Title: Ethnic and Socioeconomic Disparities in MS Progression and Management: A Real-World Analysis Using the UK MS Register

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INTRODUCTION

- Multiple Sclerosis (MS) is a chronic, debilitating neurological disease with a variable course.
- Previous researches have suggested that individuals from ethnic minority backgrounds may experience worse MS outcomes.
- The influence of socioeconomic status (SES) is often intertwined with ethnicity, but its independent contribution to MS progression in the UK's universal healthcare system is poorly understood (Harding et al., 2019).

OBJECTIVE:

To investigate disparities in MS presentation, management, and disability progression across different ethnic and socioeconomic groups using real-world data from the UK MS Register.

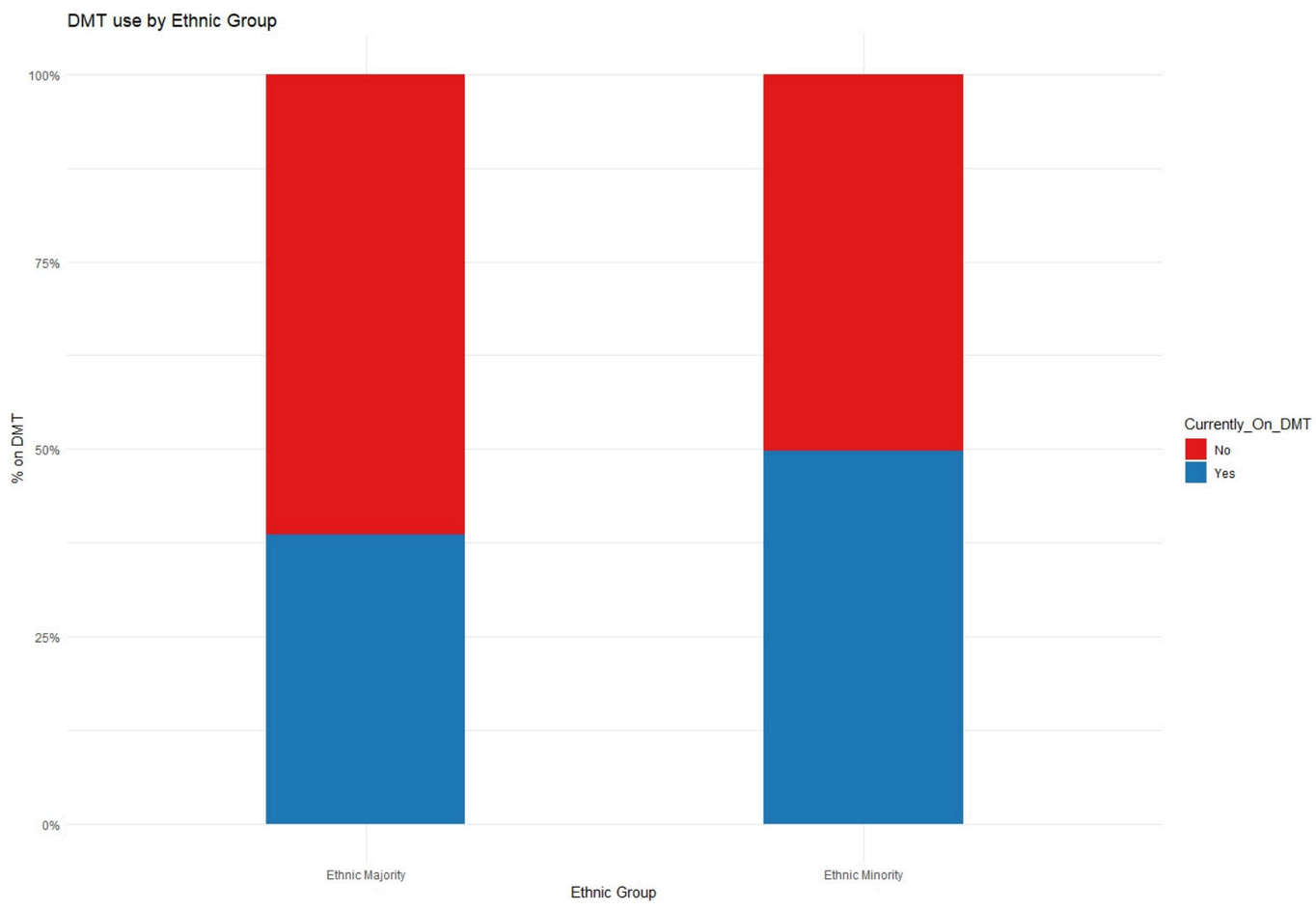
METHODS

- Data Source: Anonymised data from the UK MS Register, a prospective registry of people with MS.
- Study Population: Patients with a confirmed MS diagnosis identifying as African, Caribbean, South Asian, or Other, compared with the Ethnic Majority population for treatment patterns.
  - Variables: Socioeconomic: Education Level, Employment Status.
  - Clinical: MS Type, Disease Progression.
  - Management: DMT Use, Time to DMT Start.
- Statistical Analysis:
- Descriptive statistics were compared using Chi-square and ANOVA tests
  - Demographics: Ethnicity, Age at Diagnosis, Gender.
  - Time to disability progression was analysed using univariate and multivariate Cox proportional hazards models.
  - P-value < 0.05 was considered statistically significant.

RESULTS

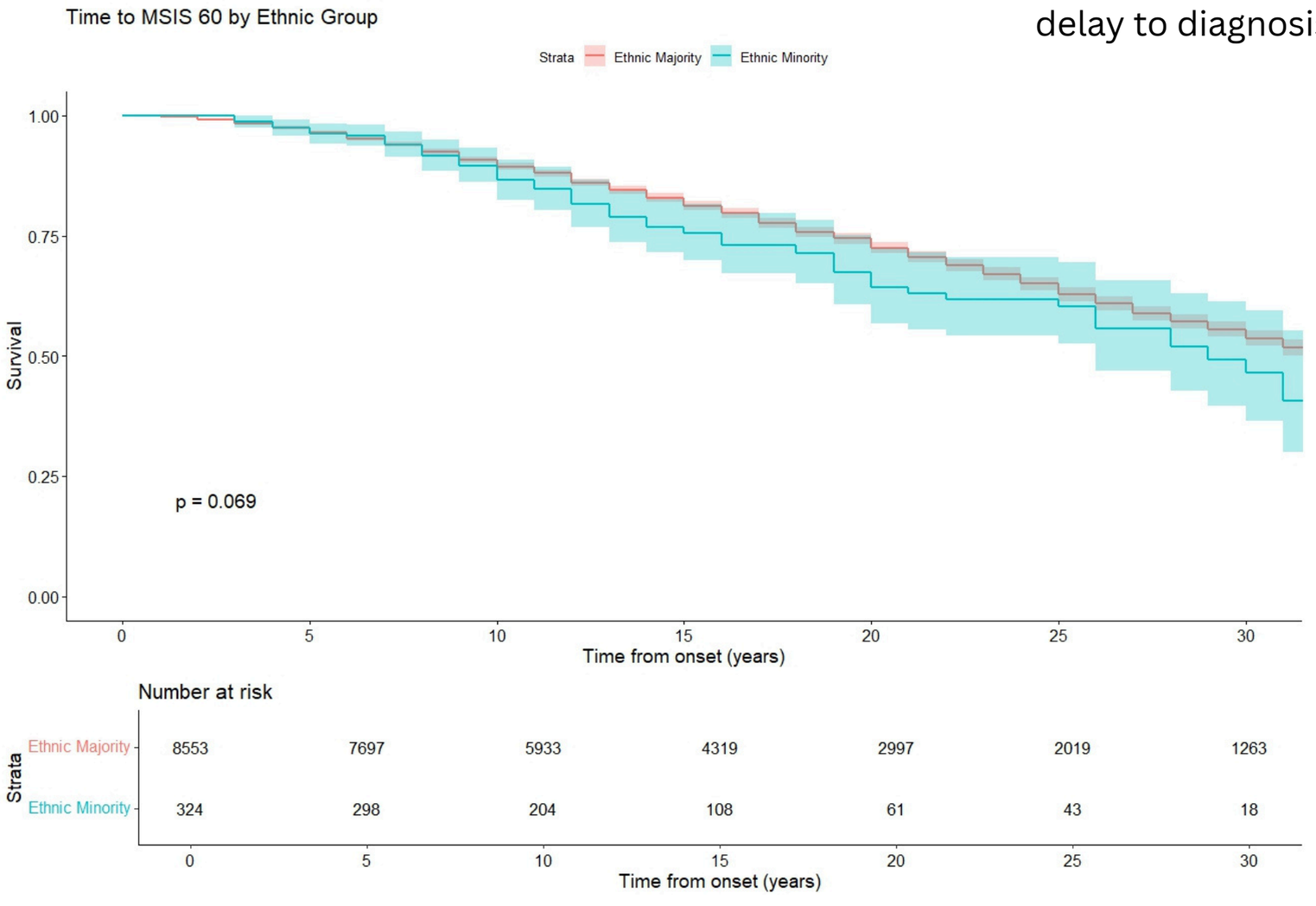
Patient Characteristics

- The study included patients from African (n=71), Caribbean (n=227), South Asian (n=277), and Other (n=226) backgrounds.



Disparities in MS Management

- Positive Finding: Ethnic Minority patients had significantly higher DMT uptake than the Ethnic Majority (49.8% vs 38.6%, p<0.001) and were more likely to be on highly active therapies.
- Challenge: Patients of African ethnicity experienced the longest mean delay to diagnosis (4.23 years), a significant disparity (p=0.0199).



CONCLUSION

- In the UK, ethnic minority patients with MS demonstrate a higher uptake of disease-modifying therapies compared to the majority population, a key positive finding.
- However, disparities in timeliness of diagnosis persist for some groups.
- The primary drivers of faster disability progression are socioeconomic factors—notably lower education and unemployment—rather than ethnicity itself.
- These findings suggest that strategies to mitigate health inequality in MS should focus on addressing socioeconomic barriers to improve long-term outcomes for all patients.

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