

HAPPYneuron PRO
at Jardins de Sophia (Sophia's gardens)
by Dr. Foare, 2007

INTRODUCTION

The "Jardins de Sophia" Alzheimer's disease clinic in Castelnau-le-Lez, France, has:

- a 24-bed day hospitalization unit (Carpe Diem) for people at an early stage of the disease living in their own home
- an 80-bed long-term unit for full treatment of people with severe Alzheimer's disease

The health care activity at "Jardins de Sophia" comprises the entire Alzheimer's treatment disease spectrum, from early stage, starting with the diagnosis, to very severe forms.

Within the day hospitalization unit, for patients with neurodegenerative diseases (Dementia of the Alzheimer type, Parkinson, vascular dementia), the unit offers alternative solutions, allowing patients with Alzheimer's disease to stay at home at the beginning stages when prevention can be associated to care (MMS>20). The day hospitalization unit admits "young" patients, that is patients of less than 65 years of age with no other possibility to enter a specialized health care facility. It was opened to treat people suffering from early cognitive deficit by associating pharmacological therapies and non-pharmacological therapies (re-adaptation, cognitive rehabilitation...) following a specialized medical assessment of their cognitive deficit in a health care environment of their own age range (instead of a gerontological environment).

Treatments are performed by a multidisciplinary team of neuro-psychiatrists, neuro-psychologists, clinical psychologists, psychomotor specialists, ergo-therapists, speech therapists, music therapists, art therapists, physiotherapists, nursing home staff, all of them coordinated by the managing doctor and the head of unit.

WHY HAPPYNEURON PRO?

The recommended therapeutic approach in case of cognitive disorders consists of maintaining existing cognitive skills and/or reeducating deficient cognitive functions. In terms of neurodegenerative pathologies, we are particularly interested in the former case in order stabilize cognitive performance and therefore slow down the progression of the disease. Historically, there were various methods used (visual, auditory, and often paper media...), they are often non-standardized and are not necessarily based on critical scientifically based theoretical concepts.

Computers therefore seemed interesting to us, and HAPPYneuron PRO in particular enabled:

- to uniquely train all cognitive functions (memory, executive, language, attention, and visual and spatial functions)
- to produce a track record of the patient's evolution (performance is recorded at each training session)
- to adapt the difficulty level to the patient's performance and to treat a heterogeneous population with a variety of cognitive deficits.

HOW WAS IT USED?

After an initial cognitive assessment, a specific therapeutic project is defined for each patient and guidelines are given for the various modules (Memory, Language, Visual and Spatial, Attention, Executive functions). Computerized cognitive remediation activities are then offered, either individually and/or in groups.

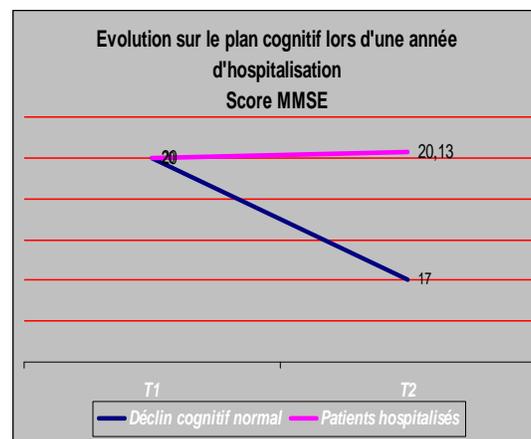
At "Jardins de Sophia", we specifically developed the use of the HAPPYneuron PRO software with a treatment in a homogeneous patient group with mild cognitive deficits. Lasting approx. 45 minutes, the sessions trained the individual's:

- *anterograde episodic memory (verbal, visual and spatial dimension),*
- *attentional functions (working memory, visual exploration...),*
- *language functions (semantic-lexical storage)*
- *visual and spatial functions (visual discrimination, mental rotation ...)*
- *executive functions (organizing, planning...)*

RESULTS REALIZED

▪ ***In terms of cognition***

Our results show the therapeutic relevance of the computerized cognitive remediation which fully fits in the global treatment offered by the day hospitalization unit. Since long-term hospitalized patients benefit from a whole diversified range of cognitive stimulation activities, the contribution of this type of treatment is not measured.



Data Summary: According to current data, the average loss of points per year on the MMSE scale (Mini Mental State Examination) represents 3 points.

The study conducted by Carpe Diem in 2007 on 47 patients with neurodegenerative diseases, who benefitted from therapeutic activities of the day hospitalization for a year, shows that our patients gain 0.12 points on the average per year.

Treatment seems to be effective when maintaining preserved skills and stabilizing cognitive performance.

▪ ***In terms of psycho-behavior***

As far as the psycho-affective dimension is concerned, we found, among other changes, an improvement in mood, greater self-confidence and self-esteem as well as less anxiety.

As far as socialization is concerned, there are extremely positive effects on the group: the activity brings people to talk to each other, eases communication among the patients (particularly listening). Joining a group also enables people to feel a part of it, to share life experiences, to improve social skills, or to sometimes solve difficult situations with other patients (social support).

Individually, the patient gains a new sense of personal valuation; he is highly motivated to reach the objective suggested by his training program as the results of each session are displayed on the screen.

For more information about HAPPYneuron PRO, please visit www.happy-neuron-pro.com