ORGANIZATIONAL SUPPORT IN ADOPTING NEW TREATMENTS FOR GENERALIZED MYASTHENIA GRAVIS

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INTRODUCTION

- Resistance to change is a well-known phenomenon in healthcare that often hinders healthcare innovation adoption.
- Resistance behavior arises from personal traits (openness to change or peers influence), perceived innovation characteristics (usefulness, value, and ease of use), and external factors like organizational support, which may be particularly impactful in transformative therapeutic landscapes.
- In recent years, multiple new targeted therapies for adult generalized myasthenia gravis (gMG) patients with antibodies against the nicotinic acetylcholine receptor (AChR-IgG) have been approved.

OBJECTIVES/AIMS

- This study aimed to evaluate the resistance behavior associated with the incorporation of new targeted treatments for gMG, focusing on organizational support for change.

METHODS

- An online, non-interventional, cross-sectional study was conducted in collaboration with the Spanish Society of Neurology (PROMPT-MG study).
- From April to July 2024, neurologists assisting patients with gMG proactively answered a survey composed of demographic characteristics, professional background, and behavioral traits.
- This study was approved by the investigational review board of the Hospital Universitario Clínico San Carlos (Madrid, Spain). Written informed consent was obtained from all participants.

Outcome measure

- Resistance to adopting gMG targeted-treatments was assessed using the User Resistance Behavior questionnaire adapted to the introduction of these new therapies in gMG.
- The User Resistance Behavior is a 34-item self-administered questionnaire evaluating resistance trait (5 items), openness to change (4 items), perceived usefulness (4 items), ease of use (5 items), perceived value (4 items), peer influence (3 items), self-efficacy for change (4 items), and organizational support (5 items).
- The five items of organizational support for change were described as follows:
  - *Specialized instruction and training concerning the change to using selective therapies is available to me.*
  - *Management policies and rules facilitated the change to using selective therapies.*
  - *Formal guidance was available to me in changing to using selective therapies.*
  - *The management provided most of the necessary help and resources to enable me to change to using selective therapies.*
  - *I receive the necessary support and assistance to change to the use of selective therapies.*
- Each item is rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Lower scores in the organizational support items indicate greater resistance to change reflecting a lack of institutional backing.
- Other questionnaires were used to describe personality traits of participants and are described in **Table 1**:

Table 1. Personality traits outcome measures

Questionnaire	Outcome
Big Five Inventory (BFI-10)	Personality traits: Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness
Utrecht Work Engagement Scale (UWES)	Work fulfilment
Single-item for clinical risks	Attitude towards clinical risks
Regret Intensity Scale (RIS-10)	Care-related regret with a patient experience in the last 5 years
Maslach Burnout Inventory – Emotional Exhaustion (MBI-EE)	Burnout
Jefferson Scale of Physician Empathy (JSPE)	Empathy in patient care

Statistical analysis

- Multivariate linear regression analyses determined the association between organizational support for change and participant characteristics.

RESULTS

- A total of 149 neurologists were included (mean age [SD]: 39.0±9.4 years, 54.4% male, median experience managing gMG [IQR]: 7 [3-15] years). A 34.9% of participants reported using minimum symptom expression (MSE) to guide treatment decisions. Demographic, professional, and other characteristics of the sample are shown in **Table 2**.

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CONCLUSION

- **Organizational support was the main barrier to integrate new gMG treatments among Spanish neurologists, particularly for those with less experience and those not using demanding treatment goals.**
- **Addressing organizational support to the access of innovation and implementing specific interventions may facilitate the adoption of new therapies in clinical practice.**

Table 2. Participant characteristics

	Total (n=149)
Age, mean (SD), years	39.0 (9.4)
Sex (male), n (%)	81 (54.4%)
Years of experience as neurologist, median (IQR)	10 (6 – 9)
Years of experience managing MG patients (excluding residency period), median (IQR)	7 (3 – 15)
Degree of specialization, n (%)	
Neuromuscular specialist	48 (32.2%)
Demyelinating diseases specialist	25 (16.8%)
General neurologist involved in assisting patients with MG	76 (51.0%)
Type of hospital, n (%)	
Academic hospital	141 (94.6%)
CSUR	42 (28.2%)
MG-specific consultation, n (%)	43 (28.9%)
Number of MG patients managed in one month, median (IQR)	10 (5 – 20)
Number of neurologists who manage MG patients with the respondent neurologist, median (IQR)	3 (2 – 5)
Participation in MG clinical trials in the last 5 years, yes, n (%)	38 (25.5%)
Co-author of peer-reviewed publications in the last 3 years, yes, n (%)	94 (63.1%)
Attended neuromuscular congresses last year, yes, n (%)	134 (89.9%)
User resistance behavior score, mean (SD) (range: 1-7)	3.0 (0.8)
BFI-10 score, mean (SD) (range: 1-5)	
Extraversion	3.3 (0.9)
Agreeableness	3.6 (0.7)
Conscientiousness	4.1 (0.7)
Neuroticism	2.5 (0.8)
Openness	3.8 (0.8)
UWES score, mean (SD) (range: 0-6)	4.5 (0.9)
Clinical risk attitude, mean (SD) (range: 1-5)	2.8 (1.0)
≥3 (risk taker), n (%)	90 (60.4%)
RIS-10 global score, mean (SD) (range: 10-50)	20.6 (7.3)
≥30 (experience of moderate-to-high regret)	17 (11.4%)
MBI-EE, n (%) (range: 1-5)	
≤2 (no symptoms of burnout)	122 (81.9%)
≥3 (1 or more symptoms)	27 (18.1%)
JSPE total score, mean (SD) (range: 20-140)	119.9 (11.1)
Total score < 1 mean – 1SD (lower empathy)	25 (16.8%)

BFI-10: Big Five Inventory; CSUR: Center accredited as a national service for MG care process by the Spanish Ministry of Health; IQR: interquartile range; JSPE: Jefferson Scale of Physician Empathy; MBI-EE: Maslach Burnout Inventory, MG: myasthenia gravis; RIS-10: Regret Intensity Scale; SD: standard deviation; UWES: Utrecht Work Engagement Scale.

- Organizational support was identified as the greatest barrier to adopting new gMG treatments (mean±SD: 3.6±1.4).
- Lower perceived organizational support correlated with younger age, less experience, being a general neurologist (vs. neuromuscular specialist), lacking a dedicated MG consultation, treating fewer patients, and not using demanding gMG goals, as well as lower agreeableness, vigor, dedication, and work absorption.
- Fewer years of experience, fewer gMG patients managed, higher extraversion, lower agreeableness, lower work absorption, and not using demanding gMG goals were predictors of perceiving lower organizational support when adopting innovative treatments (**Table 3**).

Table 3. Multivariate linear regression analysis of factors related to Organizational support for change

Parameter Estimates						
Parameter	**DF**	**Estimate**	**Standardized Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	0.536922	0	0.742481	0.72	0.4708
Years of experience as neurologist (>=10 years vs <10 years)*	1	0.462252	0.170757	0.197468	2.34	**0.0206**
Number of MG patients managed in one month (>=10 patients vs <10 patients)*	1	0.519912	0.187393	0.204080	2.55	**0.0119**
Extraversion	1	-0.240975	-0.160673	0.110699	-2.18	**0.0311**
Agreeableness	1	0.470684	0.225679	0.151833	3.10	**0.0023**
Absorption	1	0.338729	0.275657	0.089262	3.79	**0.0002**
MSE use (yes vs no)	1	0.433572	0.152770	0.206689	2.10	**0.0377**

*Divided by median value. MG: myasthenia gravis; MSE: minimum symptom expression.

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