



SOCIABLE

MOTIVATING PLATFORM FOR ELDERLY NETWORKING, MENTAL REINFORCEMENT AND SOCIAL INTERACTION

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INTRODUCTION:

Recent research results manifest that mental activity, as well as social interaction are key prerequisites for preventing or delaying the progression of dementia. Computer-based cognitive rehabilitation in dementia represents a promising area of intervention, especially in the early stages of the disease, in reducing progression of cognitive decline and improving the performance of daily living activities and, consequently, the quality of life. SOCIABLE is a pilot type B project supported by the Europe's Information Society: ICT Policy Support Programme Objective 1.4: ICT for healthy aging. The primary objective of the SOCIABLE project is to pilot and evaluate a radically new ICT based approach to the cognitive training and social activation of elderly people at the early stage of dementia, with a view to preventing and delaying the progression of dementia through pleasant cognitive training gaming activities specifically designed for elderly people.

MATERIALS AND METHODS:

The efficacy of SOCIABLE treatment was evaluated with a multi-national, multicenter, randomized controlled study.

A sample of 348 elderly subjects aged 65 + were recruited for the Clinical Trial in the pilot sites involved in the Project, located in 4 different countries in Europe (Italy, Greece, Spain, Norway), selected referring to the following target groups:

Group A: normal (cognitively intact) elderly aged 65+

Group B: patients aged 65+ with Mild Cognitive Impairment (MCI) according to the Petersen criteria, 2001 (MMSE score 25-30).

Group C: patients aged 65+ with mild Alzheimer disease (AD) according to the NINCDS-ARDRA criteria (MMSE score 20-24).

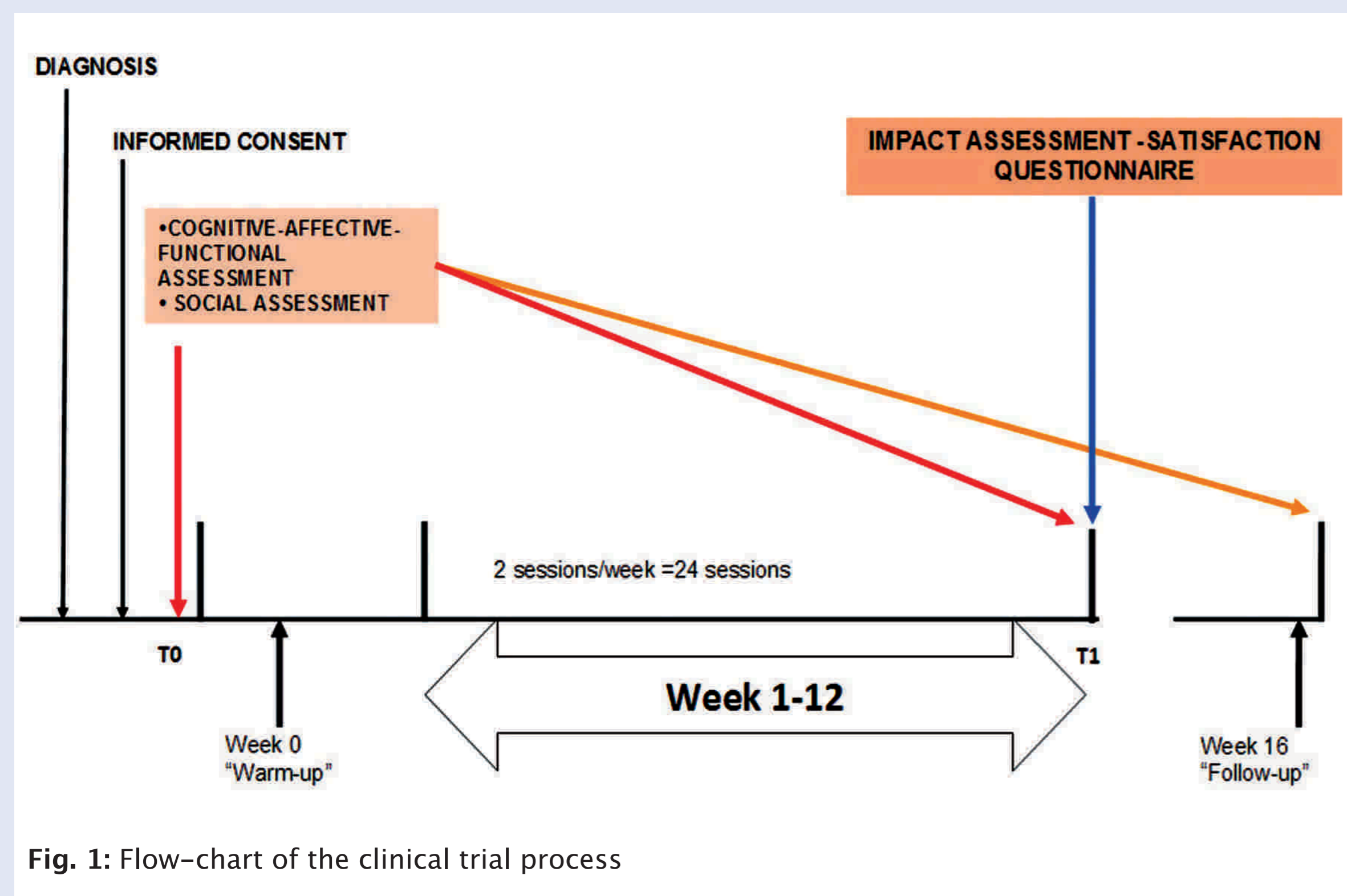


Fig. 1: Flow-chart of the clinical trial process

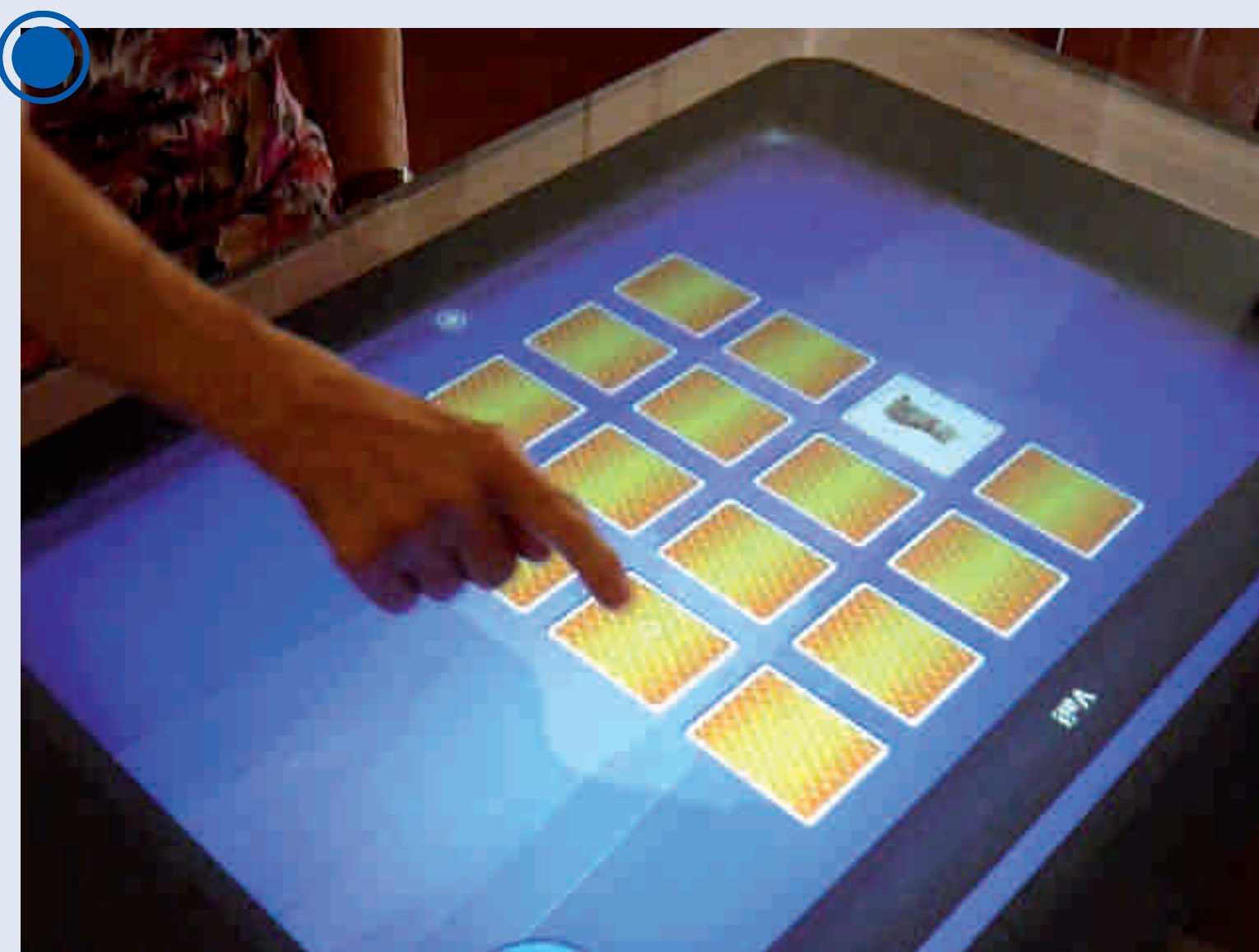
The treatment consisted in cognitive training sessions, with surface tables or surface PCs, conducted in groups of 2-3 subjects or individually, through the use of a set of 25 cognitive training games, covering the main cognitive skills, and a specific application for the social activation (book-of-life).

In order to evaluate the impact of the SOCIABLE program on the different cognitive skills, and the effect on the social interaction and mood of the elderly involved, a complete battery of neuropsychological tests and rating scales for affective and functional status was administered at three different stages of the program:

T0: before starting the cognitive training

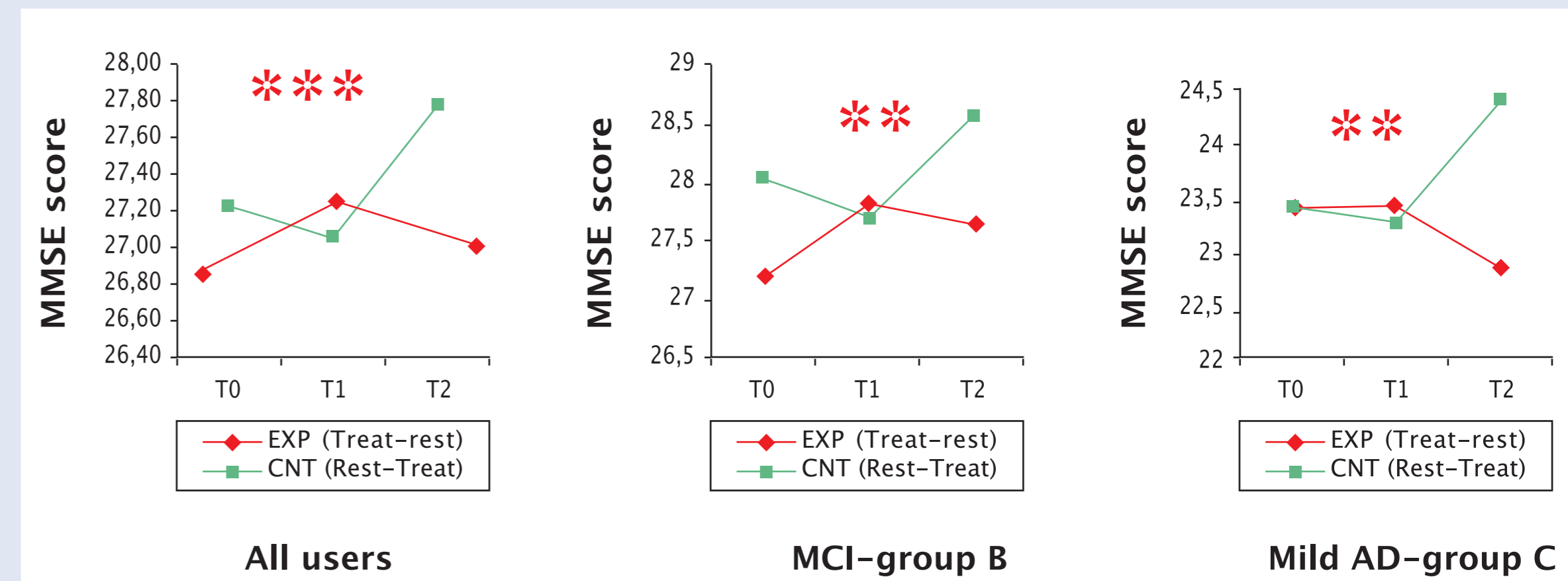
T1: after the cognitive training program

T2: as follow up assessment after 3 months from the end of the program.



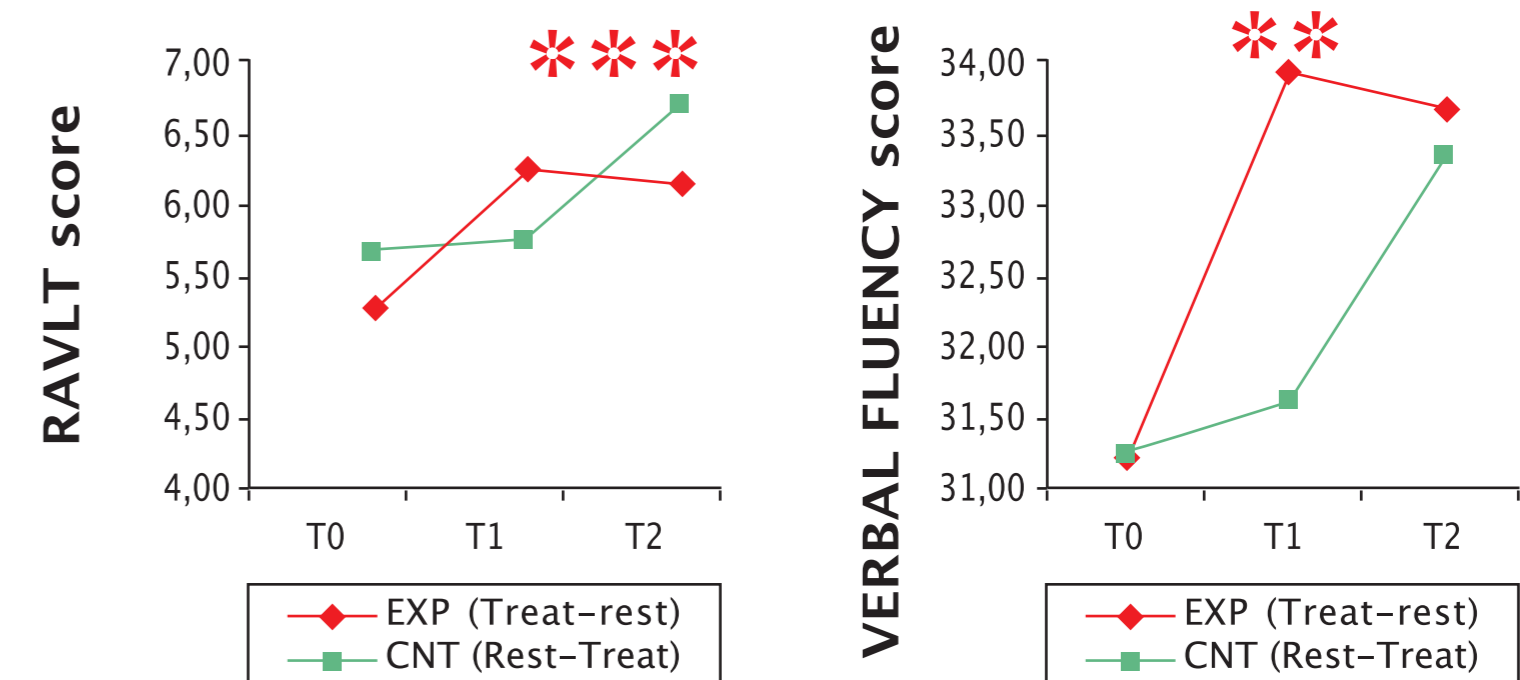
RESULTS:

- A significant positive effect of the treatment emerged on the global cognition (expressed by MMSE score), on memory and executive functions, which were the two cognitive functions most treated during the training in all the users
- A positive effect was also present in constructional praxis and language measures
- An improvement in social and functional abilities emerged as indirect evidence of the training
- A follow-up effect emerged for healthy elderly at memory test.



*p<.05; **p<.01; ***p<.001

Fig. 2: MMSE score in experimental group compared with control group, in all subjects, MCI target group and Mild AD target group



*p<.05; **p<.01; ***p<.001

Fig. 3: Ray Auditory Verbal Learning (RAVLT) test score and Verbal Fluency score in experimental group compared with control group in all subjects

CONCLUSIONS:

The main results of the project showed that SOCIABLE is an effective intervention for patients at the early stages of dementia, with a significant positive effect on the cognitive skills of elderly people affected by Mild Cognitive Impairment (MCI) and Mild Alzheimer's Disease, as well as it has been proven to be useful for cognitively intact elderly as a mean of cognitive decline prevention. Positive results emerged also about the satisfaction and ease of use associated with the SOCIABLE platform, and in terms of increased confidence and acceptance of ICT devices, expressed by the elderly users.

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