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## BACKGROUND

- Despite significant medical advances in MS care, evidence-based health promotion and supportive care interventions (EBIs) remain underutilized in clinical practice.
- The Multiple Sclerosis Implementation Network (MSIN), a national practice-based research network, aims to bridge this gap by identifying and implementing high-impact EBIs for people living with MS (PLwMS).
- We conducted a scoping review to identify health promotion, symptom management, and supportive care interventions for PLwMS.

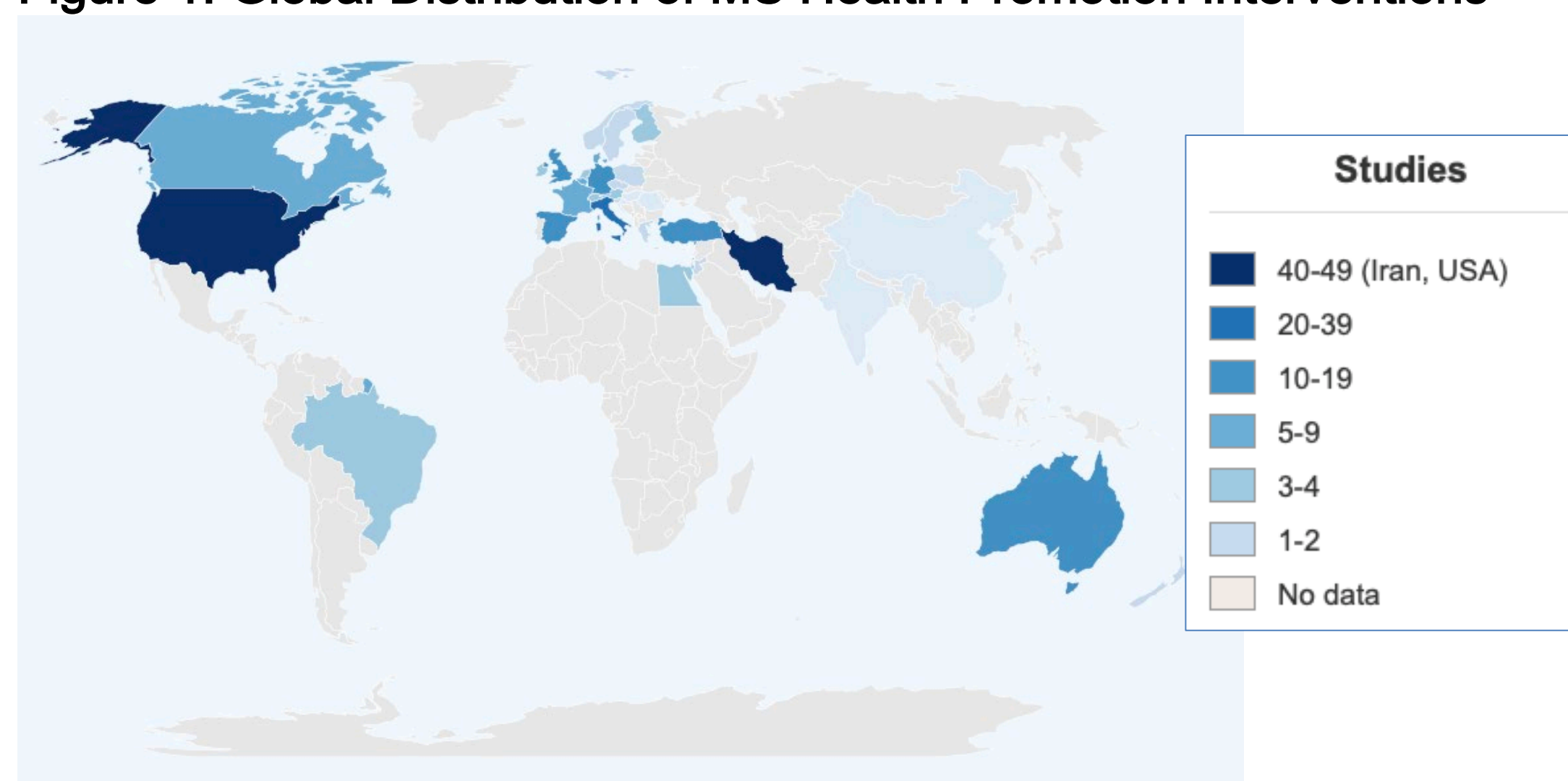
## METHODS

- Databases:** 1,049 articles identified from PubMed, Web of Science, CINAHL, and Cochrane Library.
- Inclusion criteria:** Peer-reviewed studies (Jan. 2014–Aug. 2025) in English, evaluating health promotion and supportive care interventions for adults with MS, with meaningful clinical or statistical outcomes, identified through randomized controlled trials (RCTs) or systematic reviews & meta-analyses (SR/MA).

## RESULTS

- 208 studies (168 RCTs & 40 SR/MA) met the inclusion criteria.
- Research spanned 33 countries, with the USA, Iran, Italy, Turkey, and Spain accounting for 69% of studies (Figure 1). Limited research from Africa (Egypt), Asia (China, India), & Latin America (Brazil).

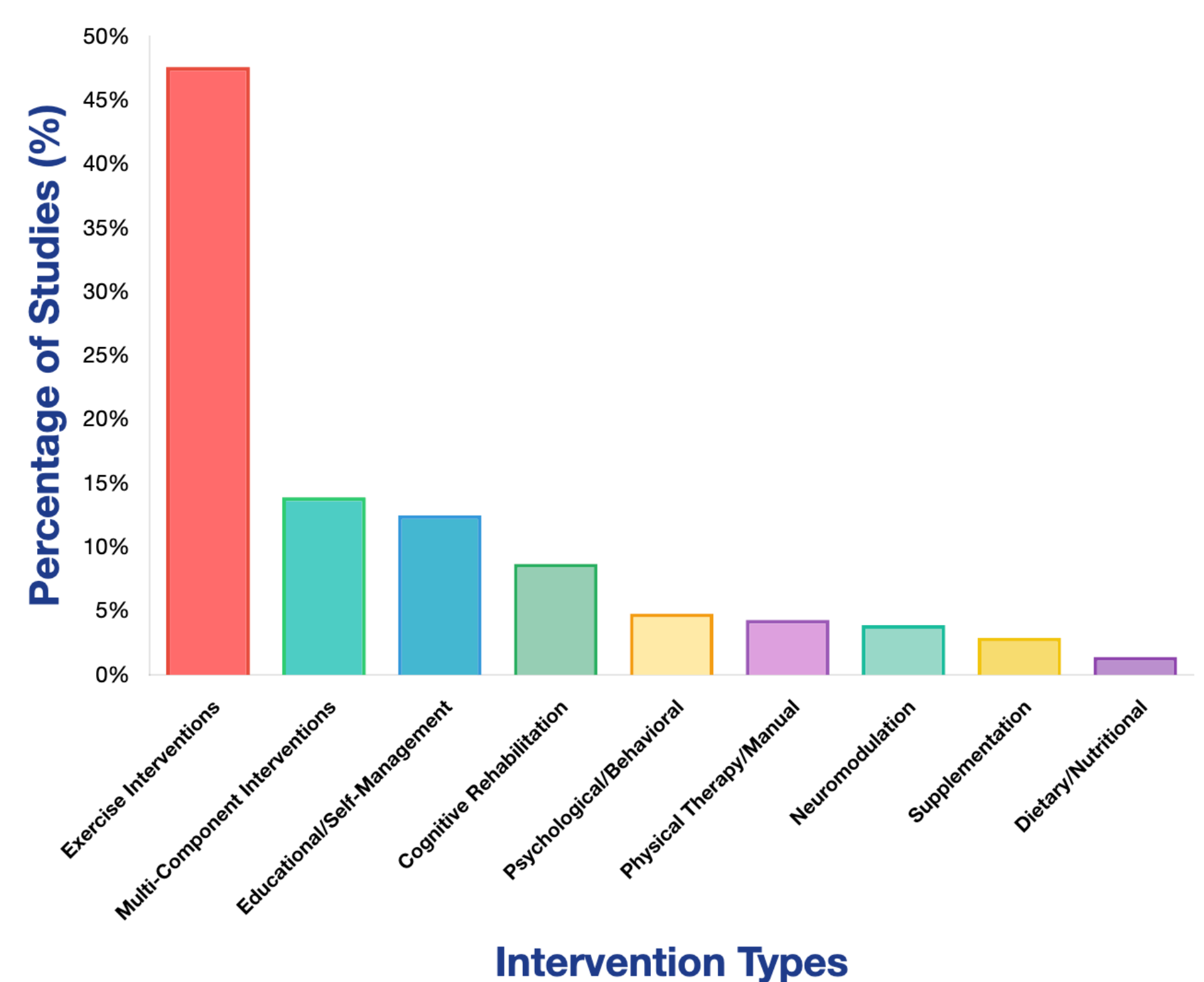
**Figure 1. Global Distribution of MS Health Promotion Interventions**



- Study settings (n=135):** Most were home-based or virtual (27.4%), multiple (24.4%), and university-based (15.6%; academic hospitals or facilities, e.g., hospitals, labs, research, or sport centers) settings.
- Outcome categories:** Symptom management (53.8%), motor function & disability (44.2%), functioning (29.3%), cognitive function (21.2%), psychological (20.2%), biomarkers & physiology (14.9%), physical fitness (9.6%), decision-making & self-management (5.3%), and diet & nutrition (1.4%).

- Exercise interventions dominated research (47.6%), including aerobic and resistance training, aquatic therapy, and balance and technology-enhanced exercises.
- Multi-component EBIs (13.9%) were the second most common, combining education, rehab, exercise, and brain stimulation.
- Only one Phase III intervention was identified - Behavioral Intervention for Physical Activity in MS (BIPAMS).
- Dietary/Nutritional interventions represent the most understudied area (1.4% of studies), followed by Supplementation (2.9%) and Neuromodulation (3.9%), highlighting significant research gaps in MS care.

**Figure 2: Distribution of MS Health Promotion Interventions (n = 208)**



## CONCLUSION

- Most EBIs were developed by single research teams without independent replication, creating evidence validation gaps.
- Geographic concentration and critical gaps in methodology reporting and intervention replication present challenges for evidence synthesis and implementation planning in diverse healthcare settings.

## MSIN OPPORTUNITIES

- MSIN provides a venue for interdisciplinary implementation research that could improve health outcomes for PLwMS.
- Each intervention will be prioritized based on the strength of evidence, potential impact on patient outcomes, alignment with patient and stakeholder priorities, and feasibility of adoption and implementation across MSIN sites.