

# The Functional Body Questionnaire for Eating Disorders: Development and validation.

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## INTRODUCTION

Previous research on Eating Disorders (ED) suggests that shifting the emphasis from body image distortion to the functional use of the body, is an important alternative. This focus could help maintain outcomes and prevent relapses. Over the last 10 years we have worked to clearly define and work with this construct: 'Functional body'.

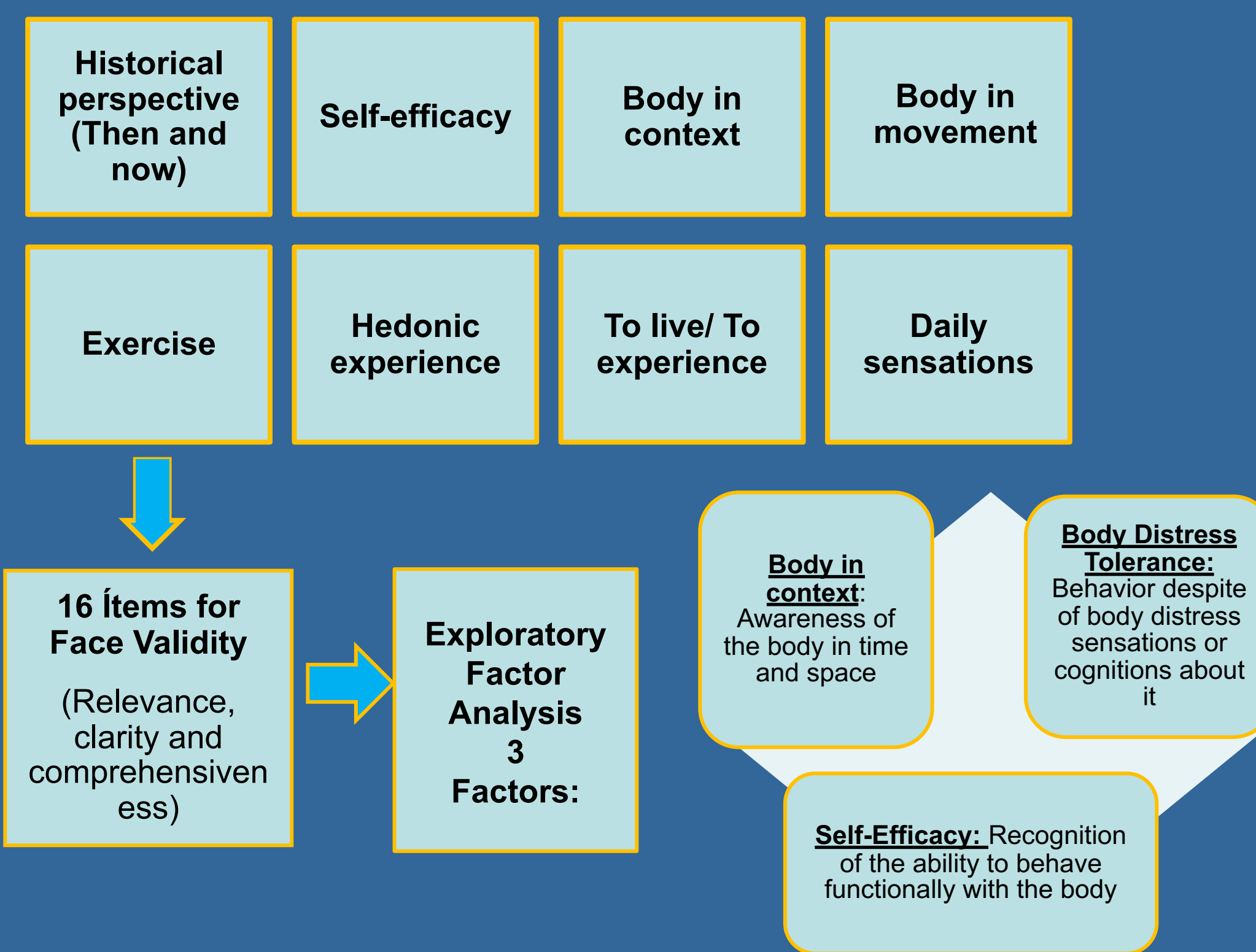
Functional body is defined as the ability to use one's body independently of body image dissatisfaction or distortion, considering:

- Everyday situations, as other people do
- With a coherent pattern of cognitive, motor and affective responses
- Allowing the search for new experiences and to cognitively reappraise them

However, there is not a measuring instrument that assesses the use of the body in daily life situations in patients diagnosed with ED.

This study describes the development and initial validation of a brief questionnaire to assess the use of a functional body in ED patients.

Figure 2. Current Functional Body Questionnaire Categories



## Exploratory Factor Analysis (EFA)

We found that KMO sample adequacy meets criteria ( $>0.70$ ): 0.824 and significance: 0.000  $\rightarrow$  Stronger correlation between items. EFA results show 3 Factors with eigenvalues greater than 1.0. The scale of the 16 items will be summed to obtain a total FBQ score. The higher the score, the higher the functional use the patient gives to his/her body. Forty four ED patients answered questionnaire (Tables 1, 2 and Figure 3).

Figure 3. Functional Body Questionnaire.

**Functional Body Questionnaire (FBQ)**

Body image distortion is a key symptom in ED patients, particularly in women. It interferes with functionality and quality of life. This is a list of statements about the functional use of the body in different situations. Please rate how frequently you felt or experienced each one of them by circling the most appropriate for you, most of the time during the last four weeks.

- I can do things with my body despite the discomfort it may cause me  
Never Rarely Sometimes Usually Always
- I can wear the clothes I like although I worry about what others may think about my appearance  
Never Rarely Sometimes Usually Always
- I am aware of the changes in my body over the years  
Never Rarely Sometimes Usually Always
- I understand that my body size and shape does not completely depend on me  
Never Rarely Sometimes Usually Always
- I do activities like dancing, exercising, even though I do not like everything in my body  
Never Rarely Sometimes Usually Always
- I focus more on the things that my body allows me to do than on how it looks  
Never Rarely Sometimes Usually Always
- I exercise for a different reason than dissatisfaction with my body  
Never Rarely Sometimes Usually Always
- I think I do not need to feel or see myself "perfect" to be able to exercise  
Never Rarely Sometimes Usually Always

Additionally, we investigated concurrent validity between the Functional Body Questionnaire (FBQ) and EDE-Q Shape Concern Subscale, using Pearson correlations ( $r$ ) on sample of 44 individuals. We correlated the total score of the FBQ with the scores obtained in the Shape Concern EDE-Q Subscale. We also correlated the scores on the three FBQ factors (Body in Context, Body Distress Tolerance, and Self-Efficacy) with the same EDE-Q Subscale. We classified correlations as weak ( $r = 0.10-0.39$ ), moderate ( $r = 0.40-0.59$ ), and strong ( $r = 0.60-0.79$ ). See Table 2.

## RESULTS

Table 3. Sociodemographics Characteristics

Variable	N(%)
GENDER	
Female	42 (95.5)
Male	2 (4.5)
Age (SD)	20.5(3.8)
ED TYPE	
AN	17 (38.6)
BN	16 (36.6)
BED	4 (9.1)
OSD	7 (15.9)

AN-Anorexia Nervosa; BN- Bulimia Nervosa; BED- Binge Eating Disorders; OSD- Other Specified Eating Disorders

Table 2. Pattern Matrix

	Body context	Body Distress Tolerance	Self-Efficacy
Item12	0,988		
Item3	0,46		
Item11		0,903	
Item15		0,865	
Item14		0,797	
Item9		0,753	
Item16		0,717	
Item10		0,662	
Item4		0,656	
Item6		0,569	
Item13		0,518	
Item5			0,88
Item7			0,763
Item1			0,632
Item8			0,388
Item2			0,334

Table 4: Concurrent Validity

Scale	Pearson Correlation (r)
FBQ Total score	-0.43 *
FBQ Factor 1 (Body in Context)	-0.15
FBQ Factor 2 (Body Distress Tolerance)	-0.47 *
FBQ Factor 3 (Self-Efficacy)	-0.30

- Concurrent validity of the total FBQ score and the EDE-Q Shape Concern subscale score was **moderate** ( $r = 0.20-0.39$ ) and statistically significant (Table 4).
- FBQ exhibits a **negative correlation** with the EDE-Q Shape Concern subscale
- Correlation is significantly **weaker** with FBQ Factor 1 (Body in context)
- Correlation is **moderate** and statistically significant for FBQ Factor 2.
- FBQ Factor 2 (Body distress tolerance) showed a significant **moderate** correlation ( $r = -0.41$ ) with EDE-Q question 6 (Flat stomach).
- FBQ Factor 3 (Self Efficacy) showed a **moderate** and statistically significant correlation ( $r = -0.42$ ) to EDE-Q question 28 (Avoidance of Exposure).

## DISCUSSION

- The EFA results show a strong correlation between items which means a robust relationship between items and the functional body concept (construct validity).
- Factorial analysis did not remove any item from the initial FBQ, based on variance  $<.30$  Di Lorio (2005).
- We propose the FBQ items to be organized in 3 new categories: Body Distress Tolerance, Body in context and Self-Efficacy.
- The negative correlation between FBQ and EDE-Q Shape concern subscale was expected: FBQ components are scored such that a higher number means a better use of the body and EDE-Q is scored such that a higher number means higher concern.
- The elements on **Body in Context** factor are particular to the Functional Body Questionnaire and are not usually addressed in other scales, we need further studies to assess the relationship of this elements with other aspects of body image disturbances.
- Our findings on the **Body Distress Tolerance** category support our theoretical approach to our body image intervention with inhibitory learning as a guiding principle.
- Results on **FBQ Factor 3** are congruent with other findings on self-efficacy and avoidant behaviors, specifically for eating disorders they suggest that perceiving your own capacity to behave and enjoy functional activities with the body mitigate avoidance of body exposure.

## CONCLUSIONS

- **The FBQ seems to be a useful tool in the clinical work in body image disturbance, focusing the intervention in exposure of the body to life activities in a functional way.**
- **We plan to compare the results of the Body Shape Questionnaire and Functional Body Questionnaire for further psychometric evaluation.**
- **Future applications in general population and ED patients before treatment would help to confirm these results.**
- **Further studies will include a specific analysis on Body in context factor components**

## REFERENCES

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## METHODS AND MATERIALS

Figure 1. Questionnaire development process

