Horse Commission
August 28th

S31 - Behavioral evaluation of the working horse

THERAPEUTIC RIDING AND AUTISM: THE ROLE OF HORSE UMAN RELATIONSHIP IN A PILOT RESEARCH PROJECT

FIRST STEPS AND CONSIDERATIONS

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AUTISM SPECTRUM DISORDER

VERY SEVERE PSYCHIATRIC ILLNESS

Aetiology → Multifactorial, not completely known

Therapy → No specific pharmacological therapy

Rehabilitation → Very important since the first onset
AUTISM SPECTRUM DISORDER (ASD)

COMMUNICATION CAPABILITIES DEFICIENCY

SOCIAL INTEGRATION AND RELATIONSHIPS PROBLEMS

UPSET BEHAVIORAL PATTERNS

ANOMALOUS REACTIONS TO SENSORIAL EXPERIENCES
AUTISM SPECTRUM DISORDER

USA 1/88

ITALY - 550,000
EUROPE - 5,000,000

INTENSIVE TREATMENTS
REHABILITATION IN SCHOOL AND PRE-SCHOOL AGE
ASD
SEVERE COMPROMISSN OF EXECUTORY FUNCTIONS
THE WHOLE OF THE MENTAL PROCESSES

EXECUTORY FUNCTION

DEPENDING ON THE CONTEXT WHERE THE SUBJECT IS LIVING

LET HIM HAVING A SERIES OF A MENTAL ACTIVITIES
ANIMALS ASSISTED INTERVENTIONS

IMPORTANT ROLE

ASD REHABILITATION

EXECUTORY FUNCTIONS
PSYCHIATRIC REHABILITATION

NEURODEVELOPMENT DISTURBANCES

POSSIBILITY TO INFLUENCE BOTH PHYSICAL AND PSYCHOLOGICAL ASPECTS

THERAPEUTIC RIDING
HORSE - HUMAN RELATIONSHIP

- Emotional, Cognitive and Motor aspects
- The horse stimulates communication behaviors and emotional expressions
- Game aspects
- Social integration
FIEROBECCO PROJECT

Pilot project about ASD and Therapeutic Riding

1. Partecipation and relation level
2. Motor abilities development
3. Executory functions
35 children with ASD
- 6-12 y. aged,
- two groups cross mode (sample/control)
- Clinical and test diagnoses of ASD
- No cognitive retard (I.Q.>70)
- No previous experiences in TR

20 horses
- different races
- 13-20 y. aged
- experience in TR
- working in the riding school with able bodied riders
- First Tests Submission
- Therapeutic Riding Sessions
  - Re-test at time $\frac{1}{2}$
  - Data elaboration
- Results /Discussion
- Re-test at final time (12 months) to verify the previous results
TRA STAFF
- 1 Health operator
- 2 TR Trainer

SUPERVISION STAFF
- Medicine Doctors, Psychologists
TESTS

- **ADOS** – to evaluate ASD
- **LEITER** – to verify cognitive level
- **ICF** – International Classification of disabilities
- **VINELAND** (study of adaptive behavior)
- **ABC MOVEMENT** (motor development)
METHOD

1 SESSION/WEEK
TOTAL 20-25 SESSIONS

DURATION ½ H x SESSION,
TOTAL 30-40H
METHOD

GROUND WORK PHASE

4 SESSIONS

- Pictures and cards about horse behavior and riding
  - Farriery activities observation
  - Harness and grooming
  - Handling and longe work
RIDING PHASE

- First 2 sessions with vaulting girth then saddled
  - Grooming and Harness
  - Saddling- Handling
- Riding (individual or group sessions, 2-3 children)
  - Physical exercises
  - Therapeutic games
  - Education
- Unsaddling and Breefing
A “therapeutic riding horse” doesn’t exist.

A domestic horse exists, with specific attitudes to be “used” in Therapeutic Riding.

Morphological and psycho-aptitude aspects.
DATA ANALYSIS

ELABORATION BY

- ITALIAN SUPERIOR HEALTH INSTITUTE (Ministry of Health)

- NATIONAL CENTER FOR ANIMAL ASSISTED INTERVENTION (Ministry of Health)

(still in progress, preliminary considerations will be showed)

FINAL DATA: DECEMBER 2013
THE HORSE  CENTRAL ROLE

AVAILABILITY TO INTERACT WITH OTHERS

HUMAN-HORSE RELATIONSHIP

DIFFERENT EMOTIONAL LEVELS

COMPETITIVE COMPARISON

COLLABORATING COMPARISON
HORSES CHOISE FOR ASD PATIENTS

- Ethological and Behavioral Evaluation
  - Biomechanic
  - Health and Wellness
  - Psychological Aptitude

FIEROBECCO PROJECT

ESSENTIAL

Wellness Monitoring
CHRONIC STRESS ➔ NEGATIVE EFFECTS ➔ PSYCHOLOGICAL AND PHYSICAL HEALTH ➔ THEREFORE ➔ ON RELATIONSHIP AND LEARNING CAPABILITIES
EVALUATION OF HORSE STRESS AND WELLNESS

WELLNESS LINEAR EVALUATION CARD
Gagliardi D., et al “HORSE WELFARE AND BEHAVIOR IN THERAPEUTIC RIDING”
63° EAAP MEETING 2012, Bratislava

WELLNESS INDICATORS

➢ NORMAL BEHAVIOR DIVERSITY AND STEADFAST
  ➢ BODY CONDITION
  ➢ COAT CONDITION
  ➢ POOR ILLNESSES INCIDENCE
  ➢ PERFORMANCE
➢ NO STEREOTYPES AND MISBEHAVIOR
➢ NOPHYSICAL AND PSYCHOLOGICAL PROBLEMS
DOES THE HORSE BEHAVIOR CHANGE?

IS THE CHANGE A SIGNAL OF NO-WELLFARE OR DISTRESS?

TESTS: TWICE A MONTH

TO POINT OUT EVERY POSSIBLE DIFFERENCES IN THE HORSES BASIC BEHAVIOR
WELLNESS LINEAR EVALUATION CARD

Gagliardi et al., Horse Welfare and Behavior,
63° EAAP Meeting 2012, Bratislava

Part 1

CARD N°____________________________
DATE________________

HORSE______________________
MICROCHIP__________________________________
AGE ___________      GENETIC TYPE  ________________________    SEX _________

STEREOTYPIES      N
   TYPE____________________________________________________________
   INTENSITY (1-5) _________________________________________________

APPEARANCE______________________________________________________

Gagliardi et al., Horse Welfare and Behavior,
63° EAAP Meeting 2012, Bratislava
Part 2

LINEAR BEHAVIOR EVALUATION
AT REST

1 - 2 - 3 - 4 - 5
Hypersensible – sensible - Unsensible

1 - 2 - 3 - 4 - 5
Intolerant – tolerant - hyporeactive

1 - 2 - 3 - 4 - 5
Provocative – cooperating - indifferent

1 - 2 - 3 - 4 - 5
Nervous – calm – apathetic
Part 3

LINEAR BEHAVIOR EVALUATION AT WORK

1 - 2 - 3 - 4 - 5
Hypersensible – sensible - Unsensible

1 - 2 - 3 - 4 - 5
Intolerant – tolerante – hyporeactive

1 - 2 - 3 - 4 - 5
Provocative – cooperating - indifferent

1 - 2 - 3 - 4 - 5
Nervous – calm – apathetic
Part 4

General clinic examination______________________________

Collateral examinations___________________________________

Harness__________________________________

Aids _______________________________________

Observations______________________________________
CONCLUSIONS

SOME PRELIMINARY CONSIDERATIONS

WELLNESS LINEAR EVALUATION CARD

- USEFUL AND SIMPLE METHOD TO MONITOR THE BASIC HORSE WELLNESS

- CAN BE USED BY TRAINERS AND EXPERT GROOMS, BUT HAS TO BE PERIODICALLY EVALUATED BY A VET
CONCLUSIONS

SOME PRELIMINARY CONSIDERATIONS

CHILDREN

➢ ALL THE PATIENTS INVOLVED IN THE STUDY HAD A SIGNIFICATIVE IMPROVEMENT IN THEIR EXECUTORY AND MOTOR FUNCTIONS (Vineland and ABC Movement scores improvement)

➢ NO DROP OUTS

➢ GOOD LEVEL OF INTERPERSONAL RELATIONSHIPS

➢ THE HORSE IS A GOOD “WAY” TO FACILITATE EMOTIONAL RELATIONSHIPS
**SOME PRELIMINARY CONSIDERATIONS**

**HORSES**

- All the horses involved in the project have maintained a standard level behavior.
- No particular stress signs have been found.
- It is necessary to improve the trainer culture about the importance of testing the horse behavior.
- This study, with all its limits, could be a starting point to discuss this kind of problems.
Thank you for your attention