

# THE EFFECTS OF BODY IMAGE CHANGES IN REHABILITATION OF NEUROLOGICAL DISORDER: A PRELIMINARY STUDY

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## AIM:

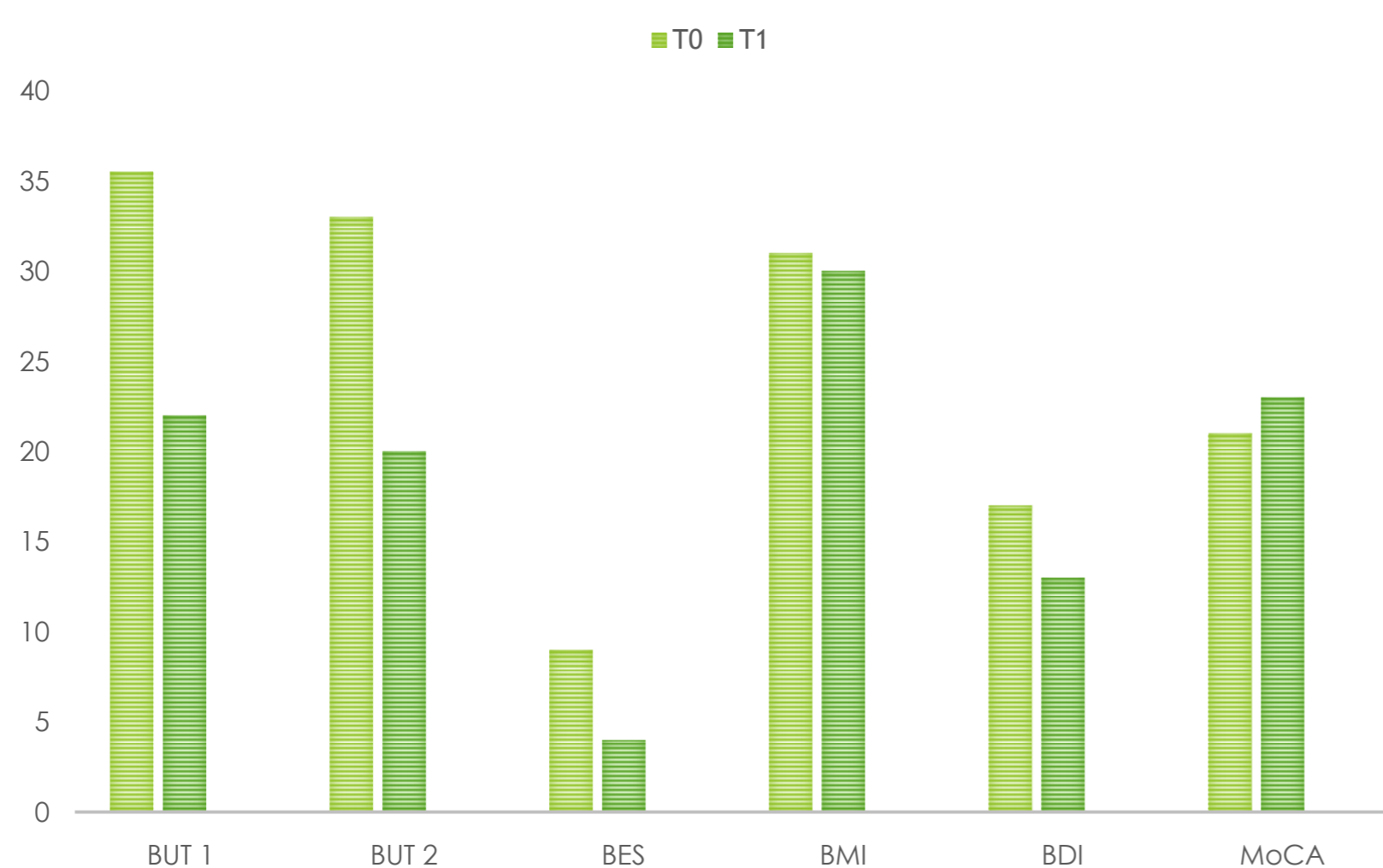
We have investigated how the changes of body image influenced emotional, cognitive, behavioral and nutritional aspects in Acquired Brain Injury-ABI (stroke, traumatic brain injury and spinal cord injury), pre and after neuropsychological treatment and personalized nutritional plan.



## MATERIALS AND METHOD:

We enrolled 21 patients, 11M and 10F aged between 20-74years (mean age 56), 7 overweight (BMI  $\geq 25\text{Kg/m}^2$ ) and 14 normal weight (BMI 18-25Kg/m<sup>2</sup>) hospitalized at IRCCS Center Neurolesi Bonino-Pulejo of Messina. They were evaluated with an anthropometric (weight, height, waist circumference, BMI) and neuropsychological assessment with Binge Eating Scale (BES), Body Uneasiness Test (BUT), Montreal Cognitive Assessment (MoCA) and Beck Depression Inventory (BDI), at the beginning (T0) and at the end (T1) of the treatment. The nutritionist planned a custom nutritional plan based on the patient's nutritional needs, past or present pathologies and hematochemical examinations, while the psychologist conducted emotional support, psychological counseling and cognitive training, aimed to restructuring the body image and consequently reduce depressive symptoms, once a week for 24 weeks (6 months).

## RESULTS:



We found that all subjects, after treatment, have improved considerably their perception of body image (BUT1 T0=35,5; T1=22; BUT2 at T0=33; T1=20), regularized their eating behavior (BES T0=9; T1=4; BMI normal weight T0=21;T1=22; BMI overweight T0=31; T1=30). Quality of the emotional life has also improved with the reduction of depressive symptoms (BDI T0=17; T1=13) and a slight overall improvement in the cognitive level (MoCA T0=21; T1=23).

## CONCLUSION AND DISCUSSION:

The psycho-emotional and behavioral outcomes of ABI have a strong impact on patient's quality of life. The results of our study show that patients with ABI, after an intensive rehabilitation program, achieve a better perception of their own body image through psychological training aimed at reducing depressive symptoms and planning a nutritional plan specifically based on their needs. Acquiring proper eating habits, improving body weight and cognitive and psycho-emotional aspects allowed performing the best rehabilitation activities.

Furthermore, like others works, our data shows that women have greater degree of severity for their body image than men do; normal weight subjects had a greater degree of overall uneasiness and body discomfort than overweight subjects did. This difference is also evident between men and women.

However, further larger sample studies with a control group are needed to confirm this positive findings.

- ▶ Holleman, M., Vink, M., Nijland, R., & Schmand, B. (2016). Effects of intensive neuropsychological rehabilitation for acquired brain injury. Neuropsychological rehabilitation, 1-14.
- ▶ Howes, H., Edwards, S., & Benton, D. (2005). Male body image following acquired brain injury. Brain Injury, 19(2), 135-147.
- ▶ van Diemen, T., van Leeuwen, C., van Nes, I., Geertzen, J., & Post, M. (2017). Body Image in Patients With Spinal Cord Injury During Inpatient Rehabilitation. Archives of Physical Medicine and Rehabilitation.