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## COMPARATIVE ANALYSIS OF REHABILITATION METHODS IN PATIENTS WITH SECONDARY PROGRESSIVE MULTIPLE SCLEROSIS

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**Background:** Secondary progressive multiple sclerosis (SPMS) is a chronic neurodegenerative condition characterized by gradual worsening of neurological function following an initial relapsing-remitting phase. Due to the limited efficacy of pharmacological treatments in the progressive phase, non-pharmacological rehabilitation approaches play a critical role in maintaining functionality and improving quality of life.

**Objective:** To evaluate and compare the effectiveness of three rehabilitation interventions-physiotherapy (PT), functional electrical stimulation (FES), and transcranial magnetic stimulation (TMS)-in patients diagnosed with SPMS.

**Methods:** This prospective comparative study included three patient groups (n = XX per group), each receiving one of the rehabilitation modalities over a four-week period. Quality of life was assessed pre- and post-intervention using the SF-36 Health Survey, which includes domains such as Physical Functioning (PF), Role Physical (RP), Bodily Pain (BP), General Health (GH), Role Emotional (RE), Vitality (VT), Social Functioning (SF), and Mental Health (MH).

**Results:** All three modalities resulted in measurable improvements across multiple SF-36 domains. TMS demonstrated the most significant gains, particularly in RP (+3.8), VT (+4.2), SF (+2.7), and MH (+5.2), suggesting a pronounced effect on both physical and psychological components. FES showed moderate improvements, especially in RE (+3.2) and MH (+4.9), while PT was associated with more modest but consistent gains, notably in GH (+1.9) and MH (+3.6).

**Conclusion:** Each rehabilitation method contributed to improved quality of life in patients with SPMS, with transcranial magnetic stimulation showing the most comprehensive benefits. These findings support the incorporation of individualized, multimodal rehabilitation programs in the management of SPMS to address both physical and mental health domains.