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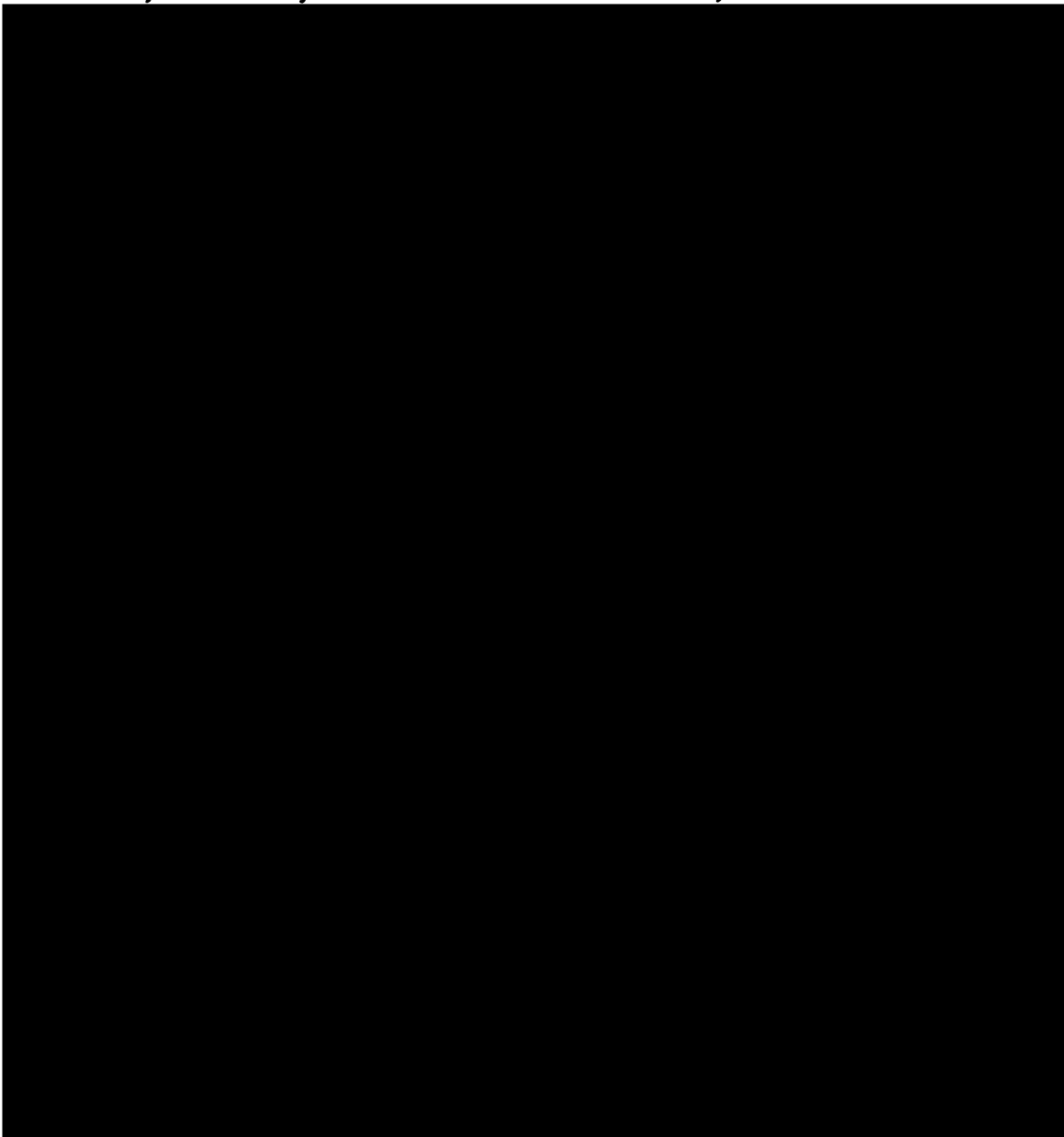Hunn, Susan Elaine

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HORSEBACK RIDING AS A PSYCHOTHERAPEUTIC TOOL

by

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INTRODUCTION

There is increasing use of animals as therapeutic agents. Gold fish, birds, cats, and dogs are generally easy to care for and may promote social activities, fill affectional needs, and provide a source for experiencing control or sharing. Theoretical and some practical evidence exists to support this use but research to understand the human-animal interrelationship is limited. The purpose of this research was to investigate the effects of horses and horseback riding on an individual's body image and self esteem. Validation and understanding of significant effects could aid in the development of horseback riding as a recognized therapeutic tool.

Horseback riding has been developing as a therapeutic tool for the physically handicapped since World War II. Therapeutic riding centers exist throughout Europe, particularly in England. Limited numbers of facilities exist in the United States and are located primarily in the eastern section of the country. Jochen Moll (Berlin) reports the use of horses and riding with psychiatric patients to increase their physical skills and to use the horse as a means of contacting humans. Little documented research exists to analyze the value of horseback riding. The North American Riding for the Handicapped Association was established in 1969 with an aim of promoting responsible research on the therapeutic value of horseback riding.

A participant observation and interview study was conducted prior

to the reported research to gain a preliminary understanding of riding

students' behaviors and statements and to put them in a theoretical

context. Many students reported an increasing sense of mastery and

physical control. They acknowledged expanded social relationships and

found new goals and activities to pursue with their new partner - the

horse. This exploratory study provided a basis and rationale for

research which would hopefully indicate these perceptions statistically.

The final results of the study to be reported do indicate statistical

significance in several areas of observations. There are limitations

to this first attempt at research which may account for the lack of

significance in other areas of observations.

CHAPTER ONE

REVIEW OF LITERATURE

Recognition of the importance and use of animals in psychiatric

therapy is becoming more widespread. Pets have been used to aid lonely

people in overcoming the feelings of being useless and unloved (Levinson,

1972). In psychotherapy with children, Levinson reports that pets

stimulate social activities, help overcome feelings of alienation,

and, when perceived as experiencing and sharing, may be a medium for

transferring a relationship onto humans (Levinson, 1964). A pet may

be used to solve problems of sharing or separation and free the thera-

pist from handling only affectional needs (Levinson, 1964). Moll

reports horseback riding as a therapeutic tool with psychiatric patients

to increase their control and coordination and to use contact with the

animal as an approach to contacting humans. The patient's position

on the horse is found to stimulate self confidence (Moll, 1972). The

therapeutic use of horseback riding receives little mention in the

literature despite theoretical and some practical evidence that this

animal could be one of the most useful for providing therapy.

The theoretical evidence supporting the use of horses reflects

a spectrum of views. Gerald Caplan outlines a framework utilizing

the notion of supplies required for each stage of one's growth and development. These are physical (food, shelter, sensory stimulation, exercise), psychosocial (satisfaction of interpersonal needs through relationships with family, peers, and others), and sociocultural (exchange of love and affection, assertion or submission to authority, joint participation in an activity) (Caplan, 1964). One's involvement with horses and riders can meet needs in these three areas.

As viewed from the perspective of ego-psychology, the horse can aid in maintaining or developing the autonomy of ego functions. Horse-back riding can serve as a means for releasing drive tensions while maintaining involvement in a reality based relationship. Motor activity in general has an impact on body-ego formation. The stimulation it provides aids in delimitation between the self-body and outer world and provides a channel for redirecting aggression away from the self (Hoffer, 1950).

The intrapsychic theories of psychiatry have acknowledged the symbolic importance of animals. Burlingham notes that animals play symbolic roles in fantasy and dreams and are often "friends" to children experiencing Oedipal frustrations (Burlingham, 1945). Freud's report of the case of Hans (Freud, 1909) describes the symbolic importance of the horse as it appears throughout religious references,

mythology, and other literature as a symbol of courage, generosity,

strength, and creative life (Howey, 1958). Horseback riding thus

provides an unusually close association with an archetypal symbol

and could fill a dual role of providing motor activity while utilizing

a symbolic animal.

Besides its applicability to several theoretical viewpoints,

English-style riding is based on principles utilized by Newell Kephart

in his work with perceptual-motor aspects of learning disabilities.

His program of exercises requires location of oneself in space through

skills of balance, locomotion, contact, and receipt and propulsion.

Temporal location occurs through development of synchrony, rhythm,

and sequencing of events. Development and improvement in these areas

have been shown to improve the ability to understand symbolic material

and to think conceptually (Kephart, 1960, Morrison and Pothier, 1972).

Riding utilizes and develops these same abilities.

Although strong theoretical evidence supporting the use of pets

in therapy exists and although some practical usage supports their

value, reports of systematic research are not found in the literature.

In order to fully understand and utilize the nature of this potentially

valuable therapeutic tool for both normal and handicapped persons, syste-

matic examination of the process is required.

PROBLEM STATEMENT

As the first step in exploring the therapeutic potential of horseback riding, the following research problem is proposed:

Will increased skill in the care, handling, and riding of a horse affect an individual's self concept?

HYPOTHESES

Six hypotheses are as follows:

1. Increased skill in the care, handling and riding of a horse will result in increased self esteem scores.

2. Increased skill in the care, handling, and riding of a horse will result in improved body image scores.

3. Beginning students will have lower pre test body image and self esteem scores than students who have participated in a series of lessons.

4. Beginning students will have lower pre test body image and self esteem scores than non-students who care for their horses on a private basis.

5. Non-students who care for their own horses and those who have taken a series of lessons will have similar body image and self esteem scores.

6. Body image and self esteem scores of beginning students will improve over a series of ten lessons and post test body image and self esteem scores will be similar to non-student scores and other's who have taken a series of lessons.

The dependent variable, increased skill in the care, handling, and riding of a horse, must reflect each individual's physical agility, ability to learn, past experience with horses and other animals, and his sense of fear, control, or confidence. No two individuals learn at the same rate and the living qualities of the horse increase the factors affecting one's ability to learn. For example, new physical skills are required which involve timing, rhythm, balance, and locomotion. Some risk is associated with this learning process since the horse moves and responds and has some behavior of "free will". Thus the rider must gain control and mastery of his own body while gaining control of the horse.

Lessons are taught in progressive steps. One student's skill may improve considerably over a period of ten lessons while another's skill improves more slowly. Despite the difference in rate of improvement, each student's skill increases from his own baseline.

The progressive steps in lessons include the following skill which reflect principles found in Newell Kephart's exercise program.

Initially the student learns the correct posture on the horse. Balance

is established and maintained by squeezing with the knees and

keeping the heels down. The body weight should be centered in the

heels. The reins are held in one hand and the rider raises the other

hand overhead. The arm is raised and lowered touching first the

knee and then the same side toe. This exercise stimulates later-

ality, directionality, body awareness, and balance. Next, cross-

over exercises are performed by touching the knee and toe of the

opposite side. All movements are performed rhythmically. After

balance is established while sitting in the saddle, the student is

asked to stand in the saddle utilizing the squeezing of the knees

and position of the heels to maintain balance. A series of stand-

ing-sitting exercises stimulates balance, rhythm, directionality,

and bilateral control. These movements are performed while the

horse is walking which gives the added dimensions of propulsion

and dynamic relationship to gravity and balance. Next in the series,

the horse is made to trot and the rider moves up and down in rhythm

with the horse's movements. This action is known as posting.

Posting requires balance, rhythm, muscle control, and directionality

while the rider experiences propulsion and contact. As the rider

advances in skill, greater synchrony of movements and sequences of

events can be practiced. For example, initially the horse is attached

to a long line and moves in a small circle around the instructor.

As the rider advances, the line is removed and he directs the horse

in circles or figure eights. Further advancement from the trot

to the canter and to standing in the saddle while the horse jumps

low obstacles requires new rhythmic movements, balance, direction-

ality, muscular control, and perceptual skill.

CHAPTER TWO

METHOD

DESIGN AND TESTING PROCEDURE

The methods used to test the hypotheses were two paper and pencil tests: the Tennessee Self Concept Scale (Fitts, 1965) and the Body Attitude Scale (Kurtz, 1968). The Adjective Check List (Gough, 1965) was also used to determine general personality characteristics. Validity and reliability of these instruments are reported in the literature (Fitts, 1965; Kurtz, 1968; and Gough, 1965). The Tennessee Self Concept Scale contains a Total Positive score which measures the overall level of self esteem. The Total Positive Score is a composit of eight subgroups which provide scores for Identity, Self Satisfaction, Behavior, Physical Self, Moral-Ethical Self, Personal Self, Family Self, and Social Self. The Body Attitude Scale is composed of three subscales: evaluation, potency, and activity. This scale was developed by a semantic differential procedure.

The tests, as measurements, were used in accordance with the Recurrent Institutional Cycle Design, a design appropriate to situations in which an anstitutional process is offered on a cyclical schedule (Stanley, J. and Campbell, D., 1963). Riding lessons at the stable (an institutional setting) are given in a

series of ten lessons on a weekly or twice weekly basis. Three

groups of subjects were tested: Group New, Group Old, and Group

Own. Group New participated in a pre and post test survey. The

other two groups participated in one testing. This design allows

for comparison of scores between those more experienced and those

less experienced with horses. This cross sectional comparison

provides for discovery of differences which could not be explained

by the effects of history or a test-retest effect. The longitudinal

comparison inherent in the design rules out the rival hypotheses

that the differences in scores are simply due to inherent differences

in participants. The comparison with the third group of non-lesson

riders and owners controls for changes due to interpersonal atten-

tion from participation in lessons.

The tests were administered in the office of the equestrian

center and required approximately forty-five minutes. Tests were

administered at the subjects' convenience. Testing was done indi-

vidually or in small groups except in the case of the scouts (mem-

bers of group New) who were tested as a troup. This "troup" admin-

istration resulted in the subjects engaging in some comparison of

answers and joking. Difficulties in controlling the testing atmos-

phere may have influenced pre test results. Post tests for group

New were administered after nine lessons. Completion of the

normal ten lesson series was not possible in this case due to

vacation interruptions and time limitations.

SAMPLE

The subject group was composed of three subject samples.

Group New was new students learning to ride for the first time.

Group Old was advanced in their level of riding skill. Group

Own owns and cares for their own horses but did not participate in

lessons. Further criteria are as follows:

1. male or female

2. Caucasian with English as a first language

3. twelve years of age and over (this is required by limitations

of the Tennessee Self Concept Scale)

4. no apparent physical disabilities that would require unusual or

atypical attention during lessons

5. the ability to afford lessons or boarding fees

These criteria reflect the general population at the riding center.

All subjects were volunteers and were asked to participate when they

signed up for lessons or when they were present at the stable for

work with their own horse.

Sample group New consisted of twenty students. This size was

decreased to seventeen subjects through attrition. That is, seven-

teen students completed nine consecutive lessons and took the post

test. The other three students missed the final lesson and post test-

ing could not be done. Group New then consisted of sixteen female sub-

jects and one male with an average age of 13.1 years. Thirteen of these

subjects belonged to a girl scout troup and participated in lessons as a

troup. Group Old consisted of sixteen females and one male with an

average age of 22.0 years. Group Own contained thirteen females and

four males with an average age of 24.4 years.

As measured by the Adjective Check List, all three groups of sub-

jects can be described as conscientious, dependable, stable, confident,

and independent (Gough, 1965, page 8). (see Table I, page 16)

Experimental research in the behavioral and social sciences, par-

ticularly in the area of educational research, is notoriously difficult

due to the complexity and interrelations of the subject and his environ-

ment. In this research, the choice of design (recurrent institutional

cycle design) attempted to control for the test-retest effect, inherent

differences in participants, and the "Hawthorne" effect. This design was

essential since random selection of subjects was not possible.

TABLE I

DESCRIPTION of THREE SAMPLE GROUPS

NEW, OLD, OWN

17 SUBJECTS EACH

	NEW	OLD	OWN
MEAN AGE	13.1	22.0	24.4
MALE:FEMALE RATIO	1:16	1:16	4:13
MEAN STANDARD SCORES ADJECTIVE CHECK LIST SELF CONTROL	43.88	45.82	43.41
MEAN STANDARD SCORES ADJECTIVE CHECK LIST SELF CONFIDENCE	49.47	48.94	51.58

CHAPTER THREE

ANALYSIS OF DATA

In this chapter a more detailed analysis of the Total Positive

and Total Body Image measures will first be described. This

includes a description of the subscale scores and their correlation

with the total score, significant correlations between the two

measurement tools, and correlations attributable to age and sex.

Next is a description of the method of data analysis. Thirdly, the

results of each hypothesis will be presented.

The Total Positive Score of the Tennessee Self Concept Scale

is composed of eight measurements. These eight subscores correlated

with the Total Positive score at the .01 level of significance.

The Identity measure describes what the person is as he sees him-

self. Self-Satisfaction describes how he feels about the self he

perceives. The Behavior score measures the individual's perception

of his own behavior. The Physical Self score measures the manner

in which the individual presents his view of his body, his state

of health, appearance, skill, and sexuality. The Moral-Ethical

score describes one's sense of moral worth, relationship to God,

and feeling of being a good or bad person. The Personal Self score

represents one's feeling of worth and adequacy as a person. Family

Self reflects one's feelings of worth and adequacy as a family

member. Social Self reflects the self as perceived in relation

to others. Because all eight sections correlated with the Total

Positive score at a significant level (see Table II, page 19), only

the Total Positive score will be reported as a measurement of

self esteem (Fitts, 1965, pages 2-3).

The Body Attitude Scale is composed of thirty sections

describing texture, color, and shape of various body parts. Each

section is scored by the three subscales. The evaluative scale

measures value and the degree of goodness-badness one feels

about the body part. The potency section measures strength-weakness.

The activity scale measures the active-passive qualities of the

body and body build. This semantic differential method of measur-

ing concepts allows for individual differences in meaning while

assuming there is also a common meaning to concepts among people.

These three subscale scores correlated with the Total Body Image

score at a significant level (see Table III, page 20). Therefore,

the Total Body Image score will be used to report body image.

Further support for the validity of the Body Attitude Scale

is shown by the significant correlation of the Total Body Image

score of the Body Attitude Scale and the Physical Self subscale

of the Tennessee Self Concept Scale. Both scales attempt to measure

TABLE II

INTERCORRELATIONS OF EIGHT SUBSECTIONS

of the TENNESSEE SELF CONCEPT SCALE

with the TOTAL POSITIVE SCORE

of the TENNESSEE SELF CONCEPT SCALE

GROUPS PRE-NEW, OLD, and OWN   n=51

GROUPS POST-NEW, OLD, and OWN   n=51

SUBSCALE	CORRELATION with TOTAL POSITIVE	
	PRE	POST
IDENTITY ------------------------------------	.896	.909
SELF-SATISFACTION ------------------------	.903	.895
BEHAVIOR ------------------------------------	.953	.945
PHYSICAL SELF ----------------------------	.845	.841
MORAL-ETHICAL SELF ---------------------	.819	.890
PERSONAL SELF ------------------------------	.918	.907
FAMILY SELF ------------------------------	.798	.790
SOCIAL SELF ------------------------------	.730	.705

$p \leq .01$

TABLE III

INTERCORRELATIONS OF THREE SUBSECTIONS

of the BODY ATTITUDE SCALE

with the TOTAL BODY IMAGE SCORE

of the BODY ATTITUDE SCALE

GROUPS PRE-NEW, OLD, and OWN   n=51
GROUPS POST-NEW, OLD, and OWN   n=51

SUBSECTION		CORRELATION with TOTAL BODY IMAGE SCORE	
		PRE	POST
EVALUATION	------------------------	.922*	.927*
POTENCY	------------------------	.377*	.314**
ACTIVITY	------------------------	.892*	.906*

*p $\leq$ .01

**p $\leq$ .05

view of the body, appearance, and quality of health, skills,

and sexuality. Correlation occurs at the .01 level of significance

(see Table IV, page 22).

Table V, page 23, indicates the significant correlations

between the Total Body Image score and the Total Positive score.

Correlations for the two potential intervening variables,

age and sex, were computed using two sets of scores, Pre-New, Old,

and Own and Post-New, Old, and Own. No correlation was found in

either set of data between age and self esteem or sex and self

esteem as measured by the Total Positive score of the Tennessee

Self Concept Scale. On the Body Attitude Scale no correlation

was found between age and the Total Body Image score, sex

and the Total Body Image score, or sex and the subscales for

evaluation and activity (see Table VI, page 24). However, in

both sets of data, Pre and Post in combination with Old and Own,

sex and the subscale potency did correlate. The scores for the

two Body Attitude subscales, evaluation and activity, correlated

with one another but potency correlated with neither (see Table VII,

page 25).

The Total Body Image scores and the Total Positive scores

were tested for differences among groups using analysis of

variance. A summary of analysis of variance data is reported in

TABLE IV

INTERCORRELATION of the TOTAL

BODY IMAGE SCORE of the

BODY ATTITUDE SCALE

and the PHYSICAL-SELF SCORE

of the TENNESSEE SELF CONCEPT SCALE

n = 51

	TOTAL BODY IMAGE PRE-NEW, OLD, OWN	TOTAL BODY IMAGE POST-NEW, OLD, OWN
PHYSICAL SELF SCORE	.637	.587

$p \leq .01$

TABLE V

INTERCORRELATION of the TOTAL BODY IMAGE SCORE

of the BODY ATTITUDE SCALE

with the TOTAL POSITIVE SCORE

of the TENNESSEE SELF CONCEPT SCALE

n = 51

	TOTAL POSITIVE PRE-NEW, OLD, OWN	TOTAL POSITIVE POST-NEW, OLD, OWN
TOTAL BODY IMAGE	.600	.454

$p \leq .01$

TABLE VI

INTERCORRELATION OF THE SEX AND AGE VARIABLES

with the

BODY ATTITUDE SCALE SCORES

and TENNESSEE SELF CONCEPT SCALE SCORES

GROUPS PRE-NEW, OLD, OWN, and POST-NEW, OLD, OWN

n = 51

	PRE-NEW, OLD, OWN		POST-NEW, OLD, OWN	
	SEX	AGE	SEX	AGE
BODY ATTITUDE				
EVALUATION	.042	.211	.053	.040
POTENCY	.450*	.117	.399*	.164
ACTIVITY	.159	.217	.064	.047
TOTAL BODY IMAGE	.232	.176	.107	.016
TENNESSEE SELF CONCEPT				
TOTAL POSITIVE	.176	.234	.109	.261

*p $\leq$ .01

TABLE VII

INTERCORRELATIONS of THREE SUBSCALES

of the BODY ATTITUDE SCALE

GROUPS PRE-NEW, OLD, OWN and POST-NEW,

OLD, OWN

n = 51

GROUPS PRE-NEW, OLD, OWN

	EVALUATION	POTENCY
POTENCY	.096	
ACTIVITY	.801*	.086

GROUPS POST-NEW, OLD, OWN

	EVALUATION	POTENCY
POTENCY	.063	
ACTIVITY	.811*	.099

*p ≤ .01

Tables VIII - XIII. Group means and standard deviations are reported

in Table ; X.   Differences between means were tested for signifi-

cance using the Scheffe post-hoc test.

To test hypothesis one, which stated that "increased skill

in the care, handling and riding of a horse will result in increased

self esteem scores", the Tennessee Self Concept Scale Total Positive

score was used in analysis. The hypothesis was tested comparing

the Pre-New, Old, and Own groups but it was not supported. Although

group means increased from New to Old to Own, the differences were

significant only at the .10 or trend level (F = 2.69, df 2,48).

(see Table VIII, page 27).

The Total Body Image Score of the Body Attitude Scale was

used to test hypothesis two which stated that "increased skill

in the care, handling and riding of a horse will result in increased

body image scores". The hypothesis was tested comparing the

Pre-New, Old, and Own groups. Although the analysis of variance

showed a main effect for groups (F = 4.73 df 2, 48, p $\leq$ .05) (see

Table IX, page 28) Scheffe's post-hoc comparison of cell means

found no difference between groups. A comparison of the variances

(Hays, page 351) of the three groups revealed a greater dispersion

of scores in the New group and a significant difference between

variances for comparisons Pre-New - Old and Post-New - Own.

TABLE VIII

ANALYSIS of VARIANCE

for the

TOTAL POSITIVE SCORE

of the

TENNESSEE SELF CONCEPT SCALE

GROUPS PRE-NEW, OLD, and OWN

SOURCE OF VARIATION	SUMS of SQUARES	df	MEAN SQUARE	F
BETWEEN GROUPS	7594.01	2	3797.00	2.69
WITHIN GROUPS	67620.81	48	1408.76	
TOTAL	75214.82	51		

TABLE IX

ANALYSIS OF VARIANCE

for the

TOTAL BODY IMAGE SCORE

of the

BODY ATTITUDE SCALE

GROUPS PRE-NEW, OLD, OWN

SOURCE of VARIATION	SUMS of SQUARES	df	MEAN SQUARE	F
BETWEEN GROUPS	90457.37	2	45228.68	4.72*
WITHIN GROUPS	458358.37	48	9549.13	
TOTAL	548815.74	51		

*p ≤ .05

(see Table X, page 30 for cell means and standard deviations)

Hypothesis three, which stated that "beginning students will have lower pre test scores than students who participated in a series of lessons", was not supported by the Total Body Image score or the Total Positive score. (see Table X, page 30)

Hypothesis four stated that "beginning students will have lower pre test scores than non students who care for their own horses on a private basis". This hypothesis was not supported by comparison of cell means of the Total Body Image score. A significant difference at the .10 level was found between pre test scores of New students and scores of non students (group Own) for the Total Positive score on self esteem (see Table VIII, page 27 for analysis of variance and Table X page 30 for cell means).

Hypothesis five stated that "non students who care for their own horses and those who have taken a series of lessons will have similar scores". This hypothesis of no difference was supported by comparing cell means using both the Total Positive score and the Total Body Image score. (see Table X, page 30)

Hypothesis six has two parts. Part one states that "scores of beginning students will improve over a series of ten lessons". This segment was supported by the increase in the Total Body Image score for group New, post test (pre-post $F = 10.37$, df 1,16, $p \leq .01$).

TABLE X

GROUP MEANS and STANDARD DEVIATIONS

TOTAL POSITIVE SCORE of the TENNESSEE SELF CONCEPT SCALE

TOTAL BODY IMAGE SCORE of the BODY ATTITUDE SCALE

PRE-NEW, POST-NEW, OLD, OWN

n = 51

TOTAL POSITIVE SCORE

	PRE - NEW	POST-NEW	OLD	OWN
MEAN	307.23	303.17	321.58	337.11
STANDARD DEVIATIONS	40.47	37.66	30.65	40.59

TOTAL BODY IMAGE SCORE

	PRE-NEW	POST-NEW	OLD	OWN
MEAN	1135.64	1226.41	1132.35	1223.29
STANDARD DEVIATIONS	119.18	146.54	73.09	95.39

(see Table XI, page 32) The Tennessee Self Concept score for the

Total Positive measure of self esteem showed no change on pre and

post scores for group New. (see Table XII, page 33)

Part two of this hypothesis stated that "post test scores

for group New will be similar to non-students and others who

have taken a series of lessons". This section of the hypothesis

was supported by the Total Body Image score for groups New-Post

test, Old, and Own. Again the analysis of variance showed a

main effect for groups (F = 4.05, df 2,48, p $\leq$ .05) (see Table XIII,

page 34). However, Scheffe's post-hoc comparison of cell means

found no difference between groups. The comparison of variances

(see Table X, page 30) of the three groups again revealed a greater

dispersion of scores in the New group and a significant difference

between variances for compariosns New-Old and New-Own (Hays, page 351).

As previously stated, no significant changes occurred on the pre-post

tests for self esteem as measured by the Total Positive score of the

Tennessee Self Concept Scale. Since the Total Positive score post

test did not increase and approach the scores of Old and Own, the

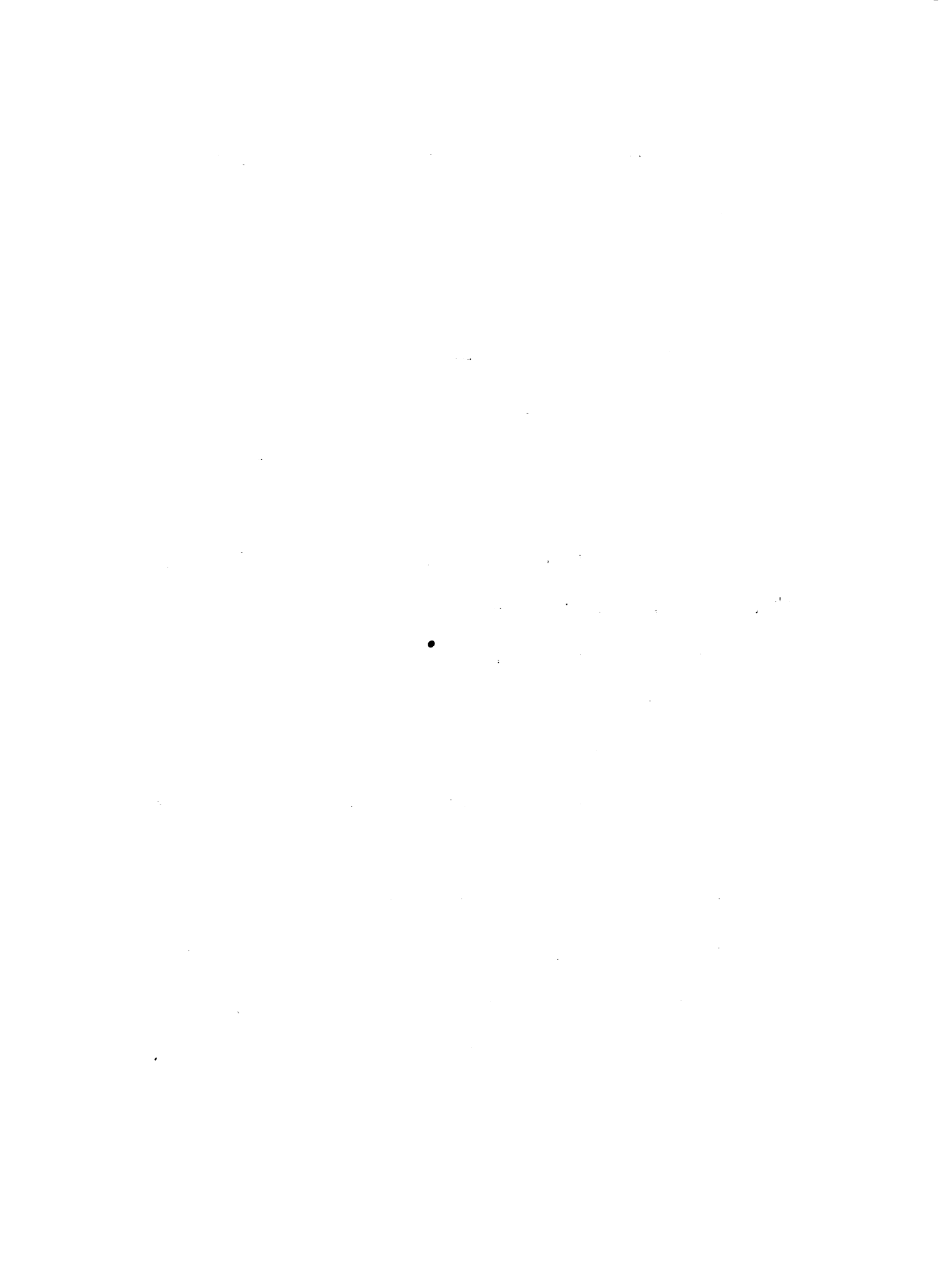self esteem measure did not support the hypothesis.

TABLE XI

ANALYSIS of VARIANCE
(REPEATED MEASURES)

for the

TOTAL BODY IMAGE SCORE

of the

BODY ATTITUDE SCALE

GROUPS PRE-NEW and POST-NEW

SOURCE of VARIATION	SUMS of SQUARES	df	MEAN SQUARE	F
MEAN	.474242	1	.474242	
GROUP	70024.94	1	70024.94	10.37 *
SUBJECT	462872.2	16	28929.51	
GS	108012.9	16	6750.805	

*p ≤ .01

TABLE XII

ANALYSIS OF VARIANCE
(REPEATED MEASURES)

for the

TOTAL POSITIVE SCORE

of the

TENNESSEE SELF CONCEPT SCALE

GROUPS PRE-NEW and POST-NEW

SOURCE of VARIATION	SUMS of SQUARES	df	MEAN SQUARE	F
MEAN	3167121.	1	3167121.	
GROUP	140.02	1	140.02	0.90
SUBJECT	46431.94	16	2901.99	
GS	2481.51	16	155.09	

TABLE XIII

ANALYSIS of VARIANCE

for the

TOTAL BODY IMAGE SCORE

of the

BODY ATTITUDE SCALE

GROUPS POST-NEW, OLD, OWN

SOURCE of VARIATION	SUMS of SQUARES	df	MEAN SQUARE	F
BETWEEN GROUPS	97053.62	2	48526.81	4.05*
WITHIN GROUPS	574680.62	48	11972.51	
TOTAL	67173.24	51		

*p ≤ .01

CHAPTER FOUR

DISCUSSION

Authors of the Tennessee Self Concept Scale discuss self esteem

changes under particular conditions. Their conclusion is that there is

considerable evidence that people's concepts of self do change as a

result of significant experiences (Fitts, 1965, page 28). However,

findings from limited numbers of studies on changes indicate that one

may begin to feel and act differently even without changes in the self

concept score. This may explain the improved Body Image Score for

group New post test although the self esteem score for this group did

not change. Furthermore, no short term changes i.e. less than six

months, have been reported. This lack of short term change may account

for the lack of change between the pre and post test of group New.

Since group Old students had been taking riding lessons for various lengths

of time (many less than six months) sufficient time may not have elapsed

for students to show significantly higher scores than the group New students.

The influence of the time factor and perhaps other variables such as

ownership or close association with the horse is suggested by the trend

for scores to increase from New to Old to Own, although these differences

were only significant at the .10 level with group Own significantly higher

than group New. The lack of significance between groups Old and Own may

be explained by the developing relationship with the horse and the change

over time that group Old is in the process of experiencing.

The absence of a significant increase in the self esteem score in the

New group post test may also be a result similar to that reported by Gividen

who studied the effects of stress and failure on self concepts of paratroop

trainees (Fitts, 1965, page 28). Trainees were subjected to physical dangers

and attitude training emphasizing failure as a disgrace. Significant

decreases in Self Esteem scores were noted in both passing and failing

groups. This initial decrease in self concept for paratroop trainees and

the lack of improvement for riding students may represent less certainty

in self concept as a result of new challenges and threats. In the

study being reported, the self concept scores increase with increased

experience as shown by the group mean increase from New to Old to Own.

This may indicate some greater certainty in self as challenging skills

are learned.

The author of the Body Attitude Scale reports that women tend to

score higher on the evaluative portions of the scale while males score

higher on the potency and activity scales. Even with only six males in

the total subject population of this study, potency and sex correlated at

the.01 level of significance. This finding lends further support to

Kurtz' findings. The activity-sex correlation and the evaluation-sex

correlation was not apparent, however. Instead, activity and evaluation

correlated indicating that for this group activity is associated with

value. Kurtz' expectation that cultural restriction limit females'

physical activities is not supported.

Further support of Kurtz' earlier findings comes from the significant correlation of the Total Body Image scores and the Total Positive scores. Kurtz' study, "Body Attitude and Self Esteem" (1971) indicated a relationship between self esteem (measured by the Ziller Self Esteem Scale) and body attitude measured by the Body Attitude Scale. The Tennessee Self Concept Scale provides another tool,. dissimilar in its methodology from the Body Attitude Scale, yet with significantly correlated results.

The significant increase in the Total Body Image score from the pre to the post test indicates the ability to improve body image perception within a limited period of time (nine weeks, in this study). The size and living qualities of the horse may be an important factor in perceiving one's own body. The animal must be controlled and mastered for both pleasure and safety, and control of the horse depends on control on one's own body. The rider's abilities become more valued as comparisons are made between present and earlier skills or as skills approach those of more advanced riders. Involvement with the care, grooming, and exercise of the horse provides an outwardly directed source of concern which may reduce the immediate concern with one's own fears and uncertainties. The needs and behaviors of the large and living animal make an important difference between riding and learning other sports.
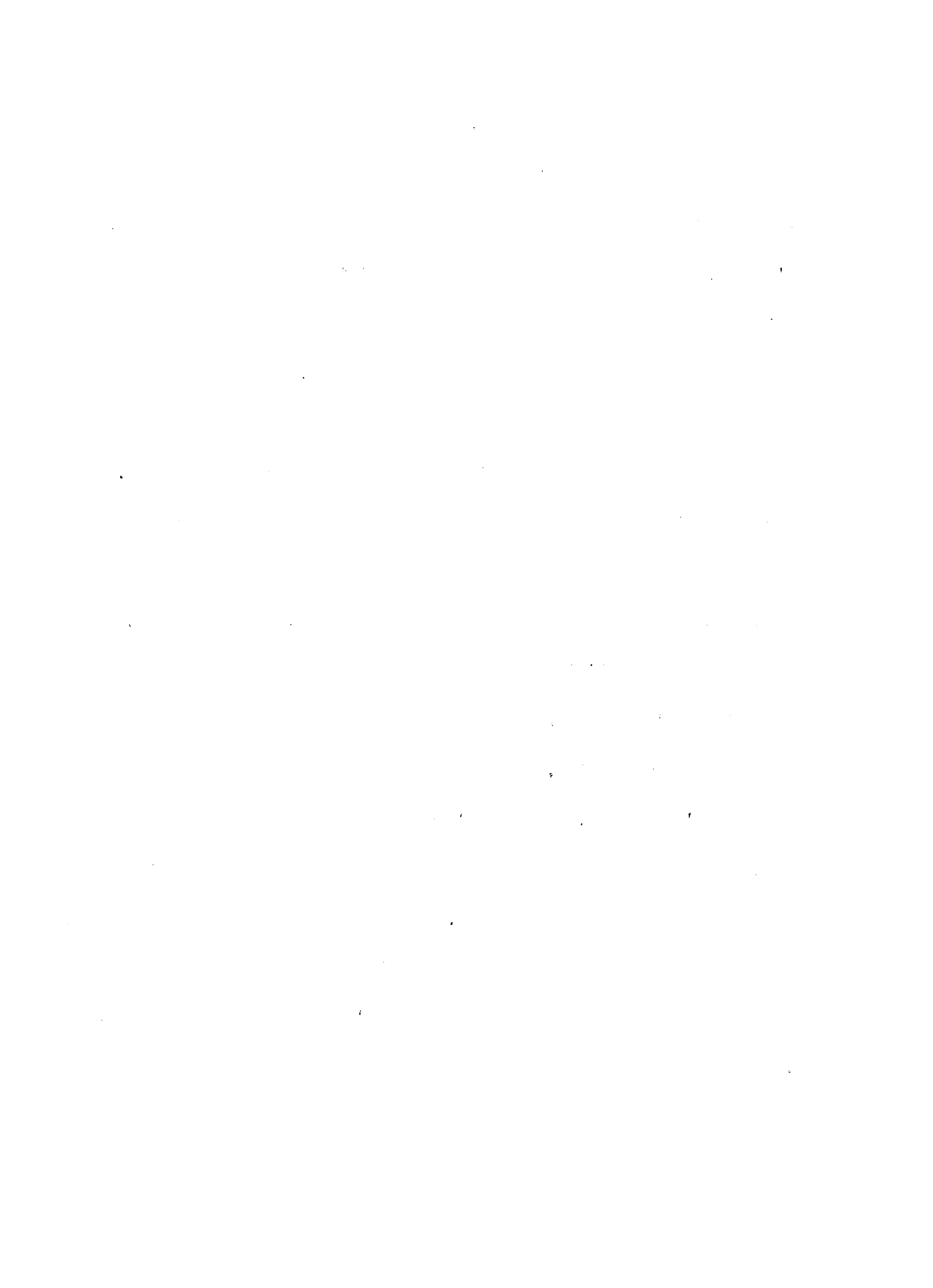
CONCLUSION

This project utilized three groups of seventeen subjects each to test the effects of care, handling, and riding of a horse on self esteem and body image. A recurrent institutional cycle design used a pre and post test for new students (group New) and a single test for old (group Old) and non students (group Own). The Total Positive score of the Tennessee Self Concept Scale was used to indicate the overall level of self esteem. The Body Attitude Scale was used to measure body image and the score was reported as the Total Body Image Score. The Adjective Check List was used to provide personality description indices. Data were analyzed using analysis of variance, the Scheffe post-hoc test, and correlational measures.

The research results are limited by sample size. Sex proved to be a significant correlate in the potency section of the Body Image test. Although age did not correlate significantly with self concept, it might be expected to have some influence. The sample is not truly random since subjects selected the riding facility. Although the design attempted to control for this lack of randomness, results cannot be generalized beyond the riding facility population. The principle finding was an increase in Total Body Image scores for group New following a series of nine riding lessons.

IMPLICATIONS AND RECOMMENDATIONS

The value and therapeutic uses of birds, fish, dogs, cats, and horses are increasing and becoming recognized. This project offers some evidence to provide a basis for larger study. Further study might include research with mentally and physically handicapped individuals. An expanded project could control for age and sex variables and could utilize other control groups i.e. subjects who learn to swim, subjects who work with other types of pets, or subjects from other riding stables. It is hoped and projected that riding could develop into a recognized therapeutic tool used individually or in conjunction with other therapeutic approaches to further improve the subject's body and self concept.

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