

Inhibitory learning as a guiding principle in body image distortion intervention in patients with eating disorders

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ABSTRACT

Objective: To identify and understand the learning principles involved in the achievement of a “functional body” in patients with ED.

Methods: We applied a “functional body” 10-session CBT protocol to 30 women with diagnosis of AN, BN, and Binge eating disorder (DSM-5), attending the “Equilibrio” outpatient program. The individual sessions included a body photographic history, an individualized body exposure hierarchy to feared situations, and daily exercises of sensory integration. We conducted in-depth interviews to each patient, focusing on their experiences with each one of the protocol components. We used a novel methodology for the analysis of the data: we performed a content analysis with categorization (qualitative research) enhanced with data mining and natural language processing techniques (cluster analysis).

Results: Patients’ narratives were organized in clusters according to word frequency and distance (similarity) among them. The content of each cluster was summarized in word clouds. We generated categories for each cluster through general consensus, and based on the word clouds and revision of narratives. We also selected narratives fragments that illustrated the categories.

Conclusions: According to the Inhibitory Learning principle, the appearance of new experiences with the body facilitates the emission of other more adaptive and useful responses. This was chosen as the best principle to explain the achievement of a functional body, even in the presence of body distortion.

INTRODUCTION

Outcomes in body image distortion in patients with ED continue to be disappointing. The methodologies that have been used are diverse. (cognitive, virtual or ecological methods emphasizing everyday life). But their results do not seem to last over time. Shifting the paradigm from an emphasis on changing body image distortion to one that privileges the functional use of the body has proven to be a useful alternative.

Figure 1.

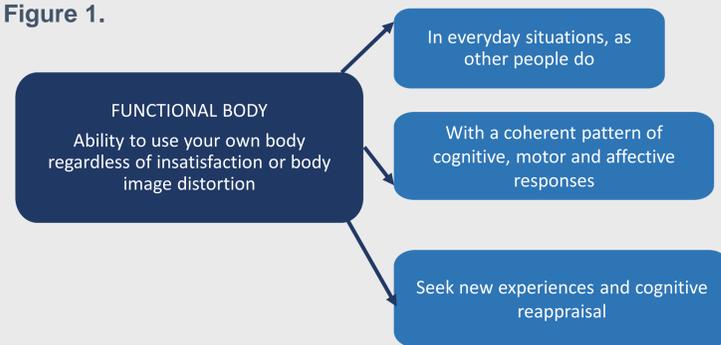
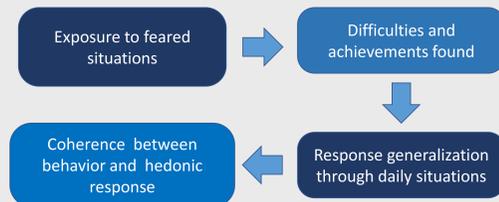


Figure 2.



MATERIALS AND METHODS

- Qualitative study of 30 women with AN, BN and Binge eating disorder (DSM V), that completed the “functional body protocol” (Figures 1 and 2).
- Semi-structured in-depth interviews to patients regarding their experience with the protocol.
- CONTENT ANALYSIS ENHANCED WITH DATA MINING AND NATURAL LANGUAGE PROCESSING (Information technology): Categorization and Text Analysis. Cluster analysis and word clouds.

Cluster Analysis: The documents are placed in a matrix based on the content (words). Later, they are grouped according to the distance (similarity) of the narratives in a coordinate plane (diagram).

OBJECTIVE

To identify and understand the learning principles implicated in the achievement of a “functional body”.

RESULTS



Figure 3. World cloud (All narratives): Transition from a body-object to an acting body-subject.

The body moves from being something that can be weighted and measured, to something understood through the actions performed with it.

Figure 4. Cluster 1. Self - efficacy: “I am capable”/ Before and after contrast



Figure 5. Cluster 2: Movement

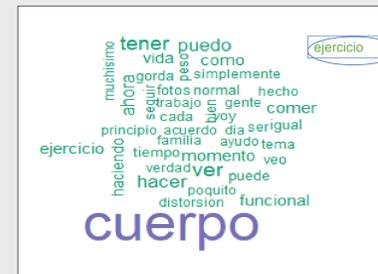


Figure 7 Cluster 5: Experience



Figure 6. Cluster 4: Hedonic experience. Acting in context



Figure 8. Word cloud (all narratives frequency only)



SELECTED NARRATIVES

“...To walk, to dance, to enjoy with my family, and start to think less ...and to be a subject...I need my body, which is a set of things, not just a figure...”

“...I used to live near a beach... and that was an everyday thing... wearing a swimsuit, but since I became ill I left all that aside... and it was really nice to start wearing a swimsuit again, to sunbathe, to go to the swimming pool ... that, I enjoyed it a lot... and I would do it again...”

“...I realize that I have been able to do things that I refused to do in the past...”

“... Before, I didn't want to look at myself, I would look at myself only once, just to see my face and put some makeup on, that was it... Now, I don't stare at myself in the mirror all the time, I look or retouch my makeup, but without the rejection... there is no hate anymore, there is no pain anymore when I see my body...”

“...At first you start trying out new actions, and then in the same way, your thinking starts to change....”

“... I don't think that I will be able to love and adore all my body... I don't think so, because there are parts of it that I don't like, but I feel that they are normal, my body is not an atrocity, it is my body and I can live a normal life, without it being a problem...”

CONCLUSIONS

- Facing the feared stimuli, facilitates the habituation to it and the ability to generate new associations.
- In the extinction process old associations are not forgotten, they remain intact.
- On top of old associations, a new, different association is learned.
- Having new experiences with the body, facilitates the appearance of new and more adaptive and useful responses, even if the body distortion is still present.
- **THE INHIBITORY LEARNING** principle seems to explain this phenomenon in an integral way.

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