



Mental Hygienic Aspects of Animal Assisted Education

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Abstract: *The Institution for Special Education at the Faculty of Pedagogic of the University of Kaposvár has been engaged in animal assisted activities for about three years. Our most recent research program was conducted for over two month in the Spring of 2014 with the involvement of 66 children - all kindergarten and elementary school age -, 11 special educators, physicians, psychologists, special educators, teachers, ethologists. The primary focus of our research was the development (and examination) of memory however observations with ethological and mental hygiene angles were a natural segment of our work. A significant part of the observations pointed to factors that both the children and their educators have experienced: the acceptance of each-other, an increased level of tolerance, an increased attention level towards the partner (human and animal). The teachers gave account of their respective observations in a small conference at the end of the last school year. Researches were offered a glimpse into the unique world of the relationship between a part of "living nature" - the pygmy rabbit in our case - and humans. During the 12 sessions of the training our colleagues have made observations that could serve as basis for a new system of paradigms of animal assisted pedagogics in the future. Our experience can also be re-considered with aspects of remedial pedagogics: we are convinced that animal assistance can become an accentuated part of the care of children and students with impairments. This is also implied by the fact that preparatory works for the continuation of this research at a kindergarten and at a school are already in progress.*

Keywords: education with animals, animal assisted education, children education, educational research, mental hygiene

A Pilot Research in the first half of 2014

In the triad of the child, the educator and the animal the “mental guard” phenomenon of *Balázs Kézdi* came into the spotlight (Kézdi, 2000).

The wholesome influences of the animal-human bond have long been known and thus animal assisted interventions have been implemented into pedagogical as well as psychological methods. Vast research conducted primarily with dogs verify that the presence of the animal increases the client’s comfort level, decreases the sensation of stress and fear, presents a strong motivation for the execution of tasks (Fine, 2010), enhances self-esteem, help establish self-discipline.

The present research has been pursued from March to June 2014 as a pilot to a series of research projects exploring the various aspects of the human-animal bond in an interdisciplinary manner. Educators conducting the animal assisted training have been selected from the class of 2013 postgraduate students of Companion Animal and Dog Therapeutic Development Expert course at the University of Kaposvár.¹

We decided to work with pygmy rabbits in our animal assisted training program because they are beloved by children, easy to domesticate and can be trained for certain rules (e.g.. toilet use). On the other hand, pygmy rabbits – while increasingly popular – are not as widespread as dogs or cats and their care can be made fit for kindergarten or school programs. Our animal assisted training program focused on memory because it is transparently measurable, easy to quantify and allows the use of a wide variety of exercises for fast processing both for the late kindergarten an early elementary school ages. Memory also facilitates mental operations such as following a conversation or reading texts.

We designed gamified tasks for developing acoustic and visual memory². We included the rabbit theme in these exercises. The order of the tasks, their respective instructions, the method of their evaluation as well as the required toolkit were set out in an instruction book and discussed and finalized with each educator after the trial training. The training program designed this way was then executed during animal assisted classes of the pilot research.

The Research Question

The foundation of our research was the concept that the presence of an animal, the direct contact with it supports the establishment of optimal mental state, the relief of discomfort and thus has a facilitating impact in learning situations.

According to our hypothesis children who can come into direct contact with the rabbit perform their tasks better and demonstrate a greater development by the end of the training program than the members of the

¹ Postgraduate students participating in the research: Eszter Fenyvesiné Rozgonyi, Anita Gyöngyösi, Ágnes Halász, Eszter Jánosi, Brigitta Kaczur, Józsefné Kedu, Tímea Koller, Mihály Kulcsár, Rita Marcali-Kis, Edit Mezeiné Martin, Péterné Szolnoki.

² The toolkit has been created by: Péterné Szolnoki and Brigitta Kaczur special educators and Tímea Koller conductive educator

two control groups, that is children participating in the training program without the presence of an animal and children at whose training an animal is present but – as it is locked in a cage – cannot establish direct contact with it.

Participants of the research

The research was introduced by an orientation for parents organized with the participation of teachers of the University of Kaposvár, experts of the Törökbálint Centre for Methodics and the Headmaster and educators of the Bóbita Kindergarten as well as a pediatrician and a veterinarian. Participation in the research was subject to approval by the parents and the exclusion of any negative health effects of contact with the animals e.g. allergies related to the animal. Additionally, children who have pygmy rabbit(s) at home or who are surrounded with various animals at home were also excluded from the research.

Sixty-six (66) children were involved in the research in Törökbálint and Érd (Central Hungary). Fifty-four (54) of them attended kindergarten and 12 were in early elementary school; 31 boys (23 in kindergarten and 8 in school) and 35 girls (31 in kindergarten and 4 in school). Their average age at the beginning of the research program was 6,4 years (youngest: 4 years 8 months, oldest: 7 years 7 months).

One child was excluded from the research for a persistent anxiety manifested during the training that was impossible to subdue in a period of three weeks and another child was involved as a substitute. Another participant's results were left unevaluated due to extended and repeated absence from the kindergarten training.

Method of the research

Children participated in the individual training sessions of the research program in three different ways: 22 participants had physical contact with the rabbit during their individual sessions. During the sessions: the rabbit moved freely under the control of the educator. The rabbit was present albeit in a cage during the sessions of 22 children of one of the control groups and the children were not allowed to touch it. The other control group participated in the development program in one-on-one sessions with the educator only without the presence of the rabbit.

The 11 educators each worked with 6 children two of whom belonged to each of the three groups. That means that each educator conducted a 12-session training program for each of the six children assigned to them: they worked with two in an animal assisted sessions with the active participation of the rabbit; two were trained in sessions with the presence of the animal but without its active participation; finally two children received the one-on-one training without the presence of the animal. With this setup we aimed to exclude bias based on the individual differences of the educators from the group results.

Prior to commencing the training program and after its completion we measured the performance of the children with two subtests of the WISC IV intelligence test specifically with the tests of Number Series and that of Coding. In the Number Series test one must repeat series of numbers with gradually increasing digit count in original and reversed order. This task measures short term auditive memory, attention, concentration and sequential abilities, thus the very areas which are in the focus of our training program for the children participating in our research. The Coding test during which symbols must be rendered to numbers and copied within a given time examines processing speed. Additionally to short term memory this test measures the following abilities: psychomotoric speed, learning capability, visual perception, visual-motoric coordination, cognitive resilience, attention. The processing speed test offers insight to the child's information reception, speed of visual-motoric coordination which contribute to the capacity of the working memory.

The tests were conducted by two independent psychologists who – in principal – had no information of the method of organizing the children into groups³. We planned a follow-up test six weeks after completing the training programs in order to measure the persistence of their impact which was possible to carry out with only six children due to timing issues (in the Summer many families have their kids home). Hence questions regarding the longer-term effects of the program remain unanswered.

In addition to the tests, each session was documented on an evaluation form containing the observations of the educators. In the end the educators summarized their experience during the research program (unstructured observations) about the children's experience with the rabbits either during the sessions or in the time between sessions.

Research results

Data retrieved during the research can be evaluated from an

- ethological,
- psychological and
- pedagogical aspect.

Qualitative results of the pilot research program

The following list is based on the unstructured observations of the educators emphasizing the aspects of further research directions and methods. Educators in general mentioned the following areas that have benefited from the training program (uniformly regardless of the presence of the rabbit):

- attention, concentration,
- task recognition, perseverance,
- self-esteem, self-confidence,
- group roles, group structure.

³ As psychologist Csaba Zentay reported, it was difficult to not receive such information in the kindergarten because events related to the research have become part of the everyday program of the children and their caregivers.

In relation to children who received the training program with the rabbit, changes to the following areas were mentioned in direct correlation to the appearance of the companion animal:

- positive emotional contact with the educator,
- establishment of a relaxed atmosphere, anxiety relief,
- easy motivation.

Educators reported that participation in the training program constituted for most children a positive experience regardless of which group they were in. Based on their reports the majority of the children was expecting the sessions with excitement and remained motivated throughout the program.

Some of the children participating with the rabbit in a cage knew that at the end of the program they too can engage in physical contact with the rabbit, others were unaware of this. The reason for this was that the children were informed about the research program to different depths by their environment. Some were told about it by their parents after the initial parent orientation session. For children who knew that they would have an opportunity to play with the rabbit once the sessions are over, this information proved to be a significant motivator (“they were almost literally counting the days down to that moment”). Those who didn’t have this information appeared to be uninterested after a while even showing symptoms of frustration (going as far as verbal aggression) according to the accounts of their educators. On the other hand they gave themselves over to playing with the rabbit with great joy without exception when they were given the opportunity at the end of the program.

Based on the reports of the educators, children participating in the program with the rabbit maintained high spirits in the sessions throughout the program. They also mentioned incidents when the non-verbal communication of children expressed immediate stress relief.

Educators altogether reported that children who were allowed to play with the rabbit, were let to take it on their lap were faster to relax in test situations and showed weaker signs of nervousness during work. They also presumed that the series of animal assisted trainings have had a positive impact on their self-confidence. Even the group structure of kindergarten groups was reported to change as a result of the training program: after the commencement of the research program, children participating in it began to play more often with one-another. In some instances even the child’s role within the group changed during the program, making him the center of attention, which is also attributed to the program according to the educators.

Educators were also excited during the research. Some feared before that the rabbit will disturb the course of the sessions. Such fears were dissolved fast during the training program and these educators reported positive experience attributable to exploring character features and capabilities of the children which had been unknown to them before or to the reinforcement of their relationship with the child. They also reported to have received continuous positive feedback from the children during the animal assisted training which resulted in an increased level of content on their part during the program.

Conclusions of the pilot research project

Our hypothesis about the positive impacts of animal assisted education has not been unambiguously verified in this research because neither the points registered in the evaluation sheets nor the results of the two WISC-IV subtests have demonstrated clear differences between the research group and the control groups. One possible explanation for this may be that the participating individuals were not randomly assigned to the groups. Although we were successful in assigning children to the groups and the educators by sex and age in a balanced way, the selection of the children was not based on a blind-assignment but rather on the recommendation of the educators. This will need to be avoided in our future research projects.

A further explanation of this might be that the effects of the animal assisted training program are not primarily manifested in the different development of the cognitive areas the training program focuses on but in the emotional and determinative functions of the children which were not aimed to be measured directly by the pilot research. These functions will be compared in our further research projects (our respective concepts are explained in the next subchapter).

Further methodical conclusions drawn from the pilot research project are for one that we shall use more tests to evaluate the psychic state of the children (Spielberger's State – Trait Anxiety Inventory for Children, STAI-C, Spielberger, 1973, and the Child Behavior Checklist, CBCL – Achenbach, 1991).

Reports of the students of Companion Animal and Dog Therapeutic Development Expert course confirm the positive impacts of animal assisted sessions. Based on their experience during the research they have reinforced their belief in the positive impacts of the animal-human bond, the justification of animals being involved in education and the efficacy of such education. Not only the children reacted with joy, excitement and with ease to the involvement of the, rabbit but also the teachers and caregivers of their schools and kindergartens as well as the educators working on the program itself. This directs our attention to an important however often neglected aspect of the educational environment, namely to the significance of mental hygienic prevention (in relation to teaching to prevention of the burnout syndrome). The preservation of psychic health is an important factor for all individuals working in institutions for nursing, training and education. It is therefore in their cardinal interest to acquire and practice adequate stress-management techniques in which animals involved in these working scenes can play an increasing role.

Further research of psychological aspects of the animal-human cooperation

The method of recording the sessions as well as the elaboration of the system for evaluating the results will be covered during the next research phase. For this purpose video recordings offer a broader basis compared to the currently used voice recording of the sessions.

Considerations for the evaluation of visual and auditory information are the following:

- signs of experiencing stress and comfort by the animal, gestures for initiating and refusing the contact (scale to be construed by ethologists),
- signs of experiencing stress and comfort by the human, gestures for initiating and refusing the contact (scale to be construed by psychologists).

Regarding the validity of the process it is important that precisely defined considerations be evaluated by several independent examiners the results of which can then be tested against statistical analyses.

In respect of examinations preceding as well as following the program, we have concluded that in addition to cognitive functions children participating in the program need to be evaluated for other personality traits such as anxiety or social relations. Thus later research programs will use other tests beside WISC-IV subtests. One of these will be the Child Behavior Checklist that screens the emotional and behavioral problems of school age children (social relations (relationships with peers and parents), anxiety, depression, somatization (physical complaints without detectable health concerns), attention disorders (problems attributable to lack of attention or possibly hyperactivity), deviant behavior (signs of not adhering to behavior norms), and aggression). We also plan to use Spielberger's State – Trait Anxiety Inventory for Children. These questionnaires will enable us to make a picture of the anxiety pattern of the school age children participating in the program prior to the program's commencement and at the beginning of the first session and at the end of the last session. Last but not least, Moreno's socio-metrics is a potentially good tool to make inter-group social networks and their changes visible during the animal assisted training.

We shall conduct our future research based on and extended by the experience summarized herein in order to examine the impacts of animal assisted activities from more perspectives with thoroughness meeting scientific requirements.

References

- Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist 4/18 and 1991 Profile*. Burlington: University of Vermont, Department of Psychiatry.
- Fine, Aubrey H. (Ed.) (2010). *Handbook on Animal-Assisted Therapy*. Amsterdam: Elsevier.
- Kézdi B. (Ed.) (2000). *Iskolai mentálhigiéné*. Pécs: Pannonia Könyvek.
- Spielberger, C. D., Edwards, C. D., Montuori, J., & Lushene, R. (1973). *State-Trait Anxiety Inventory for Children*. Palo Alto, CA: Consulting Psychologist Press.