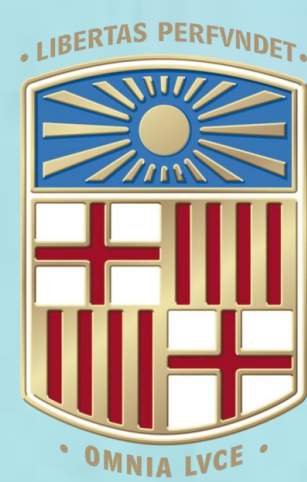


# Maladaptive personality traits associated with the severity and impact of Fibromyalgia

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## Introduction

Considering that Fibromyalgia (FM) is a chronic condition that entails significant levels of pain and emotional stress (Galvez-Sánchez et al., 2019), the assessment of personality is particularly relevant, since it plays a very important role in the modulation of the individual's response to psychological stressors and in their adaptation to chronic diseases (Malin and Littlejohn, 2012). The new proposals of the current editions of the DSM-5 (APA, 2013) and the ICD-11 (WHO, 2019) advocate a dimensional model of personality and its disorders aligned with Livesley's model of personality pathology and his "Dimensional Assessment of Personality Pathology-Basic Questionnaire" (DAPP-BQ; Livesley & Jackson, 2009). The convergence between these models can be found in Ruiz (2021).

## Objective

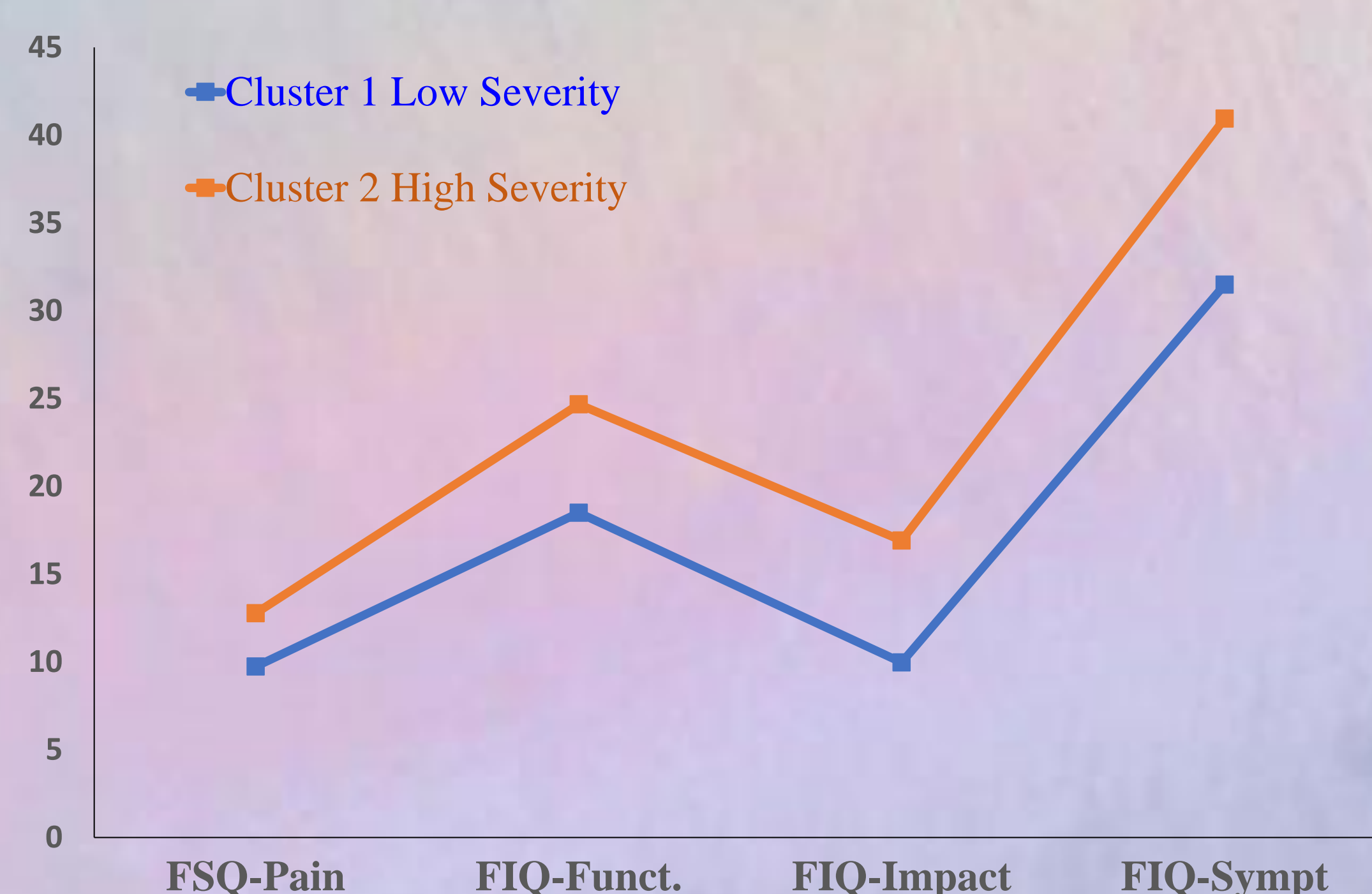
To identify the differential personality pathological traits between two groups of women diagnosed with Fibromyalgia (FM), defined by the impact and severity of FM, as well as to analyze the differences in pain and clinical symptoms of both groups.

## Method

The participants were 83 women diagnosed with FM aged 31 to 84 years old ( $M= 56.41$ ;  $SD= 9.23$ ) and body mass index (BMI)  $27 \text{ kg/m}^2$ . They were all administered the FSQ (severity of FM), FIQ-R (Impact of FM), MPQ-SV (Pain), PASS-20 (Anxiety), BDI-II (Depression), PSS (Stress), STAXI-2 (Angry), and DAPP-BQ to assess personality.

## Results

The two groups of FM patients were identified by Hierarchical Cluster Analysis using the FSQ and FIQ-R scales as clustering variables, with squared Euclidean distances included in the proximities matrix. Ward's method was used to form clusters, and standardized data were used to minimize bias caused by differences in the measurement of variables.



**Cluster 1** consisted of 39 patients and shows moderate scores in severity and impact scales. **Cluster 2** contained the largest number of patients and shows a more severe profile with a greater impact of FM, high levels of pain and clinical symptoms. Except for "Control of Anger", all scores were higher than those of Cluster 1 (Table 1).

**Table 2.** Differences in dysfunctional personality traits between two clusters

DAPP-BQ Traits	Low Severity <i>M (SD)</i>	High Severity <i>M (SD)</i>	$t_{73}$	$p$	$g$	IC 95%
Submissiveness	38.26 (9.95)	42.8 (9.01)	-2.08	.041	0.68	0.22, 1.15
Affective Lability	42.37 (9.89)	54.30 (11.37)	-4.81	< .001	0.48	0.02, 0.94
Anxiousness	43.69 (12.95)	56.03 (12.96)	-4.12	< .001	<b>0.94</b>	0.46, 1.42
Insecure Attachment	44.11 (13.94)	51.30 (15.13)	-2.13	.037	0.49	0.03, 0.95
Cognitive Distortion	37.57 (9.69)	48.30 (12.17)	-4.18	< .001	<b>0.96</b>	0.48, 1.44
Identity problems	39.89 (11.85)	53.65 (11.41)	-5.12	< .001	<b>1.17</b>	0.68, 1.66
Oppositionality	41.11 (9.25)	47.30 (9.21)	-2.90	.005	0.66	0.20, 1.13
Compulsivity	58.06 (9.77)	63.08 (9.15)	-2.29	.025	0.53	0.06, 0.99
Suspiciousness	27.74 (7.84)	33.00 (9.22)	-2.64	.010	0.61	0.14, 1.07
Self-Harm	15.14 (5.15)	24.23 (11.68)	-4.25	< .001	<b>0.97</b>	0.49, 1.45

In Table 2 we can see the dysfunctional personality traits in which patients with greater severity in FM score significantly higher. The most pronounced differences ( $g > 0.8$ ) are found in "Anxiety", "Cognitive distortions", "Identity problems", and "Self-harm".

## Conclusions

This study confirms the existence of different subgroups of patients with FM depending on its severity and impact. The group with more severe FM (Cluster 2) is characterized by a tendency to excessive worry, with thought disturbances, anhedonia, pessimism, thoughts of self-harm and greater clinical symptoms. Therefore, we can conclude that the pathological personality traits that are most predictive of a higher risk of suffering from a more disabling FM are "Identity problems" and "Self-harm".

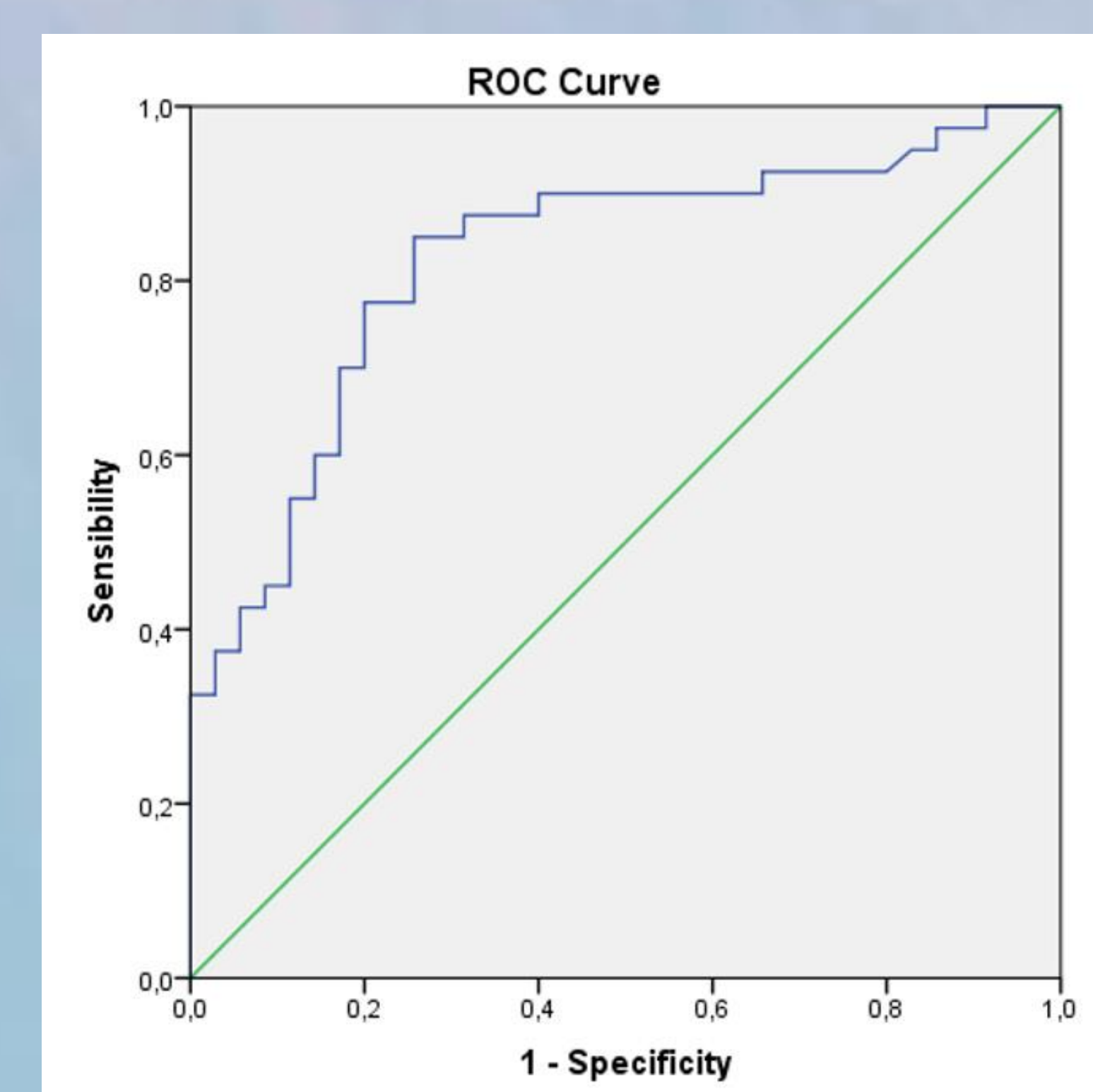
**Table 1.** Differences in pain and Clinical symptoms between two clusters

	Low Severity <i>M (SD)</i>	High Severity <i>M (SD)</i>	$t_{80}$	$p$	$g$	IC 95%
MPQ-SV Total Pain	37.23 (9.01)	44.4 (7.85)	-3.85	<.001	<b>0.84</b>	0.39; 1.30
MPQ-SV Pain intensity	2.95 (0.89)	3.74 (0.95)	-3.90	<.001	<b>0.85</b>	0.40; 1.30
MPQ-SV VAS	6.95 (0.99)	8.21 (1.03)	-5.60	<.001	<b>1.22</b>	0.75; 1.69
PSS	31.26 (6.77)	34.26 (5.75)	-2.17	.033	0.48	0.04; 0.91
PASS-20	43.36 (16.95)	66.88 (15.5)	-6.56	<.001	<b>1.44</b>	0.95; 1.92
BDI-II	18.49 (9.72)	33.81 (10.27)	-6.92	<.001	<b>1.52</b>	1.02; 2.01
STAXI State	18.64 (5.52)	26.91 (9.89)	-4.73	<.001	<b>1.02</b>	0.55; 1.47
STAXI Trait	18.28 (5.84)	23.37 (6.43)	-3.74	<.001	<b>0.82</b>	0.37; 1.27
STAXI Expression	22.74 (6.02)	26.91 (5.79)	-3.19	.002	0.70	0.25; 1.15
STAXI Control	35.28 (6.71)	29.58 (7.55)	3.60	.001	<b>-0.80</b>	-1.24; -0.34
STAXI Anger Expression Index	24.79 (11.65)	33.95 (12.67)	-3.40	.001	0.74	0.30; 1.19

To analyze the association between dysfunctional personality traits and the severity of FM we performed a forward stepwise logistic regression analysis, using the Wald statistic, and introducing as predictors only those traits in which the magnitude of the difference was high ( $g > 0.8$ ). As we can see in Table 3, "Identity problems" and "Self-harm" can be considered risk factors for more severe and disabling FM.

**Table 3.** Logistic regression predicting likelihood of severe FM

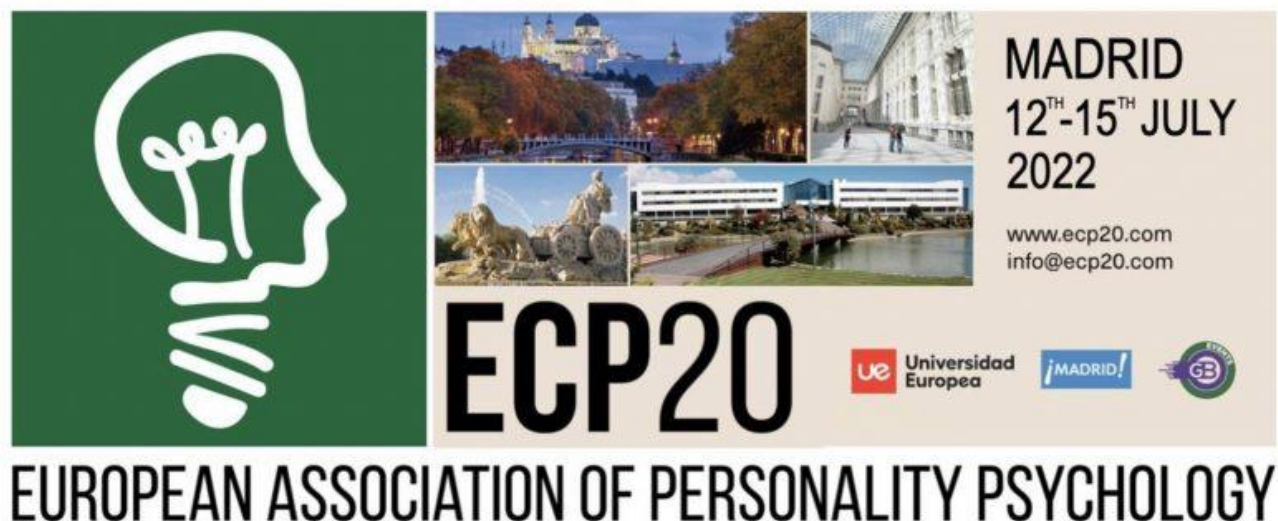
Predictor variables	$B$	SE	Wald	$gl$	$p$	OR	CI 95%
Identity Problems	0.069	0.025	7.602	1	.006	1.072	1.020 – 1.125
Self-Harm	0.090	0.043	4.469	1	.035	1.095	1.007 – 1.190



The model was statistically significant ( $\chi^2 = 27.527$ ,  $p < .001$ ), the Hosmer-Lemeshow test results were:  $\chi^2 = 9.457$ ,  $p = .221$ . The model explained 41% (Nagelkerke  $R^2$ ) of the variance and correctly classified 78.7% of the cases with a specificity of 80% and a sensibility of 77.5%. Area under the ROC curve (AUC) = .825,  $p < .001$  (0.729, 0.921) CI 95%.

All these data allow us to affirm that the model with these two dysfunctional personality traits ("Identity problems" and "Self-harm") allows us to distinguish 82.5% of patients with severe FM.





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**Topic:** Personality and Health

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