

## Objective

To assess relapse-related knowledge among people with multiple sclerosis (pwMS) and examine associations with sociodemographic factors.

## Methods

Cross-sectional survey (June–July 2024). The questionnaire comprised: 14 items on sociodemographic and clinical characteristics; the **Relapse Knowledge Questionnaire (RNK)** assessing knowledge of relapse signs and treatments. Descriptive statistics were computed. Associations were explored using **Spearman's rank correlation ( $\rho$ )**.

## Results

**N = 109** pwMS; **92.7%** with relapsing-remitting MS. **45.9%** received care at centres in Northern Italy. A **substantial knowledge gap** emerged regarding relapse recognition and management: only **3.7%** correctly identified relapse signs; **13.8%** knew about the effectiveness of **oral corticosteroids**; the highest accuracy concerned **use of corticosteroids during a relapse (62.4% correct)**. Most items had >50% incorrect responses. Care in **Southern Italy** was associated with **lower access to MS nurse specialist support** and **lower relapse knowledge ( $\rho = -0.198$ ;  $p = .039$ )**. Employed participants tended to report higher knowledge, though **not statistically significant ( $\rho = 0.180$ ;  $p = .061$ )**.

Aspect	Key Results
Sample	N = 109 pwMS; 92.7% RRMS; 45.9% followed at centres in Northern Italy
Knowledge gap - recognition	Only 3.7% correctly identified relapse signs
Knowledge gap - oral corticosteroids	13.8% aware of effectiveness
Knowledge gap - use during relapse	62.4% correct on use of corticosteroids during relapse
Overall pattern	Most RNK items had >50% incorrect responses
Regional association	Care in Southern Italy → lower access to MS nurse specialist support and lower relapse knowledge ( $\rho = -0.198$ ; $p = .039$ )
Employment signal	Employed participants tended to have higher knowledge ( $\rho = 0.180$ ; $p = .061$ ; not significant)

Table 1. Relapse knowledge in pwMS — summary of findings (N = 109)

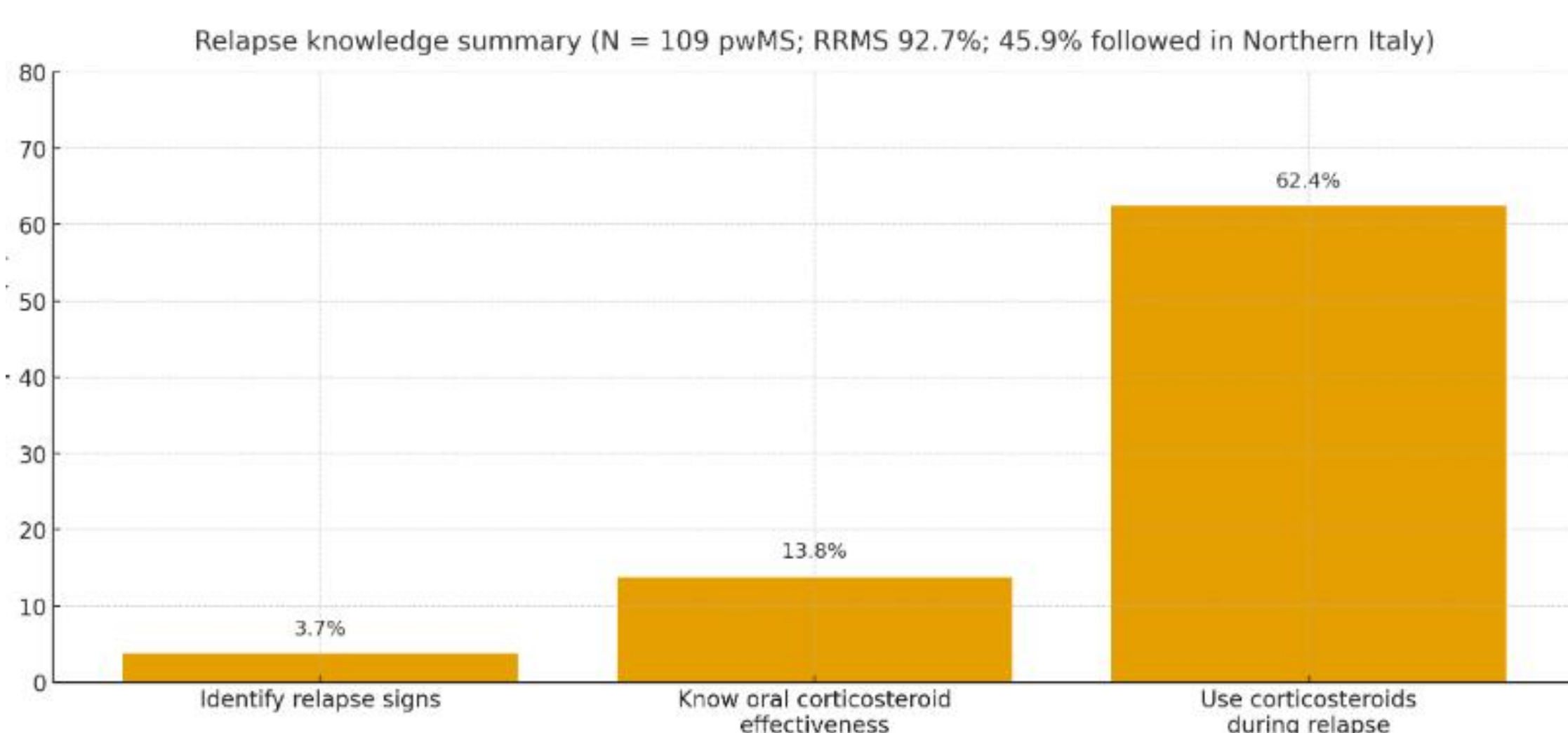


Figure 1. Relapse knowledge—selected RNK items (% correct).

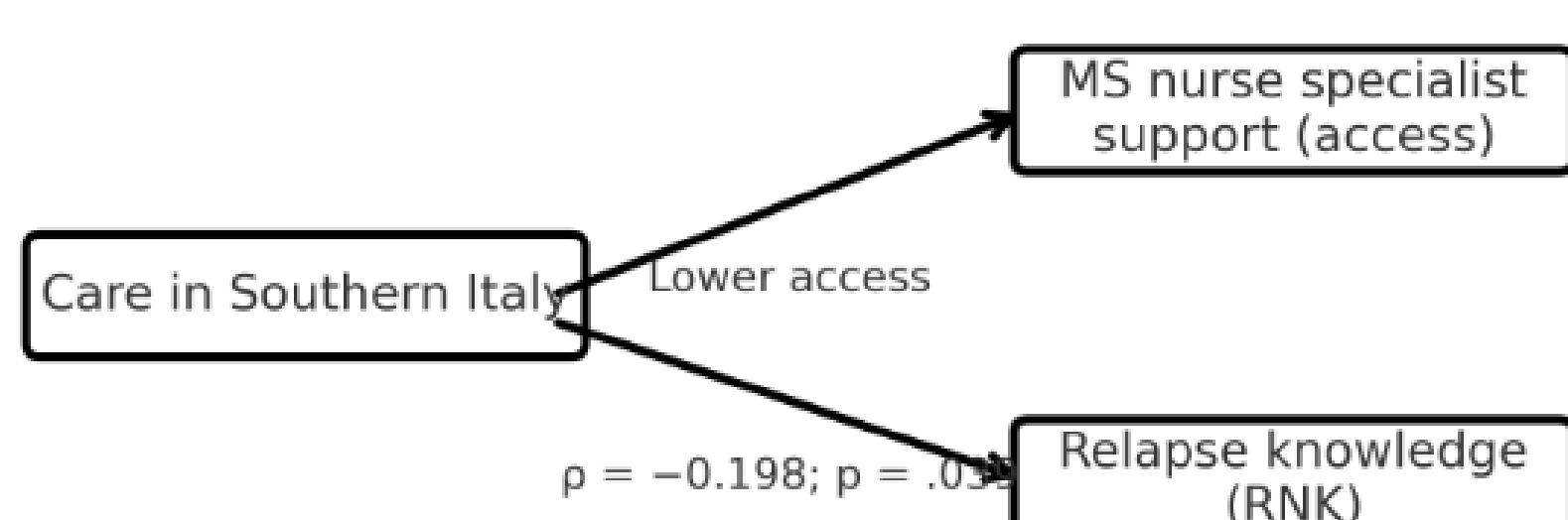


Figure 2. Regional association with access and knowledge.

## Discussion

Marked disparities in relapse knowledge persist among pwMS. Difficulties in recognizing relapse signs and understanding oral corticosteroid roles indicate **gaps in patient education**. Regional differences—particularly **less specialized nursing support in the South**—suggest inequities in educational resources and care pathways. Employment may relate to greater health-system navigation and awareness, warranting further study of **socio-economic determinants** of knowledge.

## Conclusions

Relapse knowledge among pwMS shows **notable deficits** influenced by **geographic** and **socio-economic** factors. Strengthening **MS nurse-led education** and targeted information on relapse recognition and treatment—especially in underserved areas—may improve self-management, decision-making, and equity of care.