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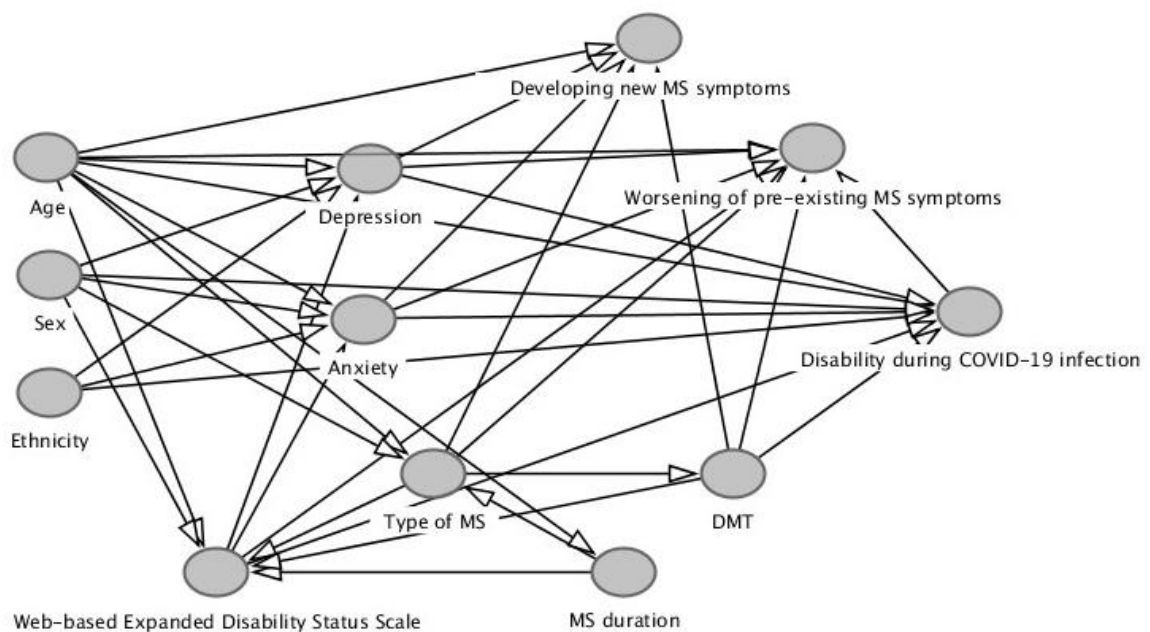


## Supplementary Material

### Statistical analysis

Directed acyclic graphs (DAG) of the COVID-19 and MS Symptoms study were created using DAGitty, a browser-based environment for creating, editing, and analysing DAGs (<http://www.dagitty.net/>). The DAG model is provided in Figure B.1.

Figure B.1. Directed acyclic graphs (DAG) of the COVID-19 and MS Symptoms study



The following DAG code can be used to reproduce the model using DAGitty:

```
dag {
```

```
bb="0,0,1,1"
```

```
"Developing new MS symptoms" [pos="0.551,0.324"]
```

```
"Disability during COVID-19 infection" [pos="0.735,0.562"]
```

```
"MS duration" [pos="0.536,0.790"]
```

"Type of MS" [pos="0.427,0.704"]

"Web-based Expanded Disability Status Scale" [pos="0.302,0.791"]

"Worsening of pre-existing MS symptoms" [pos="0.645,0.420"]

Age [pos="0.204,0.428"]

Anxiety [pos="0.386,0.569"]

DMT [pos="0.599,0.704"]

Depression [pos="0.390,0.437"]

Ethnicity [pos="0.206,0.633"]

Sex [pos="0.206,0.530"]

"Disability during COVID-19 infection" -> "Worsening of pre-existing MS symptoms"

"MS duration" -> "Type of MS"

"MS duration" -> "Web-based Expanded Disability Status Scale"

"Type of MS" -> "Developing new MS symptoms"

"Type of MS" -> "Web-based Expanded Disability Status Scale"

"Type of MS" -> "Worsening of pre-existing MS symptoms"

"Type of MS" -> DMT

"Web-based Expanded Disability Status Scale" -> "Disability during COVID-19 infection"

"Web-based Expanded Disability Status Scale" -> "Worsening of pre-existing MS symptoms"

"Web-based Expanded Disability Status Scale" -> Anxiety

"Web-based Expanded Disability Status Scale" -> Depression

Age -> "Developing new MS symptoms"

Age -> "Disability during COVID-19 infection"

Age -> "MS duration"

Age -> "Type of MS"

Age -> "Web-based Expanded Disability Status Scale"

Age -> "Worsening of pre-existing MS symptoms"

Age -> Anxiety

Age -> Depression

Anxiety -> "Developing new MS symptoms"

Anxiety -> "Disability during COVID-19 infection"

Anxiety -> "Worsening of pre-existing MS symptoms"

DMT -> "Developing new MS symptoms"

DMT -> "Disability during COVID-19 infection"

DMT -> "Web-based Expanded Disability Status Scale"

DMT -> "Worsening of pre-existing MS symptoms"

Depression -> "Developing new MS symptoms"

Depression -> "Disability during COVID-19 infection"

Depression -> "Worsening of pre-existing MS symptoms"

Ethnicity -> "Disability during COVID-19 infection"

Ethnicity -> Anxiety

Ethnicity -> Depression

Sex -> "Disability during COVID-19 infection"

Sex -> "Type of MS"

Sex -> "Web-based Expanded Disability Status Scale"

Sex -> Anxiety

Sex -> Depression

}