



GRADIOR

suite

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Wellcome to
GRADIOR
suite

**First neuropsychological
intervention suite for a
multidimensional approach
to the therapy.**

The current focus on cognitive intervention aims to a **comprehensive therapeutic approach** that includes the different dimensions of the person, working in a combined way on cognitive, emotional, behavioural, functional and social aspects. This comprehensive approach intends to contribute to maintain the cognitive function, control of behavioural symptomatology, improve well-being, quality of life and the personal autonomy of people with cognitive impairment or deficit. Under an innovative approach, **GRADIOR Suite** incorporates different support tools to develop a programme of **holistic intervention in cognitive impairment** in which the different dimensions of people are worked in a complementary way from the conviction that cognitive functioning in people is not independent of the other levels. All this ensuring the individuality and personalization of the intervention, within the framework of the person's life project, thus encouraging the active participation in his/her therapeutic process.

Under this comprehensive approach, GRADIOR Suite allows to address the cognitive dimension through the use of two tools: **GRADIOR cognitive stimulation**, oriented to cognitive training and stimulation with the aim of optimizing the cognitive abilities and functions; and **GRADIOR City of Memory** which, based on Virtual Reality, allows working specifically the memory in highly immersive environments through more attractive and motivating ecological activities.

The **sensorial and emotional dimension** is addressed through the **GRADIOR Multisensorial** tool which, also through Virtual Reality, allows to work the different senses to induce states of relaxation and sensorial stimulation and, at the same time, to work on the behavioural symptomatology contributing to the recognition and control of emotions.

We encourage you to be part of this vanguard experience in clinical practice accessing a dynamic innovation network in the field of neuropsychology that allows you to differentiate yourself as a 21st century care professional.



Consult our plans prices at:

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Why incorporate to the intervention?

- To base the intervention on scientifically validated innovative methods..
- To optimize the time dedicated to therapy.
- To be able to offer a high degree of individualization with a less effort.
- To provide more varied material that makes the rehabilitation process more effective (to avoid learning effect).
- To make available at any time and from any place all the information regarding the therapeutic process.
- To facilitate the clinical assessment and the analysis of the patient's evolution due to the detailed reports, in a simple way.
- To participate in a research and innovation dynamic network in this field in which the therapist will be able to participate in numerous training, knowledge transfer and research activities and projects.
- To differentiate and qualify, therefore, as a professional.



LA CAIXA AWARD 2018

**INNOVACIÓN
SOCIAL**



LIFE HABITAT AWARD 2020

**INNOVACIÓN
TECNOLÓGICA**



GRADIOR
cognitive stimulation

One of the neurobiological bases of cognitive stimulation is the brain plasticity (brain ability to recover and restructure itself). Emerging research focused on plasticity justifies the cognitive training of brain function and cognition. Both neuropsychological rehabilitation and cognitive training and stimulation are a set of techniques aimed at optimising the functioning of cognitive abilities and functions.

What is GRADIOR Cognitive Stimulation?

Neuropsychological evaluation and rehabilitation system for carrying out **training programmes and recovery higher cognitive functions** in people with deficits and/or cognitive impairment.

It allows working in adults Attention, Perception, Orientation, Calculation, Executive Function, Language and Reasoning.

To whom it is addressed?

Conceived as a support tool for the therapist, it is aimed at people with brain damage, traumatic brain injury, dementia, mild cognitive impairment, mental illness or other pathology where cognitive function is affected. It is also suitable under a prevention approach in active ageing programmes and/or subjective memory complaints associated with age.

Scientifically supported

GRADIOR cognitive stimulation is based on **more than 25 years of work** integrating the neuropsychological advances, daily clinical practice and new technologies under an open innovation methodology. Its **solid scientific basis** sustains itself in the scientific evidence on neuroplasticity and beyond of 37 national and international publications. It constitutes a high added value system, developed and recognised in more than 40 RDi projects carried out within the framework of the main scientific and technical excellence programs in a national and European level.

Multidevice Solution

To accompany people wherever they are, it is offered as a multidevice solution that can be run on a computer, a tablet or a smartphone. The professional will be able to connect with the management system from any location and the patients will be able to carry out their sessions regardless of their home or circumstances, due to the **online and offline functioning** of our mobility solution (**GRADIOR ConmiGO**).

Advanced functionalities

Implemented using intelligent algorithms that facilitate the management by the professional but that can be verified/readjusted by the therapists themselves. They facilitate the professional's task without forgetting his/her criteria.

Intuitive and more efficient monitoring

Daily monitoring of the intervention through a highly intuitive dashboard and summary information of the performance and a set of detailed reports to facilitate the clinical assessment including the possibility of exporting the data in a structured format for research activity.





Research publications

Solid scientific basis supported by scientific evidence on neuroplasticity and more than 37 national and international publications.

<https://www.gradior.es/sobre-nosotros/>



Pilots trials

Recent research in a PPI (Public Procurement of Innovative solutions) framework. ARGOSS platform of Junta de Castilla y León. Ongoing Clinical trial in cognitive impairment.



Acknowledgements

Selected as a reference technology in scientific excellence projects (ehcoButler, INDUCT, DISTINCT, LLM, ARGOSS platform of social and health care for chronic patient and dependent people of Junta de Castilla y León) and telemedicine and e-health projects (RESATER).



Technical requirements

Software: SO Windows 10
Processor: Intel Core i3 or superior
Memory: RAM 4GB minimum



Multisensorial stimulation is based on the premise that the world in which we live in is a mixture of sensations of light, sounds, smells, tastes and varied tactile experiences. Sensations that we have access to through our sensorial organs: ears, eyes, nose, mouth, skin... One of the objectives of this type of stimulation is to favour the use of senses, promoting rich and varied sensorial experiences that help the well-being. This technique can be used both from childhood as a method of early stimulation and by young people or adults in a situation of dependence and with chronic illnesses who often manifest symptoms related with emotional and behavioural aspects that affect their daily life.

What is GRADIOR Multisensorial?

Interactive platform for **multisensorial stimulation therapies and behavioural therapies** based on Immersive Virtual Reality. It is a support tool to the neuropsychological intervention to reduce states of anxiety and behavioural changes, favour self-control and concentration, as well as developing the creative skills. This is done through spontaneous interaction with immersive multisensorial environments. GRADIOR Multisensorial allows to work on the sensorial and psycho-affective dimension of the people, contributing to improve their quality of life.

To whom it is addressed?

A practical support to the therapist in cases of control of disruptive behaviours, emotional changes and/or agitation or states of anxiety. It also provides added value in those situations where it is necessary to improve the person's attentional focus using proprioception.

Free activity approach

In case of sensorial stimulation with GRADIOR Multisensorial, the elaboration of specific treatments is not contemplated, but rather people are encouraged to decide what type of session they want to do, with the aim of bringing out the initiative, spontaneity, capacity to explore and the personal experience, supported by a therapist.

Relaxation

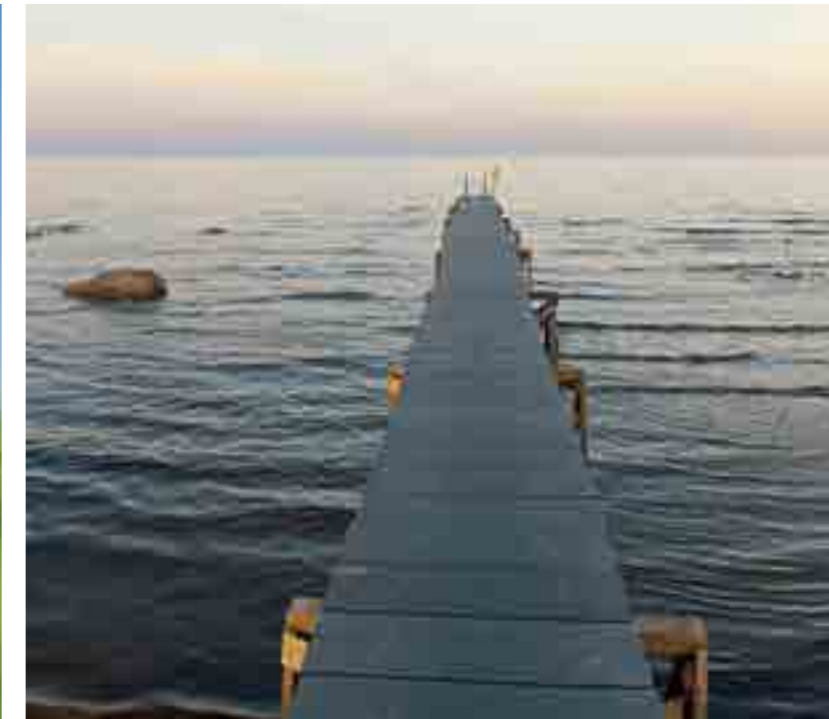
In the relaxation room conditioned with colours, visualizations, sounds and melodies, a **state of relaxation** and tranquility is induced **through the sensorial stimulation**. The room, customizable with photos and even videos provided by users, it also enables to approach **reminiscence therapies**.

Stimulation

In the stimulation room, **physiological activation** is sought by stimulating senses through immersive activities and strategies that activate sensations, perceptions and the sensorial integration: a painting room, a music room, a virtual garden or a swimming pool are some of the virtual settings from which this therapeutic objective is worked on.

Emotional regulation

In the emotional room, positive feelings are worked on to generate memories or emotional well-being, immersing people in different settings presented by 360° videos, where you have the feeling of being part of your own surroundings. It also includes short **mindfulness pills** to introduce concepts such as conscious breathing, focusing on body sensations, control of unwanted thoughts, etc.





Pilot trials

Experimental study of GRADIOR Multisensorial as a therapeutic tool for sensory and cognitive-behavioural stimulation of patients with **cognitive impairment and/or brain damage**. Sample of 20 patients.

Participating entities: Clínica de Memoria de Fundación INTRAS.

Exploratory study to assess the potential of a psychosocial intervention program based on GRADIOR Multisensorial in the case of **palliative care**. Sample of 20 patients. Participating entities: Fundación INTRAS in collaboration with Palliative Care Unit of Hospital de los Montalvos (Salamanca) and APASA in collaboration with the Palliative Care Unit of Hospital de la Santa Creu de Tortosa. Exploratory study within the framework of the platform for social and health care for chronic patients and dependent people in the Junta de Castilla y León in people with **mild cognitive impairment and initial dementia**.



Acknowledgements

Caixa Social Innovation Award 2018 as an initiative that enables facing social challenges with solutions that reports improvement or new perspectives, with positive results, adaptable and with potential to be durable and sustainable.



Technical requirements

Software: SOWindows 10

Hardware: Processor i7, 16GB of RAM, graphic card GTX1050 minimum (recommended 1070)

Virtual Reality glasses (Oculus RiftS)

Movement capture sensor (Leap Motion)



One of the recurring demands of professionals and patients with cognitive impairment is to be able to carry out activities of intervention and rehabilitation programmes more realistic and ecological. These types of activities make more sense for the patients themselves and are more effectively generalized or transferred to the activities or challenges that the person faces in his/her daily life. Virtual Reality can help to explore new dimensions of space and the way it is perceived and created truly unique spaces that cannot be addressed in any other way.

What is GRADIOR City of Memory?

A therapeutic support tool conceived as an alternative to **enrich or complement the care environments**, favour the practice of **more realistic and ecological therapeutic activities** in highly motivating, personalised, safe and controlled settings. This extended space allows memory to be worked in an comprehensive way, activating all brain systems related to it. The settings of the city of memory are specially designed by specialists to work on **spatial memory, working memory, prospective and retrospective memory**, thus completing the comprehensive intervention that Gradior Suite provides to the therapist.

To whom it is addressed?

Conceived as a support tool for the therapist, it is aimed at people with brain damage, traumatic brain injuries, initial dementias, mild cognitive impairment, mental illness or other pathology where cognitive function is affected. It is also suitable under a prevention approach in active ageing programmes and/or subjective memory complaints associated with age.

Virtual therapeutic environment

The essence of the City of memory is to overcome the architectural and contextual limits inherent in care environments in order to be able to offer users therapeutic activities that go beyond those offered by the environment itself. It is presented as an alternative to enrich or complement the care or community environments where they are located and to favour the practice of the therapeutic activities more connected with the person's daily reality and the activities of daily living (ADL). It is suitable in those cases where the environment itself does not allow to address directly this kind of activities or simply because it is desired to carry them out in highly motivating, personalized, safe and controlled settings.

The goal of these activities is to work on different aspects related to memory, specifically, **spatial memory, implicit memory and explicit memory**.

Supermarket

Secondary setting that simulates a small shop within which you have to do one of the most daily activities, shopping. The challenge is to memorize a shopping list (of greater or less complexity depending on the profile of the person) and select the items from the different shelves with the aim of working on working **memory and short-term and immediate memory**.

Museum

Secondary setting in which people are encouraged to carry out a leisure activity under a therapeutic approach. The activity is based on a walk through a museum in which, at the end of the visit, a set of questions are asked in order to work on **implicit visual memory, explicit visual memory and short-term and immediate memory**.





Pilot trials

Experimental study of GRADIOR City of memory as a support tool to the cognitive intervention to work the memory in a comprehensive form in patients with **cognitive impairment and/or brain damage**. Sample with 20 patients. Participating entities: Clínica de Memoria de Fundación INTRAS.



Acknowledgements

Life Habitat 2020 Award in the technological innovations category as an initiative that involves the creation and incorporation in the different habitats of new or significantly improved services, with a justifiable impact on the conditions of 'biopsychosocial' well-being and people's health.



Technical requirements

Software: SOWindows 10
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