues that in the upper primary school years the child's self-concept is certain to modify as it is influenced by his expanding social environment. Within his peer group he must be respected, worthy, competent and competitive. In this respect, the advocates of Pet Therapy claim that success with a pet animal can provide attributes of worth by providing positive reinforcement in substituting for 'significant others' e.g. Ross (1988).

Primary school children have increased sensitivity to the approval or disapproval of the 'significant others' in their school environment (Rushton, 1988). Rosenberg (1979) states that there is evidence that self-concept disruption can frequently occur during early adolescence, whilst Erikson

(1963) argues that at a stage, which he defines as 'Industry versus Inferiority', covering the 8 to 12 year age group, self-concept seems less stable. During this stage the child turns outwards from his family towards his peers and new adult figures. If this developmental conflict is to be successfully resolved, the child's precarious equilibrium, which depends on continuity and stability, must not be upset. If disruptions occur, these children are more at risk in resolving issues of identity during adolescence (Chapman et al, 1984). Failure in 8 to 12 year-olds to resolve negative personality traits mentioned earlier may result in the development of a diffuse identity and an inability to satisfactorily establish and maintain adult relationships (Erikson, 1963). This age group therefore presents ideal subjects for the intended investigation of the effects of Pet Therapy on self-esteem, socialisation of pupils and increased parental interest.

Burns (1982) stresses the deleterious effects of low self-esteem on a person's ability to interact harmoniously and warmly with others and argues that changes in attitudes to others can only come about through changes in attitudes to oneself. Lawrence (1981) proposes the need for therapeutic programmes which investigate methods by which a child can gain a feeling of doing something useful and, in so doing, obtain recognition from 'significant others' and improved social interaction. This proposal is supported by the findings of Rose (1983) and Wallace and Reisenstein (1978),

using *Pet Therapy* in therapeutic programmes of the kind suggested.

SUMMARY .

The preceding review of literature has described the importance of the self-concept to a person's successful functioning. Also, the antecedents of self-esteem, involving both the vital influences of the home as well as the school milieu of teachers and peers on the formation of self-attitudes, was discussed. It has examined various intervention programmes to improve self-esteem of children, especially those employing Pet Therapy. The beneficial effects of Pet Facilitated Therapy in various settings were described. In addition, the principles underlying the success of Pet Therapy and the associated theories were discussed. Lastly, the position of Pet Therapy in South Africa has been highlighted.

It is concluded, from the literature which has been reviewed, that there is still a great need for controlled experimentation and quantitative data in the field of Pet Facilitated Therapy. The purpose of the present study is thus to investigate empirically the effect of Pet Therapy as an intervention programme to improve the self-esteem of pupils within the normal setting of the primary school environment.

CHAPTER THREE

METHODOLOGY

Preceding chapters have discussed the background, the purpose and the rationale for this study. In addition, the literature related to the research questions was reviewed. This chapter details the source of the data, sample selection, instruments, research design, procedure and the method of data analysis.

Source of the data

The nature of the data required for this study demanded specialized facilities, i.e. a functional biology laboratory to provide adequate housing for the animals involved in the investigation. It also required the active support and cooperation of the principal and the teachers concerned, as well as that of the parents. The pupils required guidance in caring for the individual needs of their various animals. Therefore it was essential that the teacher in charge have the necessary knowledge. Lastly, the financial backing of the PTA was vital for such a project. Montrose Primary school was the ideal choice for the research study. It fulfilled all the requirements as an animal-keeping project had been in operation, and part of the extramural curriculum since 1981.

Sample Selection

The population for the study included children from a single, English-speaking primary school in the Northern Suburbs of Johannesburg. The pupils were from similar socioeconomic backgrounds. The final sample selected for the investigation was taken from 9 classes which included 3 classes each in Standards 3, 4 and 5. Originally only Standard 3 and 4 classes were to be involved, but it was soon realised that because of the specialised nature of the selection procedure, the sample size would be too small. It was possible to include Standard 5 pupils without adversely affecting the results of the study, as both the measuring instruments selected for the study were suitable for that age group as well.

The age group studied ranged mainly from 9 to 12 years, including some 13 year-old pupils from Standard 5. The choice of this age group was based on the classification of personality development devised by Erikson (1963). Children in this age group are at the preadolescent stage, namely the "Industry versus Inferiority" stage (Erikson, 1963); a stage at which self-esteem could be relatively easily influenced. Further substantiation for the choice was that the individuals in the age group 9 to 12 years have sufficient experience and ability to think abstractly, so that they can make general assessments of their powers (Coopersmith, 1968).

Initially the total population of 274 pupils in the 8 classes was tested with the Coopersmith Self Esteem Inventory to assess the levels of self-esteem. This testing was necessary since the classes at this school were untreaned. From the total self-esteem score of the population it was possible to establish a cut-off point by which low and high self-esteem pupils could be identified. The mean score for the inventory, which had a total of 50 marks, was 33. Therefore, for the purposes of the study, pupils with a score of 33 or below were classified as having low self-esteem, whilst pupils having scores above 33 were classified as having high self-esteem.

The sample size for the study was selected at random from the total population of pupils whose parents agreed to their children's participation in the study. This procedure, out of necessity, resulted in a self-selection criterion. This means that children of parents who gave permission, may have different characteristics from the total population of children.

Secondly, since the emphasis of the present investigation was to determine whether low self-esteem children benefited considerably more from Pet Therapy, it was necessary that the experimental group be comprised of a larger number of low self-esteem children and a smaller number of high self-esteem children. The inclusion of the high self-esteem children in the experimental group was essential to avoid

any labelling effects and possible reverse effects on the experiment.

The size of the sample for the experimental group had to be limited to 50 since the laboratory facilities could not handle a larger number. The total number of pupils who were given permission by their parents was 130, out of which 64 pupils were classified as having low self-esteem and 66 as having high self-esteem. The samples for the experimental and control groups were randomly selected from these numbers, as summarised below:

SAMPLE	EXPERIMENTAL GROUP	CONTROL GROUP
Low self-esteem	30	30
High self-esteem	20	20
Total	50	50

Instruments

Two instruments, namely the Coopersmith Self-Esteem Inventory - CSEI (Coopersmith, 1968) and the Rogers Personal Adjustment Inventory - RPAI, revised by Jeffrey (1984), were used in this study. The CSEI was used to measure self-esteem levels of the population and to identify those pupils with low self-esteem , whilst the RPAI was used to measure the amount of difficulty pupils experienced in the various areas of social adjustment. In addition to these two instruments, an extension of the CSEI, pioneered and developed by Driver (1977), using sub-scales to measure aspects of social adjustment, was used.

The CSEI was selected as it is a well-tried instrument, originally designed for use with primary school pupils (Reid, 1982; Hall and Richmond, 1985). It has been used in several education programmes, mentioned by Curtis and Shaver (1981), to measure self-esteem. The CSEI (form A), as shown in the Appendix, is composed of 58 items to be rated as "like me - unlike me". Eight items, however, comprise the "lie scale" and are not added into the total score for assessing self-esteem. In responding to these items the pupil provides information about his or her perceptions of self-worth from several aspects, for example with regard to the general self, academic self, and the social self which includes relationships with peers, with parents in the home, and with teachers at school (Coopersmith and Silverman, 1989).

Several authors in the literature surveyed caution against drawing conclusions about the relationship between self-esteem and academic achievement (Gibbs and Norwich, 1985; Lawrence, 1981). Several researchers have questioned the validity of existing self-concept instruments, including the CSEI for measuring Academic Self-Concept (ASC) and attitudes to Academic Achievement (AA) e.g. Chapman, Silva and Williams (1984). Gibbs and Norwich (1985) state that only three of the items in the entire CSEI refer to affective reactions to school attainment. Researchers have also argued that AA has a stronger relationship with ASC than with a global self-concept or self-esteem (Calsyn, 1973;

Gibbs and Norwich, 1985). This is, however, incidental to the purpose of the present study which is to determine the effect of close contact of pupils with animals, i.e. Pet Therapy, on the improvement of self-esteem and social relationships of these pupils.

The CSEI has been well tested for validity and reliability by several researchers. Coopersmith (1967, p.10), for example, describes test/retest reliability after a 5 week interval of 0.88 and after a year interval of 0.70, whilst Weiner (1971, in Curtis and Shaver, 1981) calculated a reliability estimate of 0.79 using analysis of variance procedures. Curtis and Shaver (1981, p.219), using the CSEI in their study, quote data to support its construct and concurrent validity, as well as positive correlations between the CSEI and the Teachers Behaviour Rating Scale (Coopersmith, 1967). They mention researchers reporting coefficients of internal consistency ranging from 0.80 to 0.91 and test/retest correlation coefficients ranging from 0.70 to 0.88. Curtis and Shaver (1981) calculated a test/retest reliability coefficient of 0.79 in their own study.

A shortened version of the CSEI developed by Lee (1971), has been used by several researchers e.g. Reid (1982), with significant results, especially on the affective aspects of self-concept. In addition, Gibbs and Norwich (1985, p.79) have presented data in support of the CSEI satisfactorily

assessing "... aspects of *self-perceptions and* self-evaluations about emotional reactions...". For example, children judged by their teachers to have 'neurotic', emotional or behavioural difficulties (often worries, tends to be *fearful*), had significantly lower CSEI score than those categorised as 'no difficulties'. Thus this instrument adequately satisfies the demands of the present study.

The second instrument is the Rogers Personal Adjustment Inventory (RPAI), which is designed for use with boys and girls aged 8 to 13. This instrument *can be used objectively* and clinically to examine children's adjustment to their environment, their peers, their families and themselves. The revised RPAI by Jeffrey (1984) was used for the *present study, since many* of the changes described (Jeffrey, p.2), provided more reliable scoring procedures and simplified overlay marking keys. Also the instructions to the pupils are *simple and clear, to eliminate* confusion and ensure reliability and validity of the instrument. In addition, the changes made in the test items widened the concept of family so that the items were more *relevant for children* from unusual or one-parent families. The four RPAI sub-scales were changed (Jeffrey, p.2) to Personal Difficulties (P), Social Difficulties (S), Family Difficulties (F) *and Daydreaming* (D) - a measure of the child's fantasy life which gives an indication of how the child is coping with his or her difficulties. The total score obtained is claimed as a Total *Difficulties* (T) *score*, instead of Total

Maladjustment. A high score indicates a child with a high level of difficulties, whilst a low score gives an indication that the child is experiencing a low level of difficulties.

The reliability of the Revised RPAI was investigated by Jeffrey (1984) by measuring the correspondence between scores obtained on the Rogers PAI (RPAI), and the Revised RPAI. Results showed that a moderate but substantial level of relationship existed, i.e. a correlation coefficient of 0.63. Reliability coefficients obtained on a test/retest were comparable in value to those obtained by Rogers, with the exception of the revised 'F' scale which was slightly lower.

Examining the validity of the Revised RPAI, Jeffrey (1984, p.5,6) describes investigations using 207 children in which the Revised RPAI was compared with two other measuring instruments, namely the California Test of Personality (CTP) and the Children's Behaviour Questionnaire (CBQ). The results confirmed the validity of the Revised RPAI.

As a form of triangulation, the sub-scales developed by Driver (1977), adapted from the Coopersmith SEI, enabled the researcher to assess aspects of the child's self-evaluation with regard to parents and peers and to compare these with the results obtained from the Revised RPAI. Thus a multi-method was employed for assessing levels of social

adjustment. These sub-scales have been successfully used by Lewis of Reading University in research projects conducted by his students e.g. Daniel (1986). A standardised scoring key was devised for each sub-scale. This was based on the most positive response the subject could make to each item. Two points were awarded to each item. Thus the total score on the sub-scale relating to parents is 18 and to peers is 14. Details of the sub-scales are presented in the Appendix.

A summary of the data collected from both the experimental and the control groups, by the use of the measures described above, is as follows: pre and post scores of low and high self-esteem, overall social adjustment scores and finally scores indicating the relationship difficulties of pupils, firstly with their families, and secondly with their peers.

Research Design

A quasi-experimental research design was employed to study the effects of Pet Therapy within the normal school environment. According to Cohen and Manion (1980), quasi-experimental design is most often used for empirical studies conducted in educational settings. It differs from true experimental designs in that the groups employed in the studies are selected by means other than total randomisation. In the case of this study the subjects were "self-selected" (Kerlinger, 1970) and then categorised into two

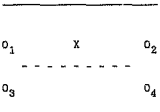
groups with low and high self-esteem, based on the criteria set for identification.

This investigation approximates the conditions of true experimental rigor in a setting which does not allow *the control* and/or the manipulation of all relevant variables (Isaac and Michael, 1983). It is a "compromise" design (Kerlinger, 1970) and balance must be achieved between the internal and *external validity*. Given these limitations, partial control in the present study has been achieved by scientific selection procedures whenever possible.

This type of design is applicable in 'real life' situations where field and operational studies are feasible (Nauch and Birch, 1983). The type of quasi-experimental design in *this study* is the Equivalent Group design (Campbell and Stanley, 1983) for which the experimental and control groups were matched on the self-esteem variable for the total group, *although the size of the categories*, namely low and high self-esteem for each of the experimental and control groups, was different. Pre- and posttests were administered to both groups and the experimental *group was exposed* to Pet Therapy, the treatment (X), and the effects of the treatment were observed, measured and then compared with the control group which did not have any exposure to the treatment. *In* other words, the independent variable, i.e. Pet Therapy, was given to the experimental group and the dependent variables, namely self-esteem, social adjustment and relationships with

peers and parents, were studied, measured and compared with those of the control group.

The research design can be illustrated by the following diagram:-



It was possible to apply Equivalent Group design since the project was conducted as an extramural activity and did not involve or affect lessons or classroom activities. Also the sample was dispersed amongst the 9 classes. The control and experimental groups were sufficiently comparable as the pupils had been selected and identified by the same self-esteem scale and were matched for other variables such as socioeconomic background. The threat to the external validity of this design is that the sample used for the study came from a self-selected group. This factor therefore limits the generalisability of the study to similar populations. The implication is that parents who granted permission may be more interested in their children's welfare or may be more aware. In any case the findings of the study are limited to similar populations but

not necessarily to the total population of high socioeconomic white primary schools.

In this study the extraneous factors that had an effect on the results were: the death of some animals, the Hawthorne effect which may have taken place due to the excitement of the pupils in the experimental group, a change of teacher in control of the laboratory, and the researcher's relocation to England in the middle of the project, which made it impossible for her to direct the investigation.

Procedure

A letter was sent in January 1988 to all parents of pupils in Standards 3,4 and 5 explaining briefly about the project and asking permission for their children to become involved in the project. At the same time all the pupils were tested with the Coopersmith SEI, the test being administered by the Guidance teacher. The scoring was done by the researcher who had no previous knowledge of the pupils involved. This initial testing was to establish the level of self-esteem of each pupil and to determine the cut-off point for identifying the pupils with low self-esteem.

The experimental group was then selected from the list of 130 pupils whose parents had replied positively. As the facilities of the laboratory could only cater for a limited number of pupils, 50 children were randomly selected, 30 with low self-esteem and 20 with high self-esteem. From the

remaining children on the list, 30 pupils were similarly allocated to the control group so that the sample matched the experimental group. These children, who had not been selected for the experiment, were informed that they would have an opportunity to work with the animals the following year.

The pupils in the experimental group were introduced to the project at the end of January, 1987 and each child was asked to choose, from a list of animals, one animal for which he or she would assume responsibility. The children were briefed on the ways to best care for their particular pets. This was done by the researcher in conjunction with the science teacher who had responsibility for the laboratory as the researcher was no longer on the staff of the school. To avoid researcher bias it was decided that the researcher would have as little personal contact with the pupils as was deemed necessary, since her enthusiasm for the project could influence the results.

The animals from which children could choose were as follows: **mammals**: mice, a rat, guinea pigs, two rabbits, gerbils, hedgehogs, hamsters and a ferret; **birds**: a cockatiel, budgies, a tame pigeon, diamond doves and finches; **reptiles**: a pair of brown house snakes, an aurora snake, a pair of speckled geckoes, a lizard, two tortoises, a pair of red-eared turtles and chameleons; **amphibians**: toads (Bufo regularis) frogs (Rana escalensis) and a pair of

salamanders; fish: goldfish, a variety of tropical fish, and a tank of marine fish and lastly, invertebrates: crustaceans: fresh water crabs; a variety of arachnids including spiders e.g. baboon spiders, some harmless scorpions and a solifuge.

Many of the reptiles were on special loan from the Transvaal Snake Park and close contact was maintained with the director as to the intricacies of properly caring for the needs of these animals. The house snakes were so well cared for that they produced a clutch of eggs which the children were able to breed out in the incubator. Two of these baby snakes were reared in the laboratory whilst the others were set free in the veld. Animals which only eat insects presented a problem of finding a plentiful supply to keep them alive all year round - woodlice and mealworms alone are not rich enough in nourishment value and have to be supplemented with crickets, grasshoppers and earthworms. In the winter months the science teacher resorted to obtaining cockroaches from the Council for Scientific Research (CSIR). Keeping these animals alive and healthy presented a continual challenge.

In February 1986, the Revised RPAI was administered to the total population of pupils as it was argued that the answers to the test could be biased and have 'clouding' effects if it was administered to the selected groups only. The Rogers Inventory has certain highly emotive questions which evoked

some adverse reactions from a few pupils who felt they could not answer the questions. These pupils were therefore excluded from the study. The Inventory was administered sympathetically and tactfully by the guidance teacher during the course of the usual guidance lessons. The scoring was done by the researcher under the guidance of a child psychologist because of the sensitive areas which exist in the Inventory. The results gave some indication of the level of difficulty the pupils were experiencing in social adjustment, particularly in the spheres of the family and the social environment at school.

During the course of the following nine months the pupils came into the laboratory at breaks and after school, some pupils even coming before school, to feed, clean or exercise their animals. The pupils were encouraged to learn about their animals, to become knowledgeable about their individual and often very specific needs, to become skilled in handling them and to hopefully establish a relationship with their animals as they became more familiar with them. This was done under the ever watchful, but unobtrusive, eye of the teacher in charge who gave the children assistance and advice. The researcher was unfortunately not able to assist in this guidance due a transfer to England.

In November 1987, the head of guidance administered firstly the Coopersmith SEI, followed by the Revised RPAI two weeks later. These two posttests, for both the experimental and

control groups, were scored by the researcher. During November the experimental group was encouraged to choose and train their successors or helpers for the following year.

The following points were important to the success of the project: Firstly, although parents and pupils realised that the relationship between the children and the animals was being investigated, at no time were they told that low self-esteem was being assessed, because of the negative impact it could have. The impression was given that this was a 'fun type' educational study investigation.

Secondly, control of the housing, cleanliness, health and feeding of the animals was absolutely vital. The cooperation of the teacher in charge, the services of a laboratory assistant and good relations with the local vet were most important. If conditions become unhygienic or the pets become sick or die there could be a detrimental effect on the emotional attitude of the pupils (Arkow, 1983), which in turn could adversely affect the results of the experiment.

Analysis of the Results

1. Means and Standard Deviations of the pre- and posttest scores of both the Experimental and the Control groups calculated on the data obtained from the following:
   a. the Coopersmith Self-Esteem Inventory (CSEI) giving overall self-esteem scores.
   b. the Revised RPAI giving overall personal / social adjustment scores.
   c. the RPAI sub-scales showing difficulties in relationships with regard to:-
      i. Parents ii. Peers
   d. the CSEI sub-scales devised by Driver, showing self-attitudes relating to:-
      i. Parents ii. Peers
2. T-tests, carried out on each set of data, and the associated levels of significance.
3. A comparison of the Means and Standard Deviations of the scores obtained by the sub-scales of the two instruments, namely the CSEI and the RPAI regarding parents and peers. Also, as a form of triangulation, a comparison of the levels of significance, assessed by t-tests carried out on *the scores from the above instruments.*
4. An Analysis of Variance (ANOVA) conducted on the variables of age and sex of both the Experimental and the Control group.

CHAPTER FOUR

RESULTS OF THE STUDY

In this chapter the results of the study have been analysed in relation to each research question. Included with each question is a statement of acceptance or rejection of the the research hypotheses, which are stated below in the Null form.

H_o1 : The intervention programme, Pet Facilitated Therapy, does not have a significant effect on the improvement of the self-esteem of primary school pupils.

H_o2 : Pet Therapy does not significantly improve the self-esteem of pupils having low self-esteem.

H_o3 : Pupils having high self-esteem do not show less improvement than those pupils having low self-esteem.

H_o4 : Pet Therapy cannot facilitate an improvement in a pupil's overall personal/social adjustment.

H_o5 : Relationships of the pupils undergoing Pet Therapy will not improve in the following areas:

a. *with their peers*

b. with their parents

The pre- and posttest scores obtained from the Coopersmith Self Esteem Inventory (CSEI) and the Roger's Revised Personal Adjustment Inventory (RPAI) were processed and are displayed in tables showing the means, standard deviations

and mean differences. The experimental and control groups are represented in separate tables concerning each research question. Firstly, the scores for the groups as a whole are presented and discussed, and then the scores for the separated groups of low self-esteem and high self-esteem pupils are analysed independently and compared with each other. Finally, the scores for relationships with peers and parents obtained from the RPAI sub-scales, are compared with the scores from the CSEI sub-scales so that more extensive information can be explored about these relationships.

The scores are analysed for levels of significance by applying ordinary t-tests and matched pairs t-tests. Levels of significance for rejecting the Null Hypothesis are $p = 0.05$. The results of these t-tests are displayed in separate tables. The following abbreviations have been used:

E.v.C = Experimental versus Control group.
E.v.E = Experimental versus Experimental.
C.v.C = Control versus Control.
pre.v.pos = pretest versus posttest.
pre.v.pre = pretest versus pretest
pos.v.pos = posttest versus posttest.
S.E. = self-esteem.
One-T = one-tailed t-test.

The results of the testing are analysed in two categories namely:

SELF-ESTEEM - which is discussed from the following aspects:

a. Self-esteem of the total sample

b. Self-esteem of the low S.E. sample

c. Self-esteem of the high S.E. sample.

PERSONAL/SOCIAL ADJUSTMENT - which is discussed in three areas namely :

a. Overall personal/social adjustment

b. Relationships with peers

c. Relationships with parents

SELF-ESTEEM

a. Self-esteem of the total sample

The first research question to be explored is:
Does Pet Facilitated Therapy, the intervention programme have a significant effect on the improvement of the self-esteem of primary school pupils?

H_o1 : **The intervention programme, Pet Facilitated Therapy, does not have a significant effect on the improvement of self-esteem of primary school pupils.**

To answer the question posed, Tables 1 and 2, showing the means and standard deviations, must be examined. Comparing the scores of the mean differences for the total sample (line a) of the experimental group with that of the

control group, there is already some indication that the experimental group has made a bigger improvement over the 9 month period. In other words, the experimental group has gained 4.20 points in the posttest whereas the control group has gained only 1.38 points. This difference is shown to be significant from Table 3 which gives the values of p.

Table 1

Self-esteem of the EXPERIMENTAL group (CSEI)

Sample	N	Mean (Pre-T)	S.D.	Mean (Pos-T)	S.D.	Mean Diff.
a.Total	50	32.14	7.87	36.34	8.22	4.20
b.Low S.E.	30	26.93	5.19	32.33	7.92	5.40
c.High S.E.	20	39.85	4.12	42.35	3.91	2.40

Table 2

Self-esteem of the CONTROL group (CSEI)

Sample	N	Mean (Pre-T)	S.D.	Mean (Pos-T)	S.D.	Mean Diff.
a.Total	50	31.88	7.06	33.38	8.75	1.38
b.Low S.E.	30	27.13	5.92	28.87	7.56	1.74
c.High S.E.	20	39.25	4.13	40.10	5.52	0.85

Table 3

Levels of significance of self-esteem for the TOTAL sample (Low plus high)

Sample	test	t	p (one-T))
E.v.C	pre.v.pre	0.188	non-significant
E.v.C	pos.v.pos	1.755	0.05
E.v.E	pre.v.pos	5.080	0.0005
C.v.C	pre.v.pos	1.730	0.05

df=48

From the levels of significance (Table 3) it can be deduced that the there was no significant difference between the experimental and the control groups at the pretest stage.

This indicates that the researcher was working with equivalent groups in the area of self-esteem at the beginning of the experiment. The control group appears to have made a significant improvement in self-esteem over the 9 month period ($p<0.05$) which can possibly be attributed to extraneous influences such as maturation, improved relationships and so on. However, the more highly significant value of $p<0.0005$ and the larger average improvement of 4.20 of the experimental group (Table 1) versus 1.38 of the control group (Table 2), confirm that the improvement in the self-esteem of these pupils was as a result of the treatment, namely the Pet Facilitated Therapy programme.

*Thus it is possible to reject the Null Hypothesis H_o1 and conclude that Pet Facilitated Therapy has a significant effect on the improvement of self-esteem of primary school pupils.

b. Self-esteem of the low S.E. sample

The second research question to be explored is:

Does Pet Therapy specifically improve the self-esteem of pupils with low self-esteem?

H_o2 : Pet Therapy does not significantly improve the self-esteem of pupils with low self-esteem.

To answer this question, line b of Tables 1 and 2 must be examined. Also Table 4 presents the significance levels of t-tests carried out on the results.

Table 4

Levels of significance of self-esteem for LOW SELF-ESTEEM sample

Sample	test	t	p (one-T)
E.v.C	pre.v.pre	0.092	non-significant
E.v.E	pre.v.pos	4.480	0.0005
C.v.C	pre.v.pos	1.640	non-significant

df=28

The mean differences of the low self-esteem samples of the experimental and control groups recorded in line b of Tables 1 and 2 reveal that the experimental group has gained 5.40 points whilst the control has only gained 1.74 points over the 9 month period. This tends to indicate that the low self-esteem sample of the experimental group has improved considerably more in self-esteem than the control group sample. The levels of significance in Table 4 confirm that the two groups were equivalent at the beginning of the experiment. The value of p for the experimental group, for the pre- versus posttest scores, namely $p<0.0005$, indicates that the improvement was statistically significant, the chance factor being as low as five in ten thousand. Comparatively, the non-significant value in the control group indicates that Pet Therapy has a beneficial effect on the self-esteem of the low self-esteem pupils in this project.

*Thus it is possible to reject the Null Hypothesis, H_o2 and conclude that Pet Facilitated Therapy has a significant effect of the improvement of self-esteem of low self-esteem pupils.

c. Self-esteem of the high S.E. sample

The third research question to be explored is:

Do pupils with high self-esteem show less improvement in self-esteem with Pet Therapy than pupils with low self-esteem?

H_o3 : Pupils with high self-esteem do not show less improvement than pupils with low self-esteem.

To answer the question posed, line c of Tables 1 and 2 must be examined as well as Table 5, giving the levels of significance derived from the t-tests.

Table 5

Levels of significance of self-esteem for HIGH SELF-ESTEEM sample

Sample	test	t	p (one-T)
E.v.C	pre.v.pre	0,528	non-significant
E.v.E	pre.v.pos	2.679	0.01
C.v.C	pre.v.pos	0.880	non-significant

df=18

It can be observed from line c of Tables 1 and 2, in comparing the mean differences of the high self-esteem samples of the experimental and control groups, that there is a much smaller variation than was the case with the low self-esteem samples. The experimental group have gained 2.40 points

whilst the control group have gained 0.85 points, whereas it was illustrated earlier that the low self-esteem samples had gained 5.40 against 1.74 points respectively. Table 5 indicates that there was no significant difference between the two high self-esteem groups at the start of the experiment. Furthermore, the value of p (Table 5) for the experimental group, in the pre- versus posttest situation, indicates a significant improvement i.e $p<0.01$, whereas t-tests for the control group indicate no significance at any level. Thus it can be said that the treatment, Pet Therapy, has had an effect on high self-esteem pupils. It is also possible to state that the high self-esteem pupils have shown less improvement in self-esteem than the low self-esteem pupils in the experiment by comparing levels of significance $p<0.01$ (Table 5) versus $p<0.0005$ (Table 4).

*It is possible from the above discussion to reject the Null Hypothesis, H_o3 and conclude that Pet Facilitated Therapy has a less significant effect on pupils with high self-esteem than on pupils with low self-esteem.

In summary, from the above presentation of the results of testing with the CSEI, and from the associated analysis, it can be concluded that, for this particular sample of children, close contact with animals in the school environment had a positive effect on the improvement of the children's self-esteem, especially for those pupils with low self-esteem.

PERSONAL/SOCIAL ADJUSTMENT

a. Overall personal/social adjustment

The first question, namely research question 4, to be explored in this section is:

Does Pet Therapy facilitate an improvement in a pupil's overall personal/social adjustment?

H_o4 : Pet Therapy cannot facilitate an overall improvement in a pupil's personal/social adjustment.

To analyse the data for this particular research question, Tables 6 and 7 for the experimental and control groups, presenting the means and standard deviations of the overall scores obtained from the Rogers Revised PAI, must be examined. These scores represent the total scores which include the four sub-scales. It must be borne in mind that an increase in the mean score of the posttest represents an increase in difficulties with personal/social adjustment, whilst a decrease in the posttest score indicates an improvement, that is, less difficulties with personal/social adjustment. The latter is indicated by a positive mean difference and the former by a negative mean difference.

Table 6

Overall Personal/social Adjustment of the EXPERIMENTAL GROUP

Sample	N	Mean (Pre-T)	S.D.	Mean (Pos-T)	S.D.	Mean Diff.
Total	50	23.42	3.86	22.44	3.85	0.98
Low S.E.	30	23.89	3.94	22.57	4.25	1.28
High S.E.	20	22.80	3.79	22.25	2.61	0.55

Table 7

Overall Personal/Social Adjustment of the CONTROL GROUP

Sample	N	Mean (Pre-T)	S.D.	Mean (Pos-T)	S.D.	Mean Diff.
Total	50	22.14	4.17	22.12	4.35	0.02
Low S.E.	30	21.93	4.39	22.07	4.45	-0.14
High S.E.	20	22.45	3.90	22.20	4.30	0.25

An initial examination of the mean differences in the above two tables indicates that the experimental group have made more improvement than the control group, by showing a decrease in difficulties in social relationships. This is most noticeable in the mean differences of the low self-esteem samples, there being an improvement of 1.26 points in the experimental group compared with no improvement in the control group. In fact, the latter low self-esteem pupils have developed increasing adjustment difficulties over the 9 month period (mean diff.= -0.14). These conclusions can be further tested by examining the values of p in Tables 8, 9 and 10 which represent the total sample, the low self-esteem and the high self-esteem samples respectively.

Table 8

Levels of significance of Personal/Social Adjustment (Overall Scores including four sub-scales). Total sample

Sample	*test*	*t*	*p* (one-T)
E.v.C	pre.v.pre	1.590	0.10
E.v.C.	pre.v.pos	0.400	non-significant
E.v.E.	pre.v.pos	1.674	0.10
C.v.C.	pre.v.pos	0.029	non-significant

df=49

The value of $p<0.10$, tending towards $p<0.05$ (Table 8), indicates that there was some difference between the experimental and control groups at the pretest stage. This is supported by the pretest means in Tables 8 and 7, in which the experimental group has a mean score of 23.42 compared with the mean score 22.14 for the control group, indicating that the experimental group was experiencing greater social difficulties. However, in the posttest stage the gap between the experimental and the control closed, giving scores of 22.44 and 22.12 respectively. The experimental group has improved, having less difficulties, whilst the control group appears to have made little improvement. This is borne out by the value of p for the E.v.C. in pre.v.pos (Table 8) having no significance at any level. Also, t-tests performed on the pre- versus posttest scores give non-significant values of p for the control group and for *the experimental group* ($p<0.10$). The latter value of p for the experimental group does not fall within the parameters set for rejecting the null hypothesis.

However, before accepting the null hypothesis, it is necessary to analyse the scores further, since the overall result has been influenced by the low improvement of the high self-esteem sample, 0.55 points, as shown in Table 6, whereas the low self-esteem sample has improved by 1.28 points. In comparison with this, the low self-esteem sample of the control group has a mean difference of -0.14 (Table 7). To obtain a more accurate analysis of the effects of Pet

Therapy on the personal/social adjustment of the experimental group, it is important that the levels of significance of the low and high self-esteem samples be examined separately, as shown in Tables 9 and 10. From these it is clear that the low self- esteem sample has a significance level of $p < 0.05$, whilst the high self-esteem group has a non-significant level. Thus it can be said that the treatment has been successful in improving the personal/social adjustment of the low self- esteem pupils but has not had a statistically significant effect on the high self-esteem pupils. Thus rejection of the null hypothesis must be qualified.

Table 9

Levels of significance of overall Personal/Social Adjustment of the LOW SELF-ESTEEM sample

Sample	test	t	p (one-T)
E.v.C	pre.v.pos	1.214	*non-significant*
E.v.E	pre.v.pos	1.884	0.05
C.v.C	pre.v.pos	0.227	non-significant

df.= 28

Table 10

Levels of significance of overall Personal/Social Adjustment of the HIGH SELF-ESTEEM sample

Sample	test	t	p (one-T)
E.v.C	pre.v.pos	0.415	non-significant
E.v.E	pre.v.pos	0.681	non-significant
C.v.C	pre.v.pos	0.230	non-significant

df=18

*It is possible from the above analysis to reject the Null Hypothesis, $H_o 4$, only in so far as the low self-esteem pupils are concerned and to conclude that Pet Therapy

facilitates an improvement in the overall social adjustment of pupils with low self-esteem.

b. Relationships with Peers

The second question to be explored in this section, namely part a. of research question 5 is:

Does Pet Therapy result in improved relationships of pupils with their peers?

H_o5a : Pet Therapy does not result in improved relationships of pupils with their peers.

To investigate the research hypothesis, firstly the means and standard deviations of the experimental and control groups presented in Tables 11 and 12 must be studied. Secondly, the level of significance for the group as a whole (Table 13) and for the separate low and high self-esteem samples (Tables 14 and 15), must be examined.

Table 11

Social Adjustment in Relation to Peers of the EXPERIMENTAL GROUP (Rogers PAI)

Sample	N	Mean (Pre-T)	S.D.	Mean (Pos-T)	S.D.	Mean Diff.
Total	50	7.76	2.05	7.32	2.33	0.44
Low S.E.	30	7.40	2.11	7.33	2.51	0.07
High S.E.	20	8.30	1.87	7.30	2.11	1.00

Table 12

Social Adjustment in Relation to Peers of the CONTROL GROUP (Rogers PAI)

Sample	N	Mean (Pre-T)	S.D.	Mean (Pos-T)	S.D.	Mean Diff.
Total	50	7.04	2.05	7.34	2.74	-0.02
Low S.E.	30	6.57	2.25	7.47	2.68	-0.90
High S.E.	20	7.75	1.83	7.15	2.91	0.60

It must be noted that a higher posttest score (negative mean difference) indicates increased difficulties, whilst a lower posttest score (positive mean difference) indicates decreased difficulties. An initial examination of the mean differences and comparison between the experimental and the control groups indicates that there is a small improvement in the experimental group (mean diff. = 0.44, Table 11); whilst the control group appear to have retrogressed (mean diff. = -0.02, Table 12). This is in fact due to the low self-esteem pupils of the control group who lost 0.90 points (Table 12) and appear to have increased difficulties in relationships with peers after the 9 month period. On the other hand the high self-esteem samples of the experimental and control groups have gained 1.00 and 0.60 points respectively.

The significance of the above results is illustrated in Tables 13 and 14 .

Table 13

Levels of significance of Adjustment to PEERS of the EXPERIMENTAL group (pre.v.pos) on Rogers PAI

Sample	t	p (one-T)
Total	1.1150	non-significant
Low S.E.	0.1412	non-significant
High S.E.	2.0779	0.05

df=49

Table 14

Levels of significance of Adjustment to PEERS of the CONTROL group (pre.v.pos) on Rogers PAI

Sample	t	p (one-T)
Total	0.682	non-significant
Low S.E.	1.6135	0.10
High S.E.	0.9166	non-significant

df=49

The above levels of significance indicate that only the high self-esteem sample of the experimental group has made a significant improvement, having $p<0.05$. The mean difference value of -0,90 (Table 12), for the control group's low self-esteem sample indicates that something unusual has occurred to cause them to retrogress.

It appears from the above results that, when the Rogers Inventory is broken down into its smaller sub-scales, the differences, as noted in the scores for the overall test as seen in Tables 6 to 10, are lost. This could be an indication that the Inventory is not measuring what it purports to or that there has been some inadequacy in the administration of the test. This assumption is supported when the results of the sub-scale for peers on the Coopersmith Inventory are

examined. Tables 15 and 16 display the means and standard deviations of the experimental and control groups, whilst Tables 17 and 18 give the levels of significance.

Table 15

Social Adjustment in Relation to PEERS of the *EXPERIMENTAL group* (Coopersmith SEI)

Sample	N.	Mean (Pre-T)	S.D.	Mean (Pos-T)	S.D.	Mean Diff.
Total	50	9.28	3.23	10.48	2.96	1.20
Low S.E.	30	8.73	3.48	10.60	2.79	1.87
High S.E.	20	10.10	2.71	10.30	3.28	0.20

Table 16

Social Adjustment in relation to PEERS of the CONTROL group (Coopersmith SEI)

Sample	N.	Mean (Pre-T)	S.D.	Mean (Pos-T)	S.D.	Mean Diff.
Total	50	9.88	2.84	10.32	2.75	0.44
Low S.E.	30	9.67	2.75	9.07	2.58	0.40
High S.E.	20	11.70	1.87	12.20	1.82	0.50

Although there is little difference in the mean difference scores between the experimental and control group high self-esteem samples, there is an appreciable difference between the low self-esteem samples. The experimental group have gained 1.87 points compared with 0.44 points gained by the control group. This is further illustrated by the levels of significance (Tables 17 and 18), in which the experimental group low self-esteem sample has a level of significance of $p<0.005$, whilst there is a non-significant difference in the results of the control group. Of some interest is that the high self-esteem sample of the experimental group made no significant improvement in adjustment to peers' scores and

appear to have made less improvement than their counterparts in the control group, i.e. mean differences of 0.20 and 0.50 respectively. This should be subjected to further testing.

Table 17

Levels of significance of Adjustment to PEERS of the *EXPERIMENTAL groups (pre.v.pos)* on Coopersmith

Sample	df	t	p (one-T)
Total	49	3.063	0.005
Low S.E.	29	3.500	0.005
High S.E.	19	0.388	non-significant

Table 18

Levels of significance of Adjustment to PEERS of the *CONTROL group (pre.v.pos)* on Coopersmith

Sample	df	t	p (one-T)
Total	49	1.244	non-significant
Low S.E.	29	0.811	non-significant
High S.E.	19	1.000	non-significant

From the above tables the tentative conclusions reached from the Rogers PAI on the relationships of pupils to their peers are enhanced by the scores obtained by the Coopersmith SEI. The latter appears to be a more sensitive test. The various discussions above support the hypothesis that close contact of pupils with pets in the Pet Therapy programme of this study can improve personal/social adjustment in relation to peers. However, for this treatment, this appears to be significant only with low self-esteem pupils. Further investigations are required with regard to high self-esteem pupils.

* Therefore it is possible to reject the Null Hypothesis H_o5a, only in so far as it concerns the low self-esteem pupils and to conclude that Pet Therapy facilitates the improvement of peer relationships of low self-esteem pupils.

c. Relationships with Parents

The third question to be explored in this section, namely Part b of the research question 5 is:

Does Pet Therapy improve relationships of pupils with their parents?

H_o5b : Pet Therapy does not result in *improved relationships* of pupils with their parents.

To answer the question posed, the means and standard deviations obtained from the scores of the Rogers PAI in Tables 19 and 20, as well as the levels of significance in tables 21 and 22, must be examined. A comparison should then be made with results obtained from the Coopersmith sub-scale on parents as shown in Tables 23-26.

Table 19

Social Adjustment in Relation to PARENTS of the *EXPERIMENTAL group* (Rogers PAI)

Sample	N	Mean (Pre-T)	S.D.	Mean (Pos-T)	S.D.	Mean Diff.
Total	50	4.08	1.29	3.88	1.22	0.20
Low S.E.	30	4.23	1.25	3.87	1.31	0.36
High S.E.	20	3.85	1.35	3.90	1.12	-0.05

Table 20

Social Adjustment in relation to PARENTS of the CONTROL group (Rogers PAI)

Sample	N	Mean (Pre-T)	S.D.	Mean (Pos-T)	S.D.	Mean Diff.
Total	50	3.80	1.32	1.90	1.56	-0.10
Low S.E.	30	3.83	1.39	3.87	1.84	-0.14
High S.E.	20	3,75	1.25	3.80	0.83	-0.05

A preliminary examination of the mean differences in Tables 19 and 20 indicate that only the low self-esteem sample of the experimental group have made any improvement in relationships with parents. This sample made a small gain of 0,38 points in comparison with the experimental group's high self-esteem sample which actually appears to have experienced increased difficulties i.e a mean difference of -0.05. The control group shows no improvement, in fact both the low and high self-esteem samples have experienced increased difficulties. On examining the levels of significance in Tables 21 and 22, it becomes evident that there are no significant differences for any of the samples. Therefore, based on the results obtained from the Rogers Inventory, it is concluded that Pet Therapy did not have an effect on improvement of relationships with parents.

Table 21

Levels of Significance of Adjustment to PARENTS of the EXPERIMENTAL group (pre.v.pos) on Rogers PAI

Sample	df	t	p (one-T)
Total	48	0.8195	non-significant
Low S.E.	28	1.0382	non-significant
High S.E.	18	0.1422	non-significant

Table 22

Levels of Significance of Adjustment to PARENTS of the CONTROL group (pre.v.pos) on Rogers PAI

Sample	df	t	P (one-T)
Total	49	0.4590	non-significant
Low S.E.	29	0.4088	non-significant
High S.E.	19	0.2035	non-significant

The effects of Pet Therapy is more clearly illustrated by examining the results obtained from the Coopersmith Inventory in Tables 23-26 and comparing them against the above results from the Rogers Inventory.

Table 23

Social Adjustment in Relation to PARENTS of the EXPERIMENTAL group (Coopersmith SEI)

Sample	N	Mean (Pre-T)	S.D.	Mean (Pos-T)	S.D.	Mean Diff.
Total	50	11.20	3.18	12.20	3.71	1.00
Low S.E.	30	11.13	3.35	12.90	3.43	1.87
High S.E.	20	11.30	2.99	11.30	4.01	0.00

Table 24

Social Adjustment in relation to PARENTS of the CONTROL group (Coopersmith SEI)

Sample	N	Mean (Pre-T)	S.D.	Mean (Pos-T)	S.D.	Mean Diff.
Total	50	10.80	3.45	10.48	4.31	-0.32
Low S.E.	30	8.53	3.47	8.33	4.25	-0.20
High S.E.	20	12.70	2.45	12.20	3.89	-0.50

A cursory examination of the mean differences in Tables 23 and 24 confirm the majority of the results obtained from the Rogers Inventory, with the exception of the low self-esteem sample of the experimental group which has made gain of 1.87 points. T-tests reveal that this gain is significant at the

level of $p<0.01$ (Table 25). In addition, the experimental group as a whole gained 1.00 points against the loss of 0.32 points in the control group. This gain is significant at the level of $p<0.05$ (Table 25). The values of p for the control group sample (Table 26), as well as the high self-esteem sample of the experimental group (Table 27), are non-significant. It appears that once again the **Coopersmith Inventory** is more sensitive than the **Rogers Inventory** when it is broken down into its sub-scal . Pet Therapy has only had an effect on the low self-esteem pupils taking part in the experiment.

Table 25

Levels of Significance of Adjustment to PARENTS of the EXPERIMENTAL group (pre.v.pos) on Coopersmith

Sample	df	t	p (one-T)
Total	49	1 8854	0.05
Low S.E.	29	2.8792	0.01
High S.E.	19	0.00	non-significant

Table 26

Levels of significance of Adjustment to PARENTS of the CONTROL group (pre.v.pos) on Coopersmith

Sample	df	t	p (one-T)
Total	*49*	*0.8410*	*non-significant*
Low S.E.	29	0.3811	non-significant
High S.E.	19	0.5262	non-significant

* It is possible to reject the Null Hypothesis, $H_o 5b$ only so far as the low self-esteem pupils are concerned and conclude that Pet Therapy facilitates the improvement o relationships of low self-esteem pupils with their parents.

* The Null hypothesis is accepted with regard to the high self-esteem pupils and it is concluded that Pet Therapy does not facilitate the improvement of relationships with parents of high self-esteem pupils.

SUMMARY

It has been established in this present study that Pet Therapy, for this particular sample of pupils, facilitates an improvement in the self-esteem of primary school pupils. This is especially valid for pupils with low self-esteem, although high self-esteem pupils also derive benefit from close contact with animals in a pet programme within the school environment. The Coopersmith SEI appears to be an adequate instrument for measuring levels of self-esteem.The results obtained from the investigation into personal/social adjustment are inconclusive, especially when measuring relationships with peers and parents using the Rogers PAI sub-scales. It is possible at this stage to conclude that Pet Therapy facilitates improved overall personal/social adjustment of the low self-esteem pupils, but further evidence is required before any valid comments can be made about the high self-esteem pupils.

Finally, with regard to the efficacy of Pet Therapy in enhancing relationships with peers and parents, it is clear that further research is required, perhaps with the use of different instruments for assessment. There was

insufficient agreement between the results of the sub-scales of the two instruments, *namely the Rogers* PAI and the Coopersmith SEI. For example, in the investigation on the relationship with peers, the Rogers PAI showed the high self-esteem pupils to have made significant improvement and the low self-esteem pupils *to have made very* little improvement, whilst Coopersmith SEI results indicated opposite results. However, since the low self-esteem pupils scored at a highly significant level of $p<0.005$ on Coopersmith, *it is possible to conclude* that the evidence indicates that Pet Therapy has facilitated improved relationships with peers for the low self-esteem pupils, but that evidence for the high selfesteem pupils is inconclusive.

It must be noted that there is greater agreement between the two instruments in the measurement of relationships with parents. *Based on these results* it is possible to state that Pet Therapy has a beneficial effect on these relationships for the low self-esteem pupils, but according to the analysis of the findings, it has not had any effect on the *high self-esteem group*.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents a summary of the study and discusses important conclusions derived from the research. It also offers recommendations for further research and the implementation of Pet Therapy into the school curriculum.

SUMMARY

Previous research has shown the importance of self-esteem in the successful functioning of children of all ages. Low self-esteem has been linked to many problems in young people including deviant behaviour, depression, anxiety, pessimism, inability to interact successfully with peers and teachers, external locus of control, poor academic achievement and *even persistent absenteeism.* For example, Chapman (1984) states that the self-concept is a mediational influence which dictates *the nature of an individual's* relationships and the types of behaviours and tasks in which he will engage.

Researchers have stressed that it is imperative that new ways should be explored to improve self-esteem since many of the standard and tried methods have had only limited success. The proponents of Pet Therapy have produced evidence of the efficacy of contact with animals in the building of self-esteem, effecting "normalisation" and bringing about improved socialisation, especially of children and the

elderly. Most of the earlier evidence consisted of subjective data gathered from anecdotal reports and observations of case studies. More recently, according to Muschel (1984), several empirical studies have been conducted which confirm the findings of the earlier reports.

The majority of evidence for the efficacy of Pet Therapy comes from research conducted with the elderly, the mentally and physically retarded, and the emotionally and medically ill. However, McCulloch (1986) states that animals are part of the normal child and family development and experience. Therefore Pet Therapy should not be exclusively identified with the handicapped.

There is a certain urgency about finding the tools with which to give children more stability. An ever increasing number of children come from homes in which there is child abuse, unrealistic expectations by parents, poor socio-economic conditions, or distressful family relationships, possibly resulting from separation or divorce. The latter factor is stressed by the results of the Berelowitz (1986) and the Fischer and Leitenberg (1986) studies which reinforce the notion that family stress has the potential to interrupt a child's normal developmental progress and affect social relationships. These children are at risk and at a disadvantage in the normal school system. Thus Brickel (1986) states that we are obligated to pursue all therapeutic avenues of potential benefit.

Many researchers have stressed that the responsibility lies with educators to endeavour to restore some balance and security into children's lives. Teachers, together with the school's psychological services, need to explore every avenue open to them. Researchers who believe in Pet Therapy claim that daily contact with an animal that is dependent on the child's care, can have a beneficial effect on that child and provide the child with those elements essential to his psychological and emotional development. Previous research such as the Robin and ten Bensel study (1985), indicates that contact with animals facilitates the acquisition of basic trust and self-esteem, a sense of responsibility and competence, feelings of empathy towards others, serving as a bridge towards relationships with other children, and an achievement of autonomy. An ideal place to have this contact with animals is within the school environment under controlled, supervised conditions.

The goal of the present study was to determine the effect of close contact with animals, namely Pet Therapy, within the milieu of a normal primary school environment, on the self-esteem, social adjustment and personal relationships of children between the ages of 9 and 12 years. The choice of this age-group is supported by Davis and Juhasz (1985), who state that the pet-child relationship is tailored for the needs of the preadolescent. This investigation introduced a Pet Therapy intervention programme through the school science club.

Pupils were selected according to predetermined criteria for an experimental and a control group. The levels of self-esteem and social adjustment were measured by means of standard psychological instruments, namely the Coopersmith SEI and the Revised Rogers PAI. These tests were administered both before and after the intervention programme.

The purpose of the study is to provide educationalists and school psychologists with data which can be used to assist in the amelioration of low self-esteem and poor personal and social adjustment of pupils, coming possibly from difficult or inadequate home backgrounds. This is consistent with the findings and recommendations of both Ross (1983) and Levinson (1988) in their studies conducted in Residential Schools.

CONCLUSIONS

The data generated from this study, and the subsequent statistical analysis, resulted in the following: Firstly, the data supports the hypothesis that Pet Therapy facilitated the improvement of the self-esteem of the primary school pupils in this particular sample. This was especially evident with pupils of low self-esteem, there being a highly significant difference at the probability level of $p<0.0005$. Although the improvement of the high self-esteem sample was not as great as the low self-esteem sample, the significance level of $p<0.01$ was well within $p<0.05$ set for rejecting the null hypothesis. These results

are consistent with the literature which relates to the improvement of *self-esteem by a Pet Therapy* programme.

Secondly, there is some evidence that *Pet Therapy is* effective in improving overall social adjustment for the group under consideration. For the total sample, the *significance* was at the $p<0.10$ level. However, there was a more significant difference, with a probability of <0.05 for the low self-esteem sample. This indicates that Pet Therapy was instrumental especially in improving social relationships of the low self-esteem pupils.

Thirdly, with regard to specific aspects of social adjustment, such as relationships with peers and parents, there are indications that Pet Therapy was beneficial to the low self-esteem sample, but that the programme had very little effect on the high self-esteem sample. Only on the Rogers PAI sub-scale for relationships with peers, did the high self-esteem sample give indications of a significant difference, namely $p<0.05$, but this was not supported by results *obtained from the* Coopersmith sub-scale. Although the results for the experimental group as a whole are not statistically *significant, there is a trend which is* important to note when the results are compared with the the results of the control group, in that the *control group in* several cases obtained negative mean difference scores, whereas the experimental group obtained positive mean difference scores. The results of the experimental group are not entirely consistent with the literature which claims

that Pet Therapy has a significantly beneficial effect on a child's socialisation process. Research on self-esteem indicates that children with high self-esteem are already well adjusted and have good peer and parental relationships (Fischer and Leitenberg, 1986). It is therefore expected that the high self-esteem group would show only a small, if any, improvement.

The inconclusiveness of the results of the investigation into social adjustment and relationships with peers and parents indicates that there is need for further research. Unfortunately there is no empirical evidence from previous research using Pet Therapy in the normal school environment as a reference point. Only anecdotal reports by researchers such as Alt (1985) and Orlans (1979) on the effects of animals in a normal school environment have been identified. *In fact, the findings of researchers, such as* N·ating et al (1987), confirm that our knowledge of what can be achieved with Pet Therapy is still limited and that there is a need for a sound theoretical basis. *McCulloch (1983) states that* we are just beginning to understand the psychological effect of pets on individuals and child development, and the mechanism of non-verbal communication between people and animals.

Furthermore, possible explanations for the inconclusiveness of the results in personal and social adjustment of the various subsections of the experimental group may be attributed to a variety of factors. A major concern is the

potential lack of sophistication of the assessment measures used, since neither of the instruments may be sensitive enough to accurately assess the dimensions of *relationships* such as those with peers and parents. Alternatively, problems may lie in the administration of the adjustment inventory. The Rogers PAI has a few highly emotive items which may have caused some consternation in the pretest administration, especially with the Standard 3 pupils. Teachers administering this inventory need to be well briefed to handle the situation. These problem questions were ignored in the scoring of the pretest and were completely eliminated from the posttest to avoid possible contamination of the results. This factor may affect the reliability of the rest of the responses to the inventory, strongly confirming the need for a pilot study in any future research.

A further explanation for the inconclusiveness of the social adjustment results can be provided from the negative mean difference score of the *control group which*, in several instances, indicates an increase in difficulties with personal relationships. This suggests that perhaps the school environment was not generally conducive to positive social adjustment changes. The change of the teacher in charge of both the laboratory and the running of the project may have contributed to disturbing relationships amongst the *experimental group* pupils.

Levinson (1964) states that when an animal is the "sole therapeutic agent", the nature and intensity of the 'owners' relationship with the animal will determine its therapeutic effect. This is very difficult to control within a school environment where there are many unknown variables and few reference points for the research, due to the lack of theoretical framework (Netting et al, 1986).

Finally, it is considered that because of the relatively small sizes of the sub-samples of the experimental and control groups, it would be inappropriate to generalise the findings to wider populations. A further influencing factor may be that the sample was made up of children from the higher socioeconomic strata of the South African society.

In conclusion, Brickel (1988) summarises the problems with Pet Therapy as follows: that the finding of positive but non-significant trends in the studies of pet "ownership" seems to reflect the complexity of the person-pet bond and indicates that meaningful variables have not yet been satisfactorily identified or isolated. Therefore this study, as with most studies, requires replication.

RECOMMENDATIONS

Pet Therapy should not be considered as a "panacea for all ills". This premise is equally applied to the school situation where some children may not respond to Pet Therapy. However, successes with Pet Therapy outweigh the negative results that have been obtained. The

recommendation for the educational organisations and sociological and the psychological services is that Pet Therapy should be considered as a treatment. The recipients of the treatment in this case would be the children at school who are at "risk", namely pupils who are highly anxious, depressed, poorly adjusted in their adaptation to school, with a low self-esteem and poor socialisation ability. These pupils are also more likely to exhibit inadequate academic achievement.

Pet Facilitated Therapy is recommended as an adjunct to the *school psychological services*, which are involved in remedial and therapeutic work, and to the head of guidance who is dealing with pupils who have emotional, behavioural or interpersonal communication problems. However, before representations can be made either to the psychological services or to the education departments for a curriculum change for introducing Pet Therapy into the extramural curriculum, much more research is required to produce evidence for its efficacy. This concept is unfamiliar in South African educational circles and only further research can help to facilitate the transition and implementation of Pet Therapy theories into practice. The replication of the present study, in a more controlled environment with larger samples involving several schools, is essential.

The replication and expansion of the Pet Therapy data base will enhance the effectiveness of the intervention technique and the reliability and validity of the findings. It is

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vital that educational and psychology researchers should meet the challenge of expanding the data base of the present study and all research findings should be reported, even the failures. The case studies of ineffective implementation of the pet therapy techniques may reveal diagnostic data for further improvement. Their documentation is most important.

Therapists engaging in Pet Therapy must be genuinely motivated, since, in spite of its potential, Pet Therapy will not be effective when applied by a reluctant practitioner. Therefore, for an intervention programme to be successful, there is a need for support and commitment among the school administration, staff and parent body. Teachers need to be more informed about the efficacy of Pet Therapy *programmes. This can only* be achieved by well designed, thoroughly controlled and carefully evaluated interventions which are essential to current and future programme development.

In trying to establish a Pet Therapy programme, careful attention must be given to the selection and care of the animals as well as to staff training and the allocation of responsibilities. The full cooperation of the teachers is essential. One of the basic principles of Pet Therapy is that the child-pet relationship should not be stressful and, as much as possible, failure experiences of the child in relation to the care and well-being of the pet should be avoided. If the pupils in the experiment become distressed

by feelings of inadequacy when taking care of their animals, the teacher should manage the crises with empathy and understanding. It is also essential to establish a close contact with the local veterinarian.

It is recommended that a pilot study should first be undertaken. The pilot study will assist in identifying the associated problems for the main study and it is especially vital for such a sensitive and emotive programme, involving animals and children. It is essential to test the assessment measures to determine their suitability and to highlight any problems in their administration, to ensure reliable and unbiased data. In addition, it is recommended that alternative assessment measures for personal/social adjustment be applied. For example, the Holm/Seidel sociometric methods used in the Guttmann, Predovic and Zemanek (1983) study might be more suitable. The Rogers PAI used in this present study presented several problems, which may have rendered the results inconclusive in the area of parent and peer relationships.

It is suggested that any future research in this area should consider an alternative control group which receives special attention other than Pet Therapy. Therefore, it would be most useful to have one Pet Therapy group, one Control group involved in some other organised extramural activity and a second Control group which receives no special attention.

It is recommended that future researchers involved in Pet Therapy should continue to investigate the primary school child. Previous research indicates that self-concept disruption and depression tendencies most frequently occur in early adolescence between the the ages of 9 to 12 years. These children are at risk in resolving issues of identity. Therefore active intervention is required in order to deal with inadequate self-concept and its emotional correlates, and thus prevent wasted potential.

Furthermore, in order to present a more comprehensive and holistic picture of the effect of the intervention programme, there is a need to gather information from the teachers and parents as well. This is important since teachers' and parents' perceptions regarding their children may not be congruent with the children's perceptions. Previous research indicates that children's involvement with animals improved relationships with parents, as parental interest was engendered. Thus parental interest needs to be assessed.

Finally, the following recommendations are put forward for future research:

Firstly, investigations should be conducted to determine whether improved self-esteem, as a result of Pet Therapy, is correlated with academic achievement of pupils.

Secondly, the effect of the intervention technique on the improvement of self-esteem and social relations of

exceptional children, who are not motivated or achieving their full potential, should be investigated.

Thirdly, a longitudinal study should be designed to document the lasting effects of the intervention programme by tracing the primary school pupils, who have been exposed to the Pet Therapy programme, into the high school.

Finally, a feasibility study and cost analysis of the Pet Therapy programme should be conducted, and its logistics, labour and time, relative to other forms of extramural activity, should be assessed.

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APPENDIX

Coopersmith

Inventory

Form C

by
Stanley Coopersmith
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1975

Directions

On the following page, you will find a list of statements about feelings. If a statement describes how you usually feel put a check (✓) in the column "LIKE ME." If a statement does not describe how you usually feel, put a check (✓) in the column "UNLIKE ME."

There are no right or wrong answers.

Example:

	LIKE ME	UNLIKE ME
I am a hard worker	( )	( )

Begin at the top of the page and mark every statement.

There are 25 statements to be answered.

COOPERSMITH - REVISED SUB-SCALES

Coopersmith (1967) did not include a standardised scoring key for his questionnaire therefore Daniels (1968) and her supervisor Dr. Lewis of Reading University devised one based the sub-scales developed by Driver (1977) from the 58 items of the Coopersmith Self-Esteem Inventory (CSEI). A mark of two was given where it was considered that the subject is most likely to tick; that is the most positive response in the questionnaire.

Statements in the questionnaire which were considered to be relating to parents, school and peers are as follows:

Parent = 5. 12, 19, 26, 33, 40, 47, 54.
Total score = 16

Peers = 11, 18, 25, 27, 32. 39, 46.
Total score = 14

School = 7, 14, 21, 28, 35, 42, 49, 56.
Total score = 16

The remaining items of the CSEI relate to perceptions about the 'Self'. The total self-esteem score = 116.

For the purposes of this present study only the items relating to relationships with parents and peers were scored.

Rogers Personal Adjustment Inventory: Revised

Patricia Jeffrey

NFER-NELSON

Girl's Booklet

The questions in this booklet are to help us find out what girls think and the things they really wish for. There are no *'right'* or *'wrong'* answers. Each girl will answer differently. Just try to put down what you really think and really wish.

My name is .....

My age is .....

My school is .....

Today's date is .....

NFER-NELSON

D P S F Total

Suppose that just by wishing you could change yourself into any of these people.

Choose 3 whom you would most like to be. Put a cross (X) in the boxes next to the 3 you choose.

Read the whole list through before you make any mark.

☐	teacher	☐	nurse
☐	pop star	☐	doctor
☐	shopkeeper	☐	gymnast
☐	businesswoman	☐	air hostess
☐	princess	☐	T.V. star
☐	typist	☐	poet
☐	policewoman	☐	housewife
☐	ballerina	☐	dressmaker
☐	vet	☐	cook

Is there another sort of person you would very much like to be?

Write the name here.

.....

D	P	S	F
☐	☐	☐	☐

2

Suppose you could have *just 3 of the wishes* below, which would you want *to come true*? Put a cross (X) in the boxes next to the 3 you choose.

Read the whole list through *before you make any mark*.

I would like

- ☐ to be bigger *and stronger than I am now*.
- ☐ to have the other children like me better.
- ☐ to get on better with mum and dad.
- ☐ *to be cleverer* than I am now.
- ☐ to play games better.
- ☐ to have a different mum and dad.
- ☐ *to be a boy*.
- ☐ to have more money *to spend*.
- ☐ to be grown up and get away from home.
- ☐ to have more friends.
- ☐ to be better looking.
- ☐ to have mum and dad love me more.

3

Suppose you were going away to live on a desert island and could only take 3 people with you. Write *here the names of the 3* people you would choose. If *you cannot* think of anybody leave the spaces blank.

1 .....

2 .....

3 .....

D P S F

3

Read the sentences below and answer the questions that go with them.

If the answer is Yes put a cross (X) in the **Yes** box like this

Yes	X	No

If the answer is **No** put a cross (X) in the **No** box like this

Yes		X

If the answer is not *Yes or No but* ***somewhere in between,*** put a cross (X) in the **empty** box like this

Yes	X	No

Only use the middle box if you really cannot say Yes or No.

Remember to answer both parts of each question.

1 Mary is the prettiest girl in the class.

Are you like her?	Yes	No
Do you want to be like her?	Yes	No

2 Fiona likes to read. She has read all the fairy stories and **girl adventure books that she can.**

Are you like her?	Yes	No
Do you want to be like her?	Yes	No

3 Jean is better at sports than any other girl in the class.

Are you like her?	Yes	No
Do you want to be like her?	Yes	No

D	P	S	F

4 **Pauline gets very good marks in all her school work.**

Are you like her?	Yes	No
Do you want to be like her?	Yes	No

5 **Isabel has pretend friends and a pretend world which is much nicer than the real world. She dreams of all sorts of adventures with these pretend friends.**

Are you like her?	Yes	No
Do you want to be like her?	Yes	No

6 **June is a leader. All the girls do what she tells them.**

Are you like her?	Yes	No
Do you want to be like her?	Yes	No

7 **Sheila always has a wonderful time at parties.**

Are you like her?	Yes	No
Do you want to be like her?	Yes	No

8 **Alice always does just what her mum tells her to do.**

Are you like her?	Yes	No
Do you want to be like her?	Yes	No

D P S F

9 **Anna is the best liked girl in the class.**

Are you like her?	Yes	No
Do you want to be like her?	Yes	No

10 **Laura has more boy friends than any of the other girls.**

Are you like her?	Yes	No
Do you want to be like her?	Yes	No

11 **Margaret is pretty poor at her school work, even though she works very *hard*.**

Are you like her?	Yes	No
Do you want to be like her?	Yes	No

12 **Jackie doesn't want to do what her mum and dad tell her. She knows she is old enough to decide things *for herself*.**

Are you like her?	Yes	No
Do you want to be like her?	Yes	No

13 **Ruth has more pocket money than the other girls.**

Are you like her?	Yes	No
Do you want to be like her?	Yes	No

D P S F

14 Pat likes to sit by herself and imagine things. She thinks this is much more fun than playing real games.

Are you like her?	Yes		No
Do you want to be like her?	Yes		No

15 *Carol is* the cleverest girl in the class.

Are you like her?	Yes		No
Do you want to be like her?	Yes		No

16 Julia quarrels a lot with the other people in her family, no matter how hard she tries not to.

Are you like her?	Yes		No
Do you want to be like her?	Yes		No

Think of all these girls.

Which one would your mum like best? Write her name here.

.....

Which one would your dad like best? Write her name here.

.....

D P S

Read the questions below and put a cross (X) in the box next to the line which is most like you.

1 How many friends would you like to have?

- [ ] None.
- [ ] A few good friends.
- [ ] Many friends.
- [ ] Hundreds of friends.

2 How well can you play tennis and netball?

- [ ] Can't play these sorts of games at all.
- [ ] Can play a little bit.
- [ ] Can play pretty well.
- [ ] Best player in my class.

3 How strong are you?

- [ ] Very weak.
- [ ] Not very strong.
- [ ] Strong.
- [ ] The strongest in my class.

4 When you are grown up, what sort of person do you want to be?

- [ ] I want to be a great person and do great things that people will talk about.
- [ ] I want to be one of the most important people in the town I live in.
- [ ] I want to be a happy, ordinary person, with a good job.
- [ ] I would rather not grow up.

5 Do you like to play games with other boys and girls?

- [ ] I don't, because I can't play games very well.
- [ ] They don't want me to play with them, because I can't play games very well.
- [ ] I like to play games.
- [ ] I would rather play games than anything else I know.

D P S F

N

6

left out.

7 Do you want to be grown up?

- [ ] I just can't wait to be grown up.
- [ ] I would like to be grown up.
- [ ] I don't want to be grown up. I like it as I am just now.
- [ ] I would like best of all to be a few years younger than I am now.

8 How well do your mum and dad like you?

- [ ] I am the one they like best of all.
- [ ] They don't seem to like me very much at all.
- [ ] They like other people in my family better than me.
- [ ] They like me a great deal.

9 Which do you like best?

- [ ] To go off by yourself and play or read.
- [ ] To play with one or two other children.
- [ ] To play with a whole crowd of children.

10 Do you like to have someone else tell you how to do things?

- [ ] I like it.
- [ ] I don't care.
- [ ] I would rather do things my own way.
- [ ] I hate being told what to do.

11 *How do you feel when someone in your family is told they have done something very well?*

- ☐ I feel proud of them.
- ☐ I wish I could do better than they have done.
- ☐ I don't like to hear it.
- ☐ I hate to have them do better than I can do.

12 Are you good-looking?

- ☐ I'm not at all good-looking.
- ☐ I'm not very good-looking.
- ☐ I'm as good-looking as most girls.
- ☐ People say that I'm very good looking.

13 *Do other children play nasty tricks on you?*

- ☐ Never.
- ☐ Sometimes
- ☐ Very often

14 Do you have any good friends?

- ☐ None at all.
- ☐ A few good friends.
- ☐ Many friends.
- ☐ *Hundreds of them.*

15 Do you like to get into rough games, chasing, running around or things like that?

- ☐ *I like them very much.*
- ☐ I like them a little.
- ☐ I don't like them.
- ☐ I hate people being rough with me.

D P S F

16 Do people treat the other people in your family better than they treat you?

- [ ] Never.
- [ ] Sometimes.
- [ ] Often.
- [ ] Almost always.

17 Do you want people to like you?

- [ ] I just can't stand it if people don't like me.
- [ ] I always try very hard to make people like me.
- [ ] I don't care very much, but I'm glad when people like me.
- [ ] I don't care a bit whether people like me or not.

18 What do your mum and dad want you to do when you are grown up?

- [ ] They want me to be a great person and do great things that people will talk about.
- [ ] They want me to be one of the most important people in the town I live in.
- [ ] They want me to be a happy, ordinary person with a good job.
- [ ] They don't want me to grow up.

19 Do boys or girls like you best?

- [ ] The girls like me better than the boys do.
- [ ] The boys like me better than the girls do.
- [ ] I am well liked by both boys and girls.
- [ ] I am not well liked by either boys or girls.

20 When do you think you have the most fun in life?

- [ ] When you are a young child.
- [ ] When you are between 9 and 13 years old.
- [ ] When you are between 14 and 25 years old.
- [ ] After you are 25 years old.

D. P. J. F.

Boy's Booklet

The questions in this booklet are to help us find out what boys think and the things they really wish for. There are no 'right' or 'wrong' answers. Each boy will answer differently. Just try to put down what you really think and really wish.

My name is .....

My age is .....

My school is .....

Today's date is .....

Are you a Science Worker? . . . . . .

NFER-NELSON

D P S F Total

Suppose that *just by* wishing you could change yourself into any of these *people*.

Choose 3 whom you would most like to be. *Put a cross* (X) in the boxes next to the 3 you *choose*.

Read the whole list through before you make any mark.

☐ teacher	☐ army officer
☐ pop star	☐ doctor
☐ shopkeeper	☐ boxer
☐ businessman	☐ engineer
☐ prince	☐ T.V. star
☐ bus driver	☐ poet
☐ policeman	☐ postman
☐ spaceman	☐ farmer
☐ vet	☐ coal miner

Is there another sort of person you would very much like to be?

Write the name here.

.....

D P S F

[2]

2

Suppose you could have just 3 of the wishes below, which would you want to *come true*? Put a cross (X) in the boxes next to the 3 you choose.

Read the whole list *through* before you make any mark.

I would like

- ☐ to be bigger and stronger than I am now.
- ☐ to have the other children like me better.
- ☐ *to get on better with mum and dad.*
- ☐ *to be cleverer than I am now.*
- ☐ to play games better.
- ☐ to have a different mum and dad.
- ☐ to be a girl
- ☐ to have more money to spend.
- ☐ *to be grown up* and get away from home.
- ☐ to have more friends
- ☐ to be better looking
- ☐ to have mum and dad love me more.

3

Suppose you were going *away to live on* a desert island and could only take 3 people with you. Write here the names of the 3 people you would choose. If you cannot think of anybody leave the spaces *blank*.

1 .....

2 .....

3 .....

D P S P

[3]

Read the sentences below and answer the questions that go with them.

If the answer is Yes put a cross (X) in the Yes box like this

Yes	X	No

If the answer is No put a cross (X) in the No box like this

Yes		X

If the answer is not Yes or No but **somewhere in between**, put a cross (X) in the empty box like this

Yes	X	No

Only use the middle box if you really cannot say Yes or No.

Remember to answer both parts of each question.

1 Peter is a big, strong boy who can beat any of the other boys in a fight.

Are you like him?	Yes		No
Do you want to be like him?	*Yes*		No

2 George likes to read. He has read all the books he can about cowboys, spacemen and soldiers.

Are you like him?	Yes		No
Do you want to be like him?	Yes		No

3 Ian is the best football player in the class.

Are you like him?	Yes		No
Do you want to be like him?	Yes		No

D. P S F

4 **David gets very good marks in all his school work.**

Are you like him?	Yes	No
Do you want to be like him?	Yes	No

5 **Allan has pretend friends and a pretend world which is much nicer than the real world. He dreams of all sorts of adventures with these pretend friends.**

Are you like him?	Yes	No
Do you want to be like him?	Yes	No

6 **Joe is a leader. All the boys do what he tells them.**

Are you like him?	Yes	No
Do you want to be like him?	Yes	No

7 **Steven always has a wonderful time at parties.**

Are you like him?	Yes	No
Do you want to be like him?	Yes	No

8 **Alfred always does just what his mum tells him to do.**

Are you like him?	Yes	No
Do you want to be like him?	Yes	No

D P S F

9 John is the best liked boy in the class.

Are you like him?		No
Do you want to be like him?	Yes	No

10 Harry has more girl friends than any of the other boys.

Are you like him?		No
Do you want to be like him?	Yes	No

11 Neil is pretty poor at his school work, even though he works very hard.

Are you like him?		No
Do you want to be like him?	Yes	No

12 Jack doesn't want to do what his mum and dad tell him. He knows he is old enough to decide things for himself.

Are you like him?		No
Do you want to be like him?	Yes	No

13 Don has more pocket money than the other boys.

Are you like him?		No
Do you want to be like him?	Yes	No

D P S F

14 Jim likes to sit by himself and imagine things. He thinks this is much more fun *than playing* real games.

Are you like him?	Yes	No
Do you want to be like him?	Yes	No

15 Bob is the cleverest boy in the class.

Are you like him?	Yes	No
Do you want to be like him?	Yes	No

16 Fred quarrels a lot with the other people in his family, no matter how hard he tries not to.

Are you like him?	Yes	No
Do you want to be like him?	Yes	No

Think of all these boys.

Which one *would your mum like best*? Write his name here.

.....

Which one would your dad like best? Write his name here.

.....

Read the questions below and put a cross (X) in the box next to the line which is most like you.

1 How many friends would you like to have?

- [ ] None.
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- [ ] Many friends.
- [ ] Hundreds of friends.

2 How well can you *play football and cricket*?

- [ ] Can't play these sorts of games at all.
- [ ] Can play a little bit.
- [ ] Can play pretty well.
- [ ] Best player in my class.

4 How strong are you?

- [ ] Very weak
- [ ] Not very strong.
- [ ] Strong.
- [ ] *The strongest in my class.*

5 When you are grown up, what sort of person do you want *to be*?

- [ ] I want to be a great *person and do great things* that people will talk about.
- [ ] I want to be one of the most important people in the town I live in.
- [ ] I want to be a happy, ordinary person, with a good job.
- [ ] I would rather not grow up.

6 Do you like to play games with other boys and girls?

- [ ] I don't, because I can't play games very well.
- [ ] They don't want me to play with them, because I can't play games very well.
- [ ] I like to play games.
- [ ] I would rather play games than *anything else I know*.

U P S F

6

Left out

7 Do you want to be grown up?

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- [ ] I like it.
- [ ] I don't care
- [ ] I would rather do things my own way.
- [ ] I hate being told what to do.

11 **How do you feel when someone in your family is told they have done something very well?**

- [ ] I feel proud of them.
- [ ] I wish I could do better than they have done
- [ ] I don't like to hear it.
- [ ] I hate to have them do better than I can do.

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- [ ] I'm not at all good-looking.
- [ ] I'm not very good looking.
- [ ] I'm as good-looking as most boys.
- [ ] *People say that I'm very good-looking.*

13 Do other child..en play nasty tricks on you?

- [ ] Never.
- [ ] Sometimes
- [ ] Very often.

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- [ ] A few good friends.
- [ ] Many friends
- [ ] Hundreds of them

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- [ ] I like them very much.
- [ ] *I like them a little.*
- [ ] I don't like them
- [ ] I hate people being rough with me

D P S F

16 Do people treat the other people in your family better than they treat you?

- [ ] Never.
- [ ] Sometimes.
- [ ] Often.
- [ ] Almost always.

17 Do you want people to like you?

- [ ] I just can't stand it if people don't like me.
- [ ] I always try very hard to make people like me.
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- [ ] They want me to be a happy, ordinary person with a good job.
- [ ] They don't want me to grow up.

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- [ ] The girls like me better than the boys do.
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20 When do you think you have the most fun in life?

- [ ] When you are a young child.
- [ ] When you are between 9 and 13 years old.
- [ ] When you are between 14 and 25 years old.
- [ ] After you are 25 years old

D P S

The following letters are just a few that were written by parents in response to questions about how they saw the role of the animals in the 'living laboratory' in conjunction with their own children.

14th Novemberr 1964

Mrs J Bergesen
Montrose Primary School

Dear Mrs Bergesen

This letter is prompted by a report of some criticism of the value of Montrose's science laboratory or that the usefulness of the laboratory as an educational tool was debatuable.

What an extraordinary question in an age when surveys of metropolitan people show that there are children in this world who don't know where milk comes from!

Imagine what knowledge those children have of creatures much smaller than cows and which have no apparent economic effect on our lives in the cities of this world.

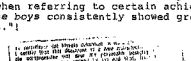
How priviledged am I that my two sons should take pleasure from the opportunity to join a real insight into nature's contributions to life on our planet and, heaven knows, how often I am reminded of this priviledge when I am told of a rare visitor to our bird feeder in the garden, or that the cat has been scolded for stalking a lizard or bird - or when our poodle chooses to bark at a passer-by just when 10 red bishops settle on the feeder.

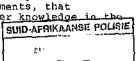
True my own interest in these things is a stimulus, but I could never have taught them all they appear to know and show such keen interest in.

Most vital, however, is the intense conservation desire present in all the children associated with the lab. and I can't think of anything that rates a higher priority in this shrinking world with its growing pollution problem.

Clearly the practical "hands on" experience gained through caring for and viewing the various creatures' habits has far greater learning results than simple exposure to books or even audio-visual material. We as a family have direct proof of this from a teacher in Gregory's high school who noted, when referring to certain achievements, that "Montrose boys consistently showed greater knowledge in the sciences."!

AB8AAW

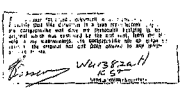


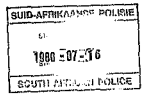


Whilst I may be luckier than others because both my boys were particularly keenly involved with caring for the animals, I am convinced that every child at Montrose has a greater regard for and a better understanding of the process of life and the part played by the various creatures on the earth. It is a pity that all of our city children can't enjoy similar opportunities.

With personal thanks for the experience and understanding you have imparted to Gregory and Andrew.

Leo van Osch





ABBAAN

1984

MONTROSE'S SCIENCE LABORATORY

Many child psycologists have put much emphasis on the environment in which children *are expected* to learn. It has been proved too that children learn best in an environment where they are able to observe and act on things.

The learning environment that has been created at Montrose Primary School is a learning environment that I, together with other psycologists feel children will learn best in. I have been so deeply impressed with the way this laboratory is run and the involvement of all the children. I have met pupils that have *expressed* such detailed knowledge on creatures that they have been able to observe daily, care for and study up on.

This science Laboratory has made children aware of a great number of creatures that are *seldom seen in* nature by the city child. Here in the laboratory the children have *created as close to each* animals' natural environment as possible, and care for them on a daily basis.

The things that impressed me most about this laboratory were, firstly the inborn conservation idea that each child had. I most certainly believe that *this is* because the child is brought up to see that a snake or a spider has as much right to *live as* does a bird or a mouse. Each child that I met in the Lab had an attitude of "what can I do to help this animal," (no matter the kind).

Secondly, the knowledge that the children have about the creatures could only be instilled by *observation*, feeding and caring for. The warmth I felt in this environment was something *quite different* and most certainly rare. There always seemed to be a buzz of excitement, whether the seahorse was having babies or whether there was a new addition to the laboratory.

Words cannot express what *is taking* place here in this environment. It is something that you must see for yourself to *understand* and appreciate it.

Karin De Groot

ABSABA

SUID-AFRIKAANSE POLISIE
SA
1986-07-13
SOUTH AFRICAN POLICE

26th November 1984

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TO WHOM IT MAY CONCERN

I would personally like to recommend that student teachers at Training College's or Universities throughout the country are encouraged to start up 'Science Laboratories' at their respective Junior or High Schools when they become qualified. The tremendous interest that is achieved by the children involved in a task, taking care, feeding, playing and most of all loving their helpless animal or mammal. It teachers them responsibility and gives them great satisfaction. In later years they can be part of the community of preserving the wild life of the world and not destroying them.

It would be a great achievement if the Educational Department made this type of Laboratory a part of the school curriculum.

S. Slater-Varley

AB8AAY

SUID-AFRIKAANSE POLISIE
19RR -07- 16
POLICE

11 November 1984

"Agua Brava"
11 Shandon Way
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783-3353

My son, Jonty Braun joined the Science Lab. at Montrose School, 4 years ago. Since that time I have had the pleasure of watchin, him change from a little guy who didn't quite know what he wanted to do with his free time into a confident, happy younster who has a very definite purpose in life.

School, should be more than just an establishment where a child learns the 3'rs and the Science Lab at Montrose offers more than just that.

My son's responsibility in the Lab is mainly to look after 3 chameleons. It is a commitment that he made and he has never regretted it. He has a feeling of contentment once his creatures have had their food at School Break and he tries to organise his weekend arrangements to suit "feeding time" at the Lab. This has moulded him into a very responsible person, for he feels letting the animals down is letting himself down. This hobby of his has now given him a wonderful insight into the habits, etc., of the various animals and he is now a fundi on the subject of Chameleons. There can only be a few, if any Labs in the Tvl. where chameleons have survived the seasons.

Not all younsters excel at Sport and yet they want to know, that they are doing their bit for their School - here once again the Science Lab plays an important role.

In Sociology we learn that it is the youngster who is not accepted into a group - i.e. the outsider who is prone to delinquency therefore it is important that he fits into one little circle of society and what better group could you find than this, in a number of responsible, knowledgeable younsters, who are aware that others are dependant on them for food, water and care. I'm sure when seeing their fellow members 10 years from now they will have many interesting memories of when they were members of Montrose Science Lab.....

Lane Braun

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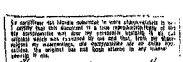

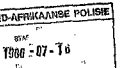

behavioural components. However, Coopersmith's description of self-esteem (1967, p.4) refers to self-esteem as *the* ". . . evaluation that *the individual* makes with regard to *himself; it expresses* an attitude of approval or disapproval and indicates the extent to which the individual believes himself to be capable, significant, successful and worthy". Scheirer and Kraut (1979) state that a belief in the power of the self-concept is incorporated *into all strands* of psychological, *sociological* and educational theory which have emphasized that a person's belief about himself will influence all his decisions and actions.

In the study of self-esteem there are three main *reference* points, according to Burns (*1982*). *One of these* is the con*gruence between* the known self-image and the ideal self-image, whilst the second reference point involves the view of oneself being 'master' of one's actions and having a sense of competence. A third point is the internalisation of the judgement of 'significant others' *and society*, the resulting *self-evaluation* being determined by the individual's beliefs about how others evaluate him and how he measures up to their aspirations. This latter aspect, involving positive reinforcement from 'significant others', reflects the original formulation by Mead and *Cooley (In* Scheirer and Kraut, 1979) *of the* 'symbolic interactionism' *theory which* states that meanings are learnt by interaction with others.

15 July 1986

Mr J W Bayliss
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Dear Jeanette

Paul finished primary school 3 years ago, I now feel it is time to let you know the effect of working in your science laboratory had on him. He was prior to joining your science laboratory at the primary school, a lonely immature small boy. He became interested in spiders and scorpions through your tuition and also a responsible youngster, as I think you saw by him happily going up on Christmas day etc. to feed all the animals.

He got his family interested i.e. his mother used to go out on trips with him to collect spiders and scorpions as well as after he went to boarding school insisting on keeping certain of his collection as pets.

This interest has continued, even after leaving primary school and now as a young man coming towards the end of standard 8 he still has spiders and scorpions which he keeps at boarding school not unfortunately at home. I am certain that once his high-school career is completed he will probably continue the study of spiders and scorpions (biology) as a future career. We at home will then again be knee-deep in his collection.

I wish to place on record to you, that the science laboratory that you ran at Montrose Primary School can only broaden childrens outlook and make them interested in the Ecology of this country. It also opens avenues of interest which they would not normally have access to.

Congratulations on a job very well done.

Yours faithfully

J W BAYLISS

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their outcomes. This implies the necessity to improve self-esteem.

Many of the above-mentioned researchers have recommended therapeutic or compensatory programmes of some sort in their studies. The intervention programme for improving the self-esteem of slow learners (Curtis and Shaver, 1981) has direct bearing on the design of this present study. The rationale used, namely that the confidence gained by the students successfully accomplishing the set tasks plus the positive reinforcement by 'significant others' will raise their self- esteem, is important to this study. It is similar to the rationale behind Pet Facilitated Therapy (Levinson, 1978). Levinson , a child psychologist, is the first researcher to provide detailed reports about the therapeutic effects of human-pet contact.

Levinson's first paper (1969) describes the way in which his dog became "co-therapist" in his treatment of emotionally disturbed children. Levinson's work consisted largely of detailed case studies out of which basic principles of Pet Facilitated Therapy have been derived. These have formed the rationale for many other Pet Facilitated programmes and investigations (Netting, Wilson and New, 1987). Most of the research done in this area consisted of case studies (Beck and Katcher, 1984) which explain the principles behind Pet Facilitated Therapy, but little quantitative data of controlled studies has been collected (Netting et al, 1987).

Stimulated by Levinson's work and his appeal for "rigorous research" (Levinson, 1978), Corson and Corson (1978b) conducted one of the earliest controlled studies to evaluate the effects of animals in an institutional setting i.e. in a hospital psychiatric ward. In this experiment the patients acted as their own controls as they had not responded to any previous traditional therapeutic treatments. The results showed that the patients improved in their socialisation and self-regard. The animals acted as "social catalysts".

Professional therapists in the 1980's have come to value animals as therapeutic aids in the treatment of either physical and/or emotional disabilities. In other words animals provide physiological and/or psychological benefits (Brickel, 1986). In discussing the physiological benefits, Brickel (1986) describes various research projects in which children's blood pressure and heart rate were monitored under various conditions such as reading, watching a blank wall, or watching tropical fish or a dog. Lowest blood pressures were recorded both in hypertensive and normatensive children under those conditions involving animals.

An example of the psychological benefits derived from animals is the study conducted by Polt (1985) which describes how children in the Hope Centre with developmental disabilities developed skills, learned cooperation, and gained self-confidence and self-esteem through their daily

NAME: _____ STD: _____ DATE: _____

Please mark each statement in the following way:
If the statement describes how you usually feel, put a check (√) in the column, "*Like Me.*"
If the statement does not describe how you usually feel, put a check (√) in the column "*Unlike Me.*"
There are no right or wrong answers.

	Like Me	*Unlike Me*
1. I spend a lot of time daydreaming.		
2. I'm pretty sure of myself.		
3. I often wish I were someone else.		
4. I'm easy to like.		
5. My parents and I have a lot of fun together.		
6. I never worry about anything.		
7. I find it very hard to talk in front of the class.		
8. I wish I were younger.		
9 There are lots of things about myself I'd change if I could.		
10. I can make up my mind without too much trouble.		
11. I'm a lot of fun to be with.		
12. I get upset easily at home.		
13. I always do the right thing.		
14. I'm proud of my school work.		
15. Someone always has to tell me what to do.		
16. It takes me a long time to get used to anything new.		
17. I'm often sorry for the things I do.		
18. I'm popular with kids my own age.		
19. My parents usually consider my feelings.		
20. I'm never unhappy.		
21. I'm doing the best work that I can.		
22. I give in very easily.		
23. I can usually take care of myself.		
24. I'm pretty happy.		
25. I would rather play with children younger than me.		

	Like Me	Unlike Me
26. My parents expect too much of me.		
27. I like everyone I know.		
28. I like to be called on in class.		
29. I understand myself.		
30. It's pretty tough to be me.		
31. Things are all mixed up in my life.		
32. Kids usually follow my ideas.		
33. No one pays much attention to me at home.		
34. I never get scolded.		
35. I'm not doing as well in school as I'd like to		
36. I can make up my mind and stick to it.		
37. I really don't like being a boy—girl.		
38. I have a low opinion of myself.		
39. I don't like to be with other people.		
40. There are many times when I'd like to leave home.		
41. I'm never shy.		
42. I often feel upset in school.		
43. I often feel ashamed of myself		
44. I'm not as nice looking as most people.		
45. If I have something to say, I usually say it.		
46. Kids pick on me very often.		
47. My parents understand me.		
48. I always tell the truth.		
49. My teacher makes me feel I'm not good enough.		
50. I don't care what happens to me.		
51. I'm a failure.		
52. I get upset easily when I'm scolded.		
53. Most people are better liked than I am.		
54. I usually feel as if my parents are pushing me.		
55. I always know what to say to people.		
56. I often get discouraged in school.		
57. Things usually don't bother me.		
58. I can't be depended on.		



Author Bergesen Freda Jeannette
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