

# DII Mentoring Project – Patient Associations as a Catalyst for Quality-Of-Life Improvement And Positive Economic Impact In Inflammatory Bowel Disease

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## Introduction

Inflammatory bowel disease (IBD), which refers to ulcerative colitis (UC) and Crohn's disease (CD), poses a significant burden on patients' physical, emotional, and social well-being. In Portugal, IBD prevalence is estimated at 24,069 patients, with 6,067 DALYs estimated to be lost in Portugal due to IBD (1). Approximately 1500 cases are diagnosed every year (2). Beyond clinical management, peer support programs can help patients navigate the challenges of living with a chronic illness (3). The DII Mentoring Project was launched to connect individuals recently diagnosed with IBD (mentees) with experienced patients (mentors) who can share practical advice, emotional support, and coping strategies. Implemented in 2020, this structured program aimed to promote effective disease self-management, improving patients' (both mentees and mentors) quality of life (QoL).

## Objectives

The main objective of this work is to evaluate the QoL impact across multiple dimensions and groups of patients and to estimate the economic benefit of the program. Secondary objectives are focused on the impact of the program on disease severity, depression, and global satisfaction.

## Methods

Participants completed a baseline clinical and demographic questionnaire, along with the SF-36 MOS, HADS (Hospital Anxiety and Depression Scale), and PSS-10 (Perceived Stress Scale) questionnaires, which were administered electronically, using google forms, annually through year 4. SF-36 scores were calculated for each domain and also converted to EQ-5D index scores using the algorithm validated by Rowen et al. (4). A mixed-effects model was fitted to baseline covariates, with the EQ-5D index score as the dependent variable. The program's global societal value was estimated using the Portuguese Willingness to Pay (WTP) threshold of 14,784€/QALY, as described by Woods et al. Data analysis was performed using Rstudio (R V4.5.0).

## Results

Until 2025, 102 participants were included: 59 mentees and 43 mentors. Most mentees were female (85%); 44% had ulcerative colitis, 51% Crohn's disease, and 5% unspecified colitis. Disease duration was significantly greater in mentors (15 vs. 1,  $p < 0.001$ ), and adherence rates were also higher (Table 1).

Table 1 – Baseline characteristics of study population

	Mentees		Mentors		Between groups difference *
	Freq	%	Freq	%	
n	59	100.00%	43	100.00%	NA
Gender					<b>p &lt; 0.05</b>
Male	8	13.56%	14	32.56%	
Female	51	86.44%	29	67.44%	
Disease					<b>p &gt; 0.05</b>
Ulcerative Colitis	26	44.07%	18	41.86%	
Chron Disease	30	50.85%	25	58.14%	
Unspecified Colitis	3	5.08%	0	0.00%	
Age at diagnosis (Median)	33 (16-69)		25 (14-43)		<b>p &lt; 0.05</b>
Age at project start (Median)	35 (18-73)		42 (24-71)		
Time from diagnosis (years - Median)	1 (0-24)		15 (4-48)		<b>p &lt;0.001</b>
Time in project (years - Median)	0 (0-4)		1 (0-4)		
Adherence (N follow-up questionnaires)	72		59		NA
Adherence rate (%)	65.69%		81.51%		<b>p &gt; 0.05</b>
Reported disease severity (Average)	3.1		2.9		NA

\* Evaluated by t-test or chi-squared test

In all QoL dimensions evaluated, mentees showed significant ( $p < 0.05$ ) improvement by year 3, mainly in physical activities (+28.8) and emotional function (+45.8) (Figure 1).

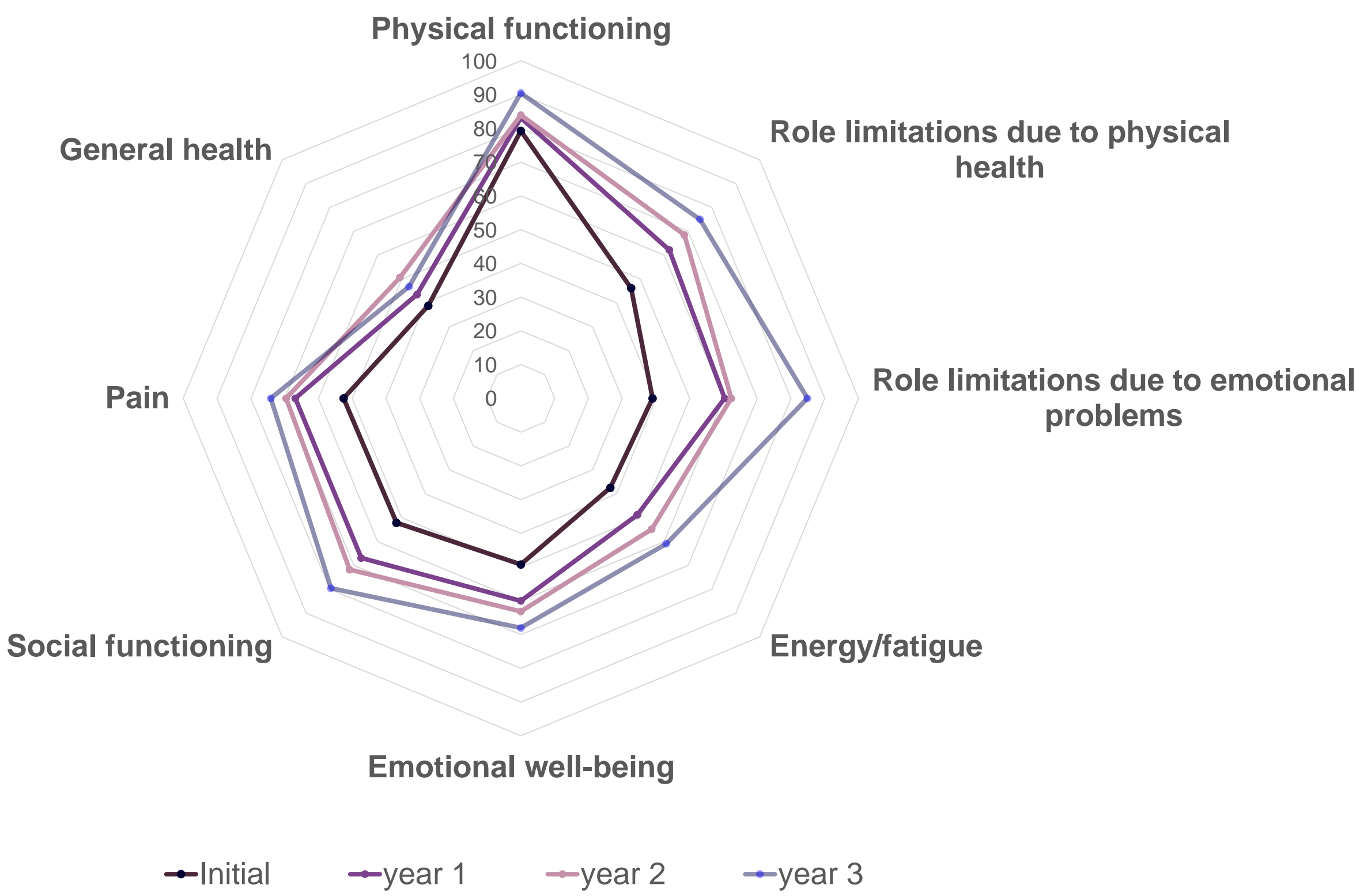


Figure 1 – Mentees SF-36 score by domain, from entering the project to year 3 (100 represents the best score)

After the first year, mentees had a 0.12-unit increase in EQ-5D index score, 0.62 vs 0.74 (Wilcoxon,  $p < 0.05$ ). Focusing on depression, in the initial assessment 39% of mentees presented depression or borderline depression, comparing to 18.2% after 4 years. Of the 8 patients with uncontrolled disease at baseline, only 1 remained uncontrolled after 2 years in the program. Initial disease severity ( $\beta$  - 0.079,  $p < 0.001$ ) and disease control ( $\beta$  -0.057,  $p < 0.001$ ) were the only factors impacting QoL improvement. Regarding satisfaction with the program, mentees had a 3.66 score after 3 years, comparing to 3.11 for the mentors group. Disease control improved in 77% of participants. The program's global economic impact was estimated at +26,611€/year.

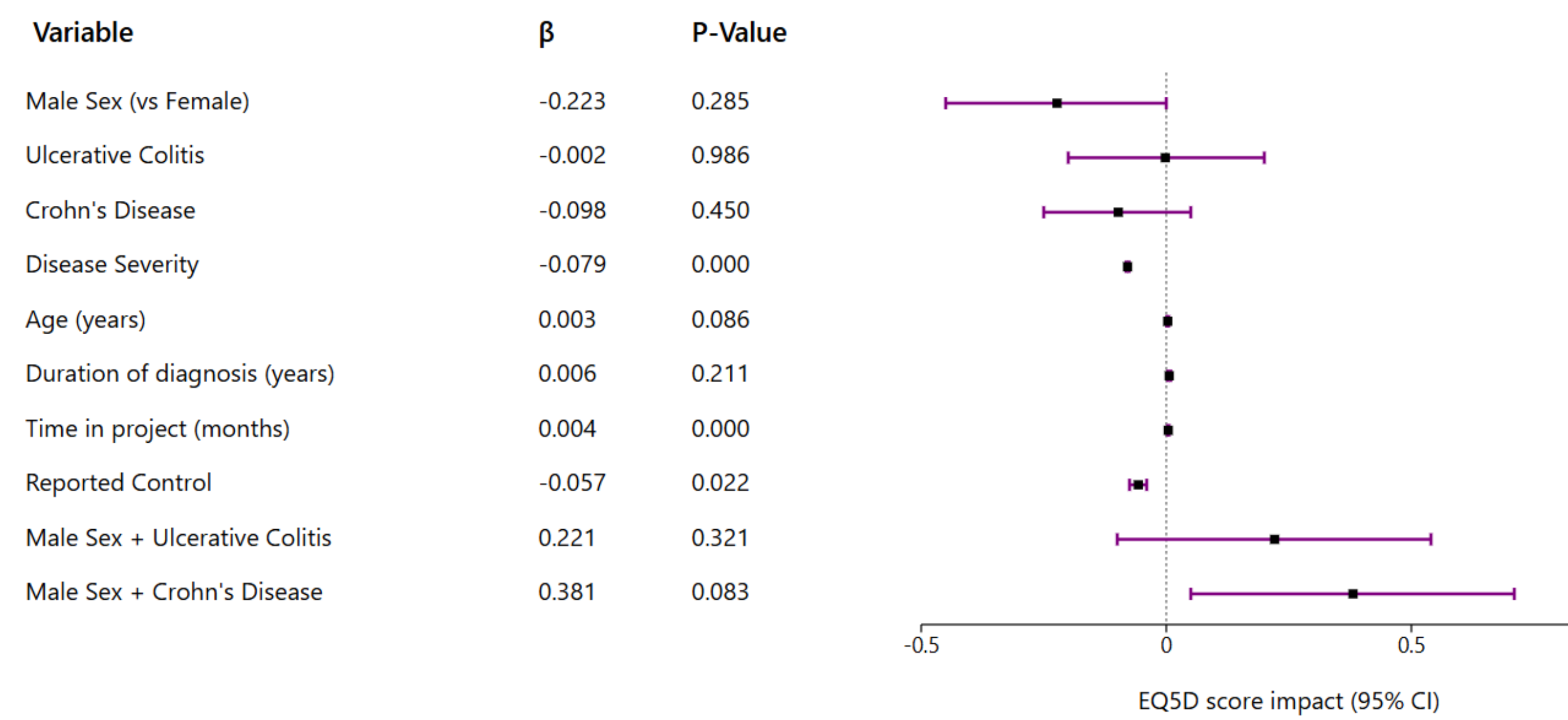
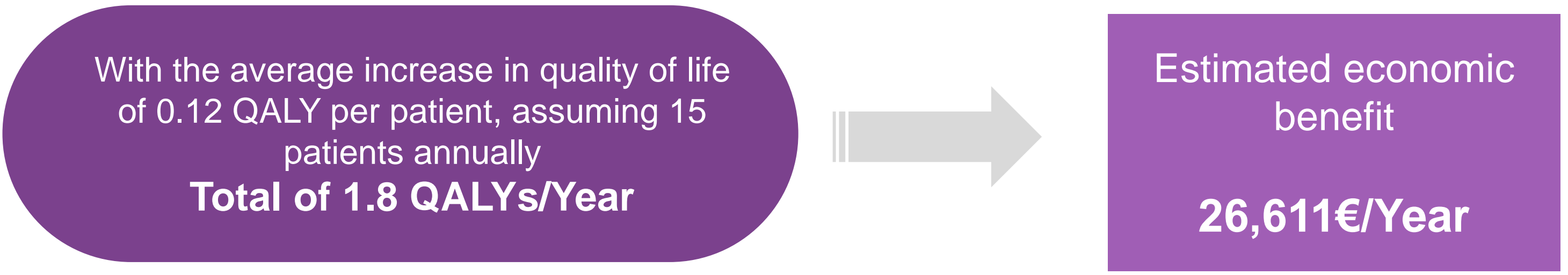


Figure 2 – Mixed effects linear regression of baseline factors with EQ5D index score after one year



## Discussion and Conclusions

This mentoring program significantly improved QoL, emotional well-being, and disease control in patients with IBD. Depression rates and uncontrolled disease decreased, and mentees reported high satisfaction. With an estimated annual economic benefit of €26,611, these findings support integrating mentoring into national strategies to promote personalized, patient-centered care.



### References

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