



Public Health  
England

Protecting and improving the nation's health

## **Slope index of inequality**

Effects of methodological changes in the Public Health  
Outcomes Framework

Yorkshire and the Humber Region

# Introduction

In May 2017, changes were made to the methodology for the calculation of the PHOF overarching indicators on inequality in life expectancy at birth and healthy life expectancy at birth. The changes were applied to the following indicators:

**0.2i - Slope index of inequality in life expectancy at birth based on national deprivation deciles within England**

**0.2iii - Slope index of inequality in life expectancy at birth within English local authorities, based on local deprivation deciles**

**0.2vii - Slope index of inequality in life expectancy at birth within English regions, based on regional deprivation deciles**

**0.2v - Slope index of inequality in healthy life expectancy at birth based on national deprivation deciles within England**

The three major methodology changes were:

1. A change to the calculation of life expectancy, to use an upper age band of 90 and over, whereas previously the upper age band was set to 85 and over.
2. Use of the Index of Multiple Deprivation 2015 (IMD 2015) to define deprivation deciles, replacing the Index of Multiple Deprivation 2010 (IMD 2010) which was previously used.
3. A revised method of calculating confidence intervals was introduced.

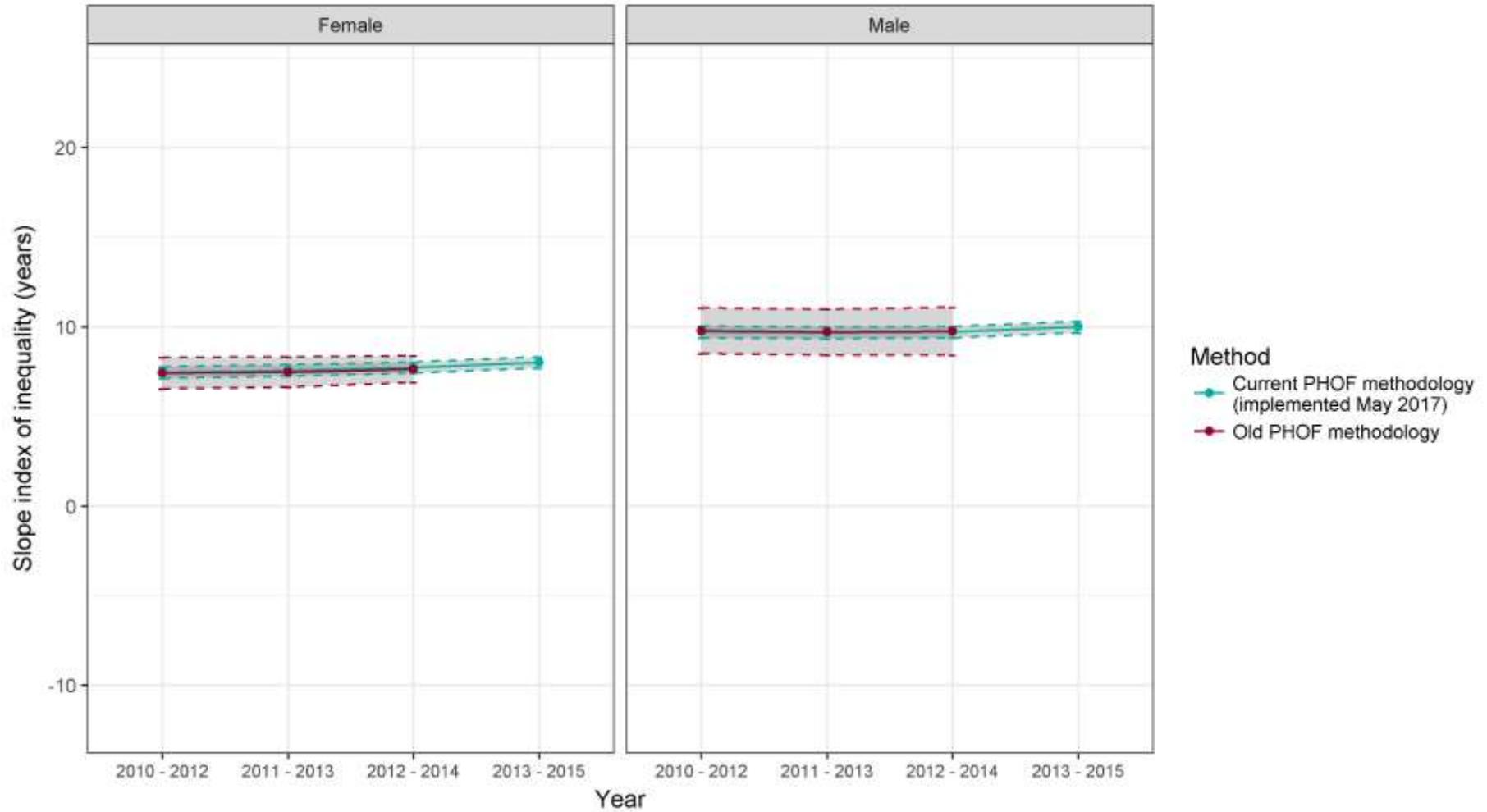
Due to these changes, previously published data for these indicators are **not comparable** with the current data and have been removed from the PHOF tool. For indicators 0.2i, 0.2iii and 0.2vii (life expectancy) data has now been published using the new methodology for 2010-12 to 2013-15. For indicator 0.2v (healthy life expectancy) data has been published using the new methodology for 2011-13 to 2013-15.

In order to visualise the impact that the methodology changes have had on the slope index of inequality in life expectancy, this document has been produced. It shows, for each area, charts of the trend in the slope index of inequality (and confidence intervals) based on the methodology implemented in May 2017, and the trend (and confidence intervals) for the data previously available in the PHOF tool.

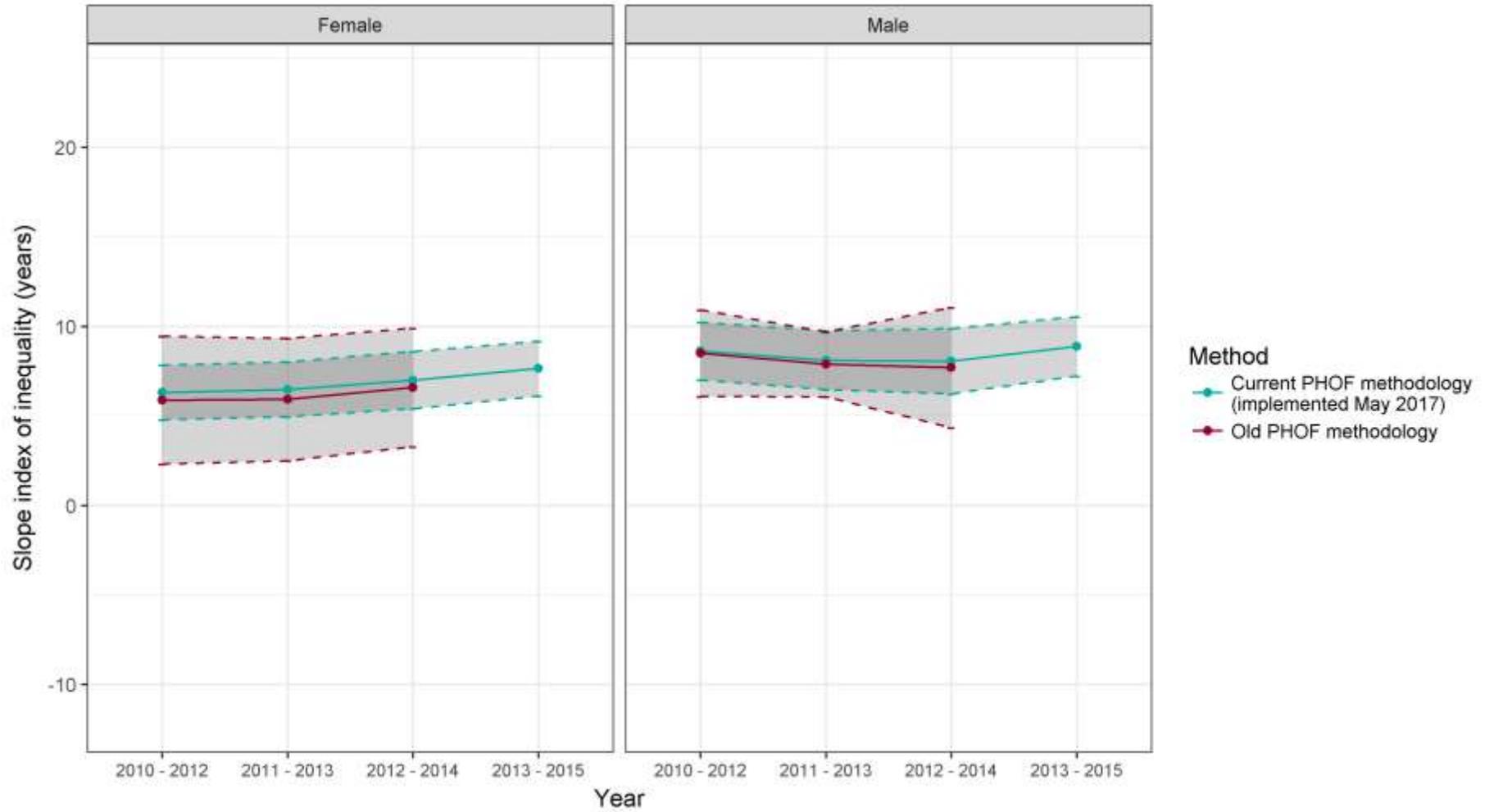
For most areas, the impact of the methodology changes on the slope index of inequality trend is small, although confidence intervals are narrower for the majority of areas. In some areas, however, there are larger changes, which may be due to the age structure of the population, or changes to the levels of deprivation within the area.

A more detailed description of the new methodologies can be found in the PHOF overarching indicators technical user guide on the further information page of the PHOF data tool: <http://www.phoutcomes.info/further-information>

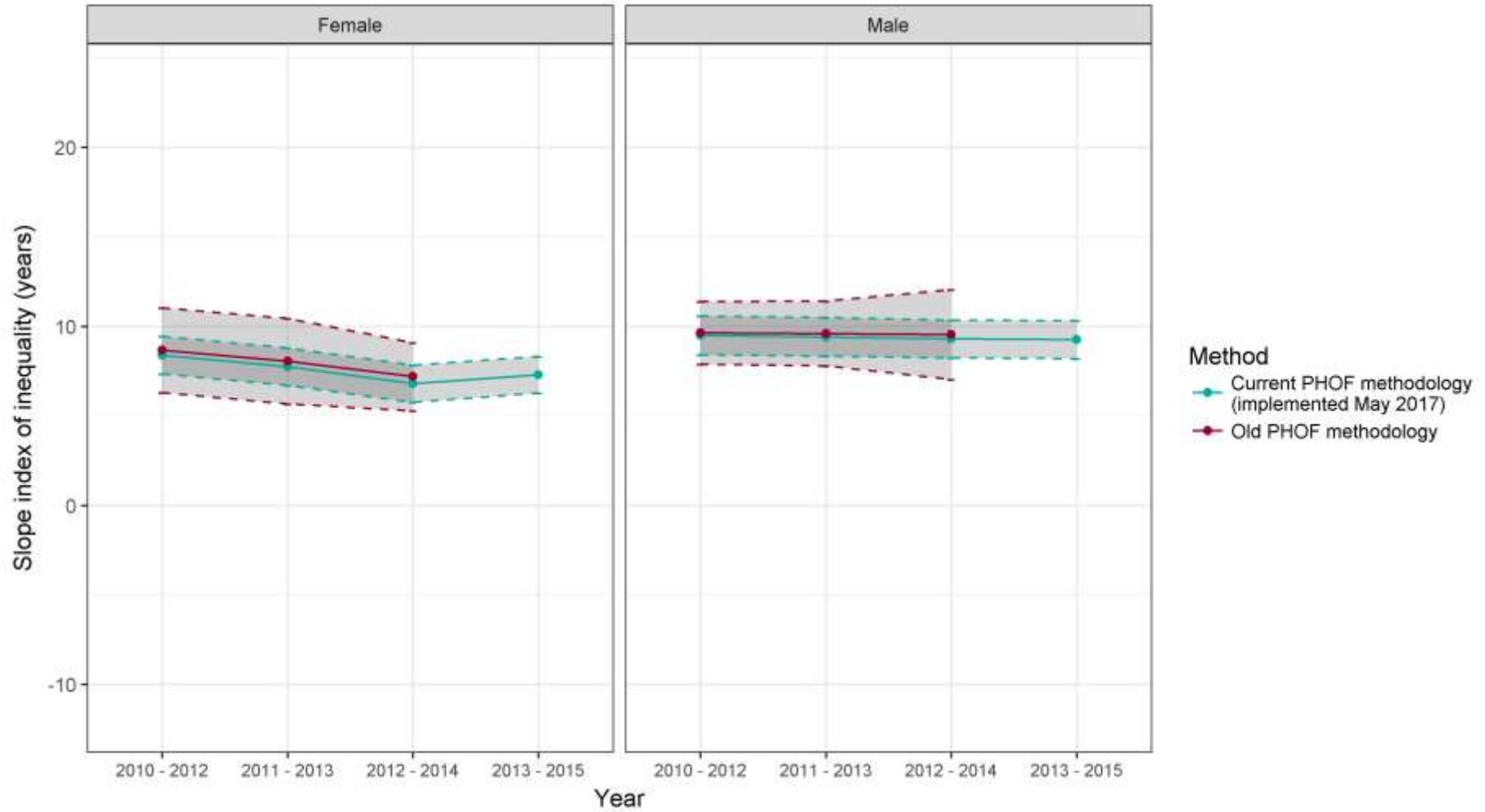
# Yorkshire and the Humber region



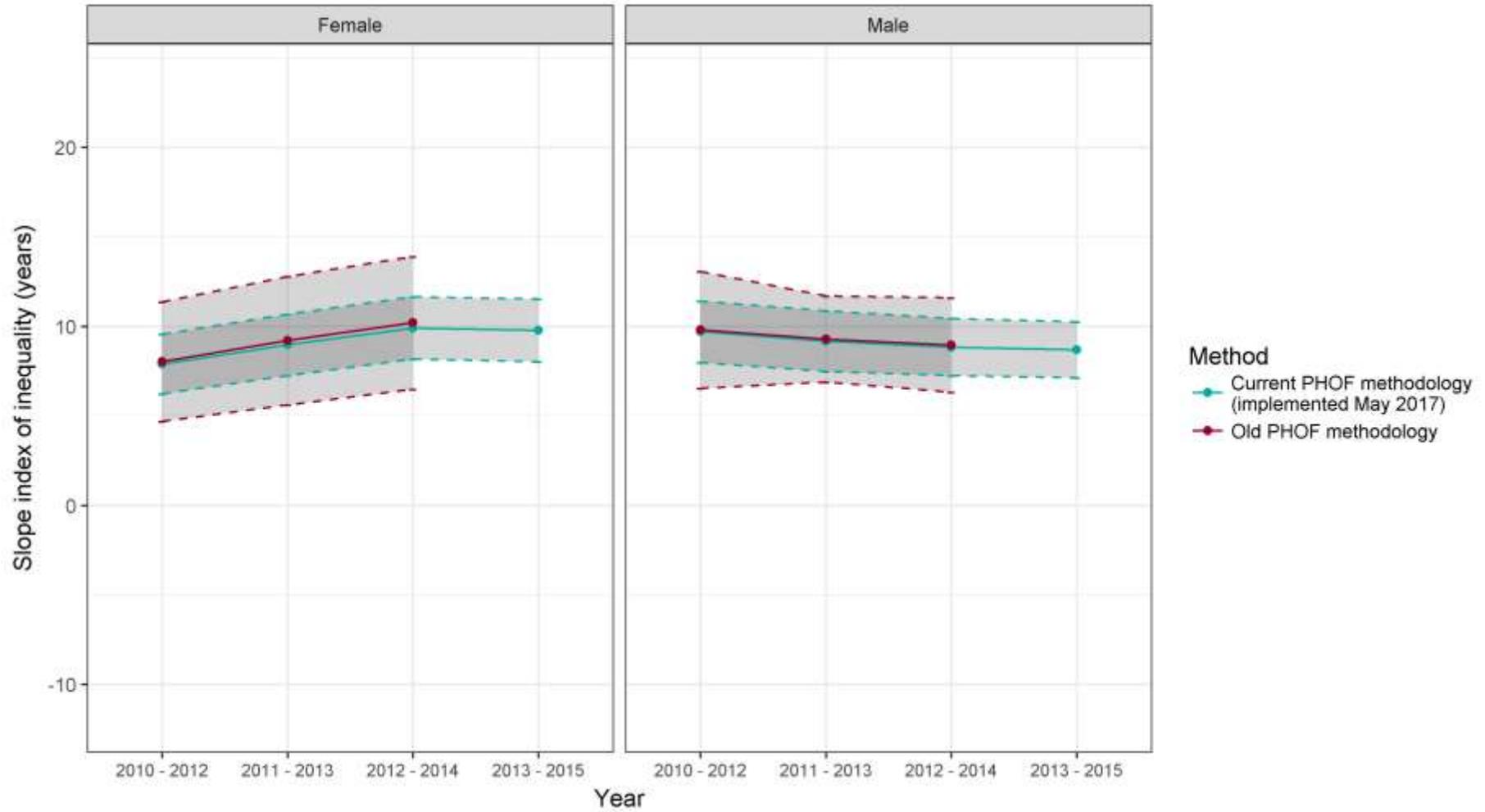
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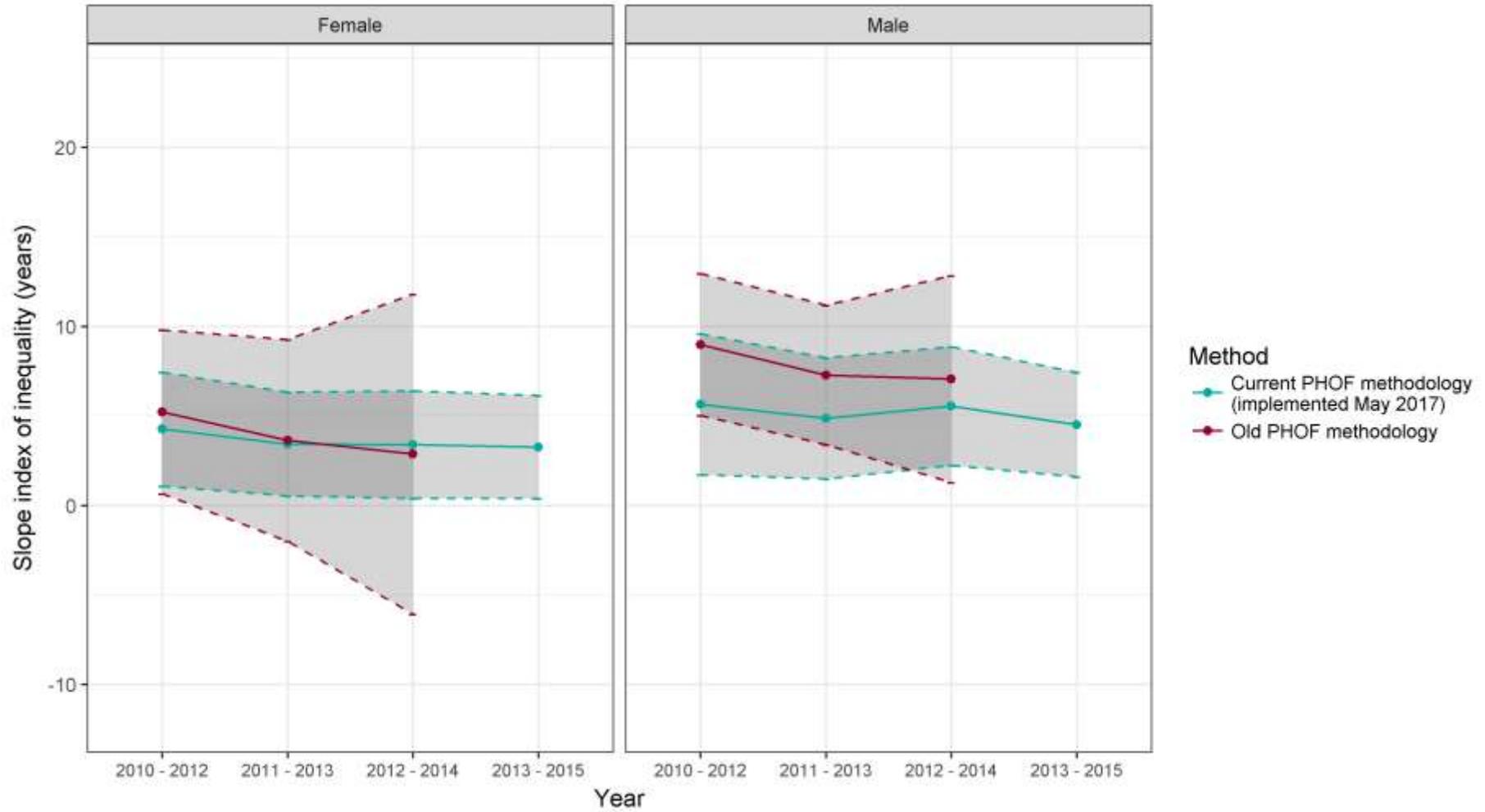
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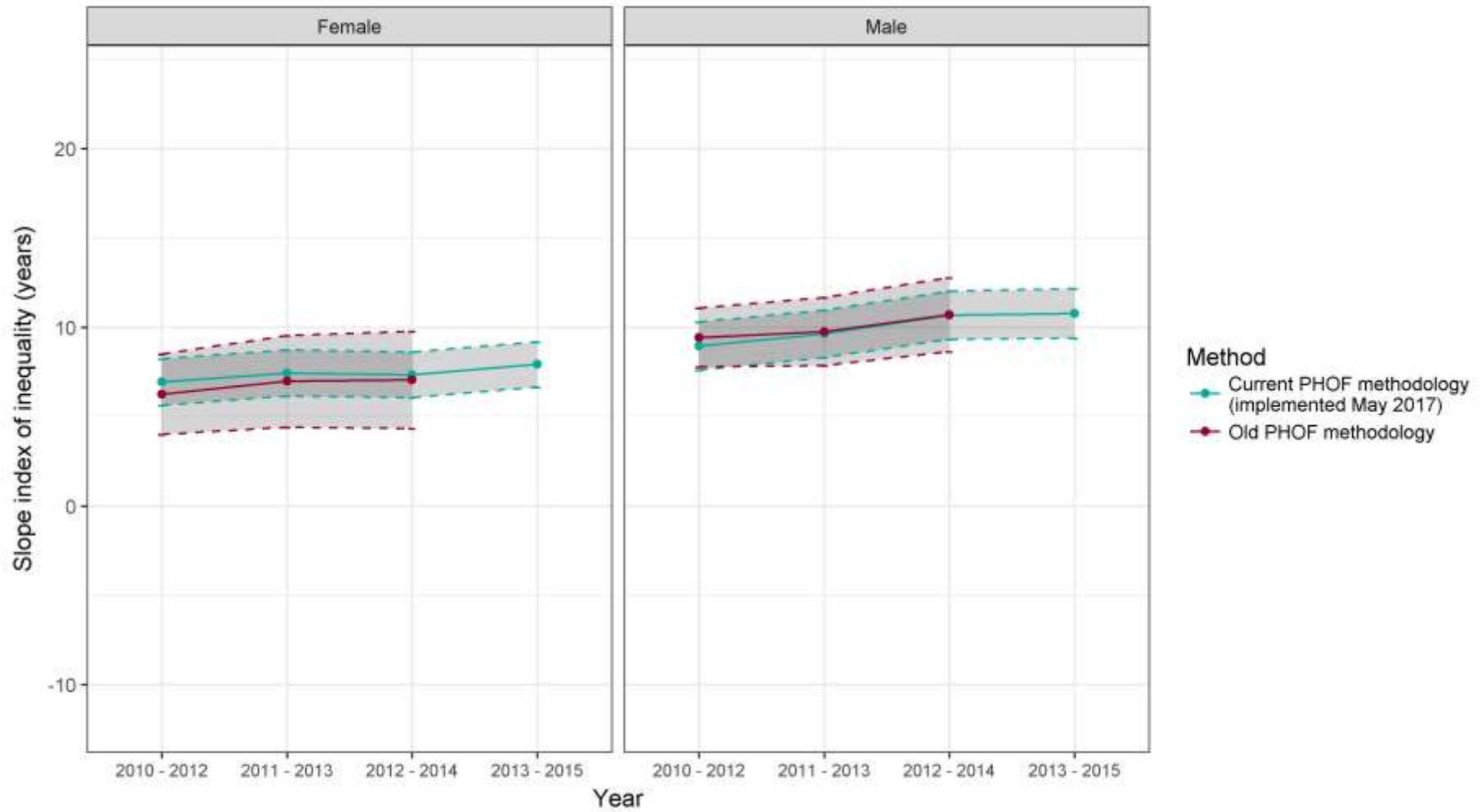
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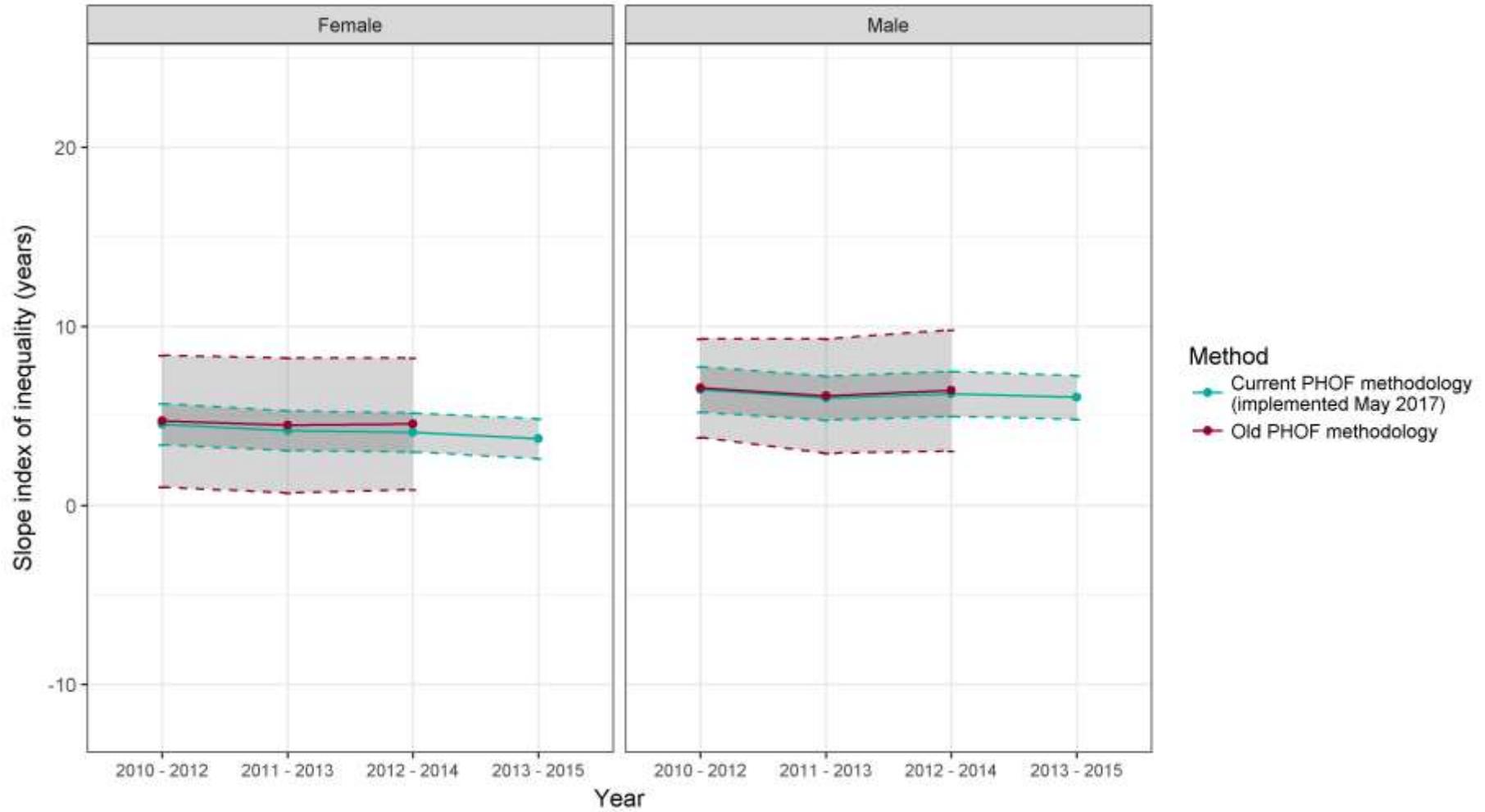
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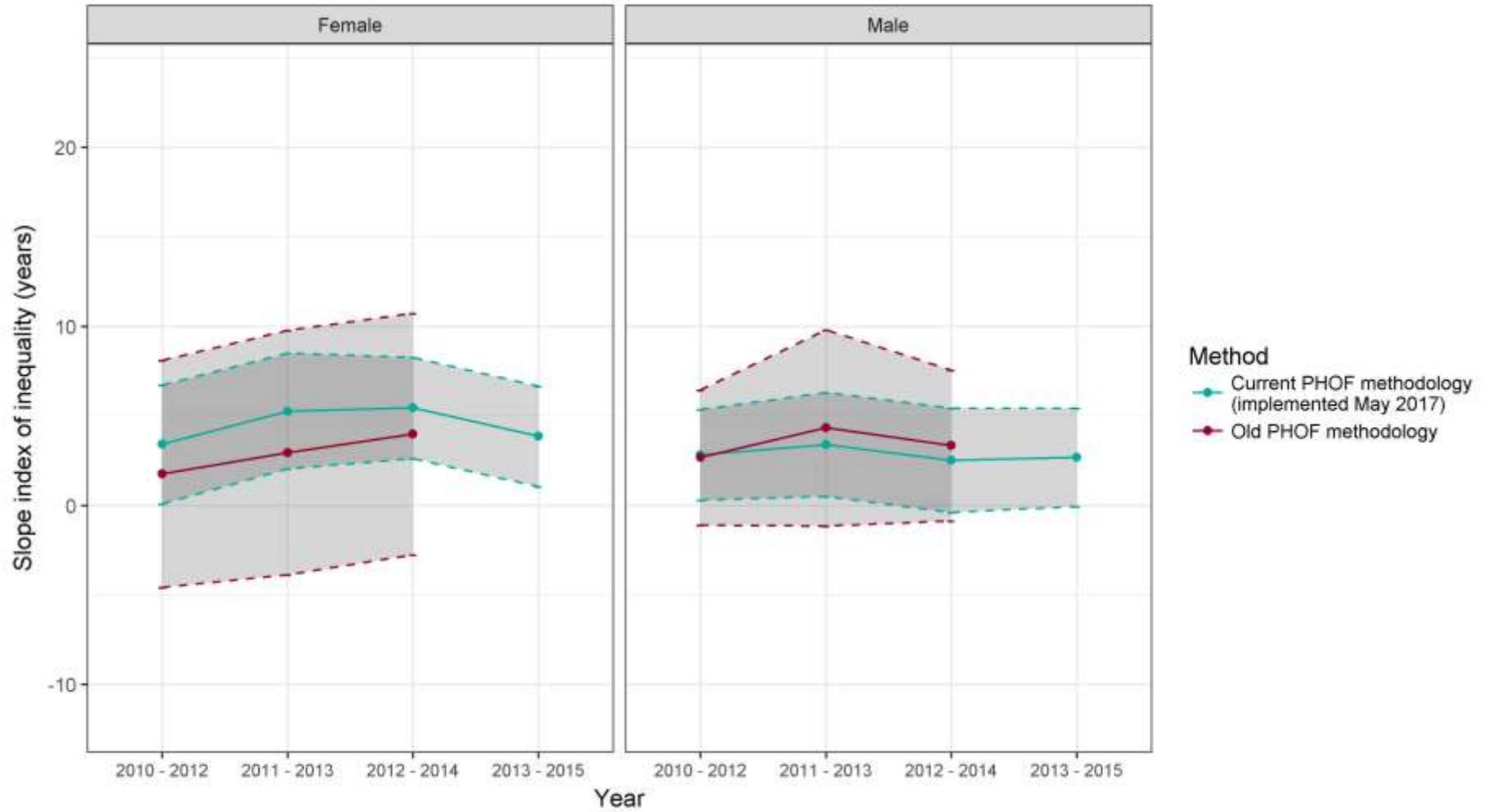
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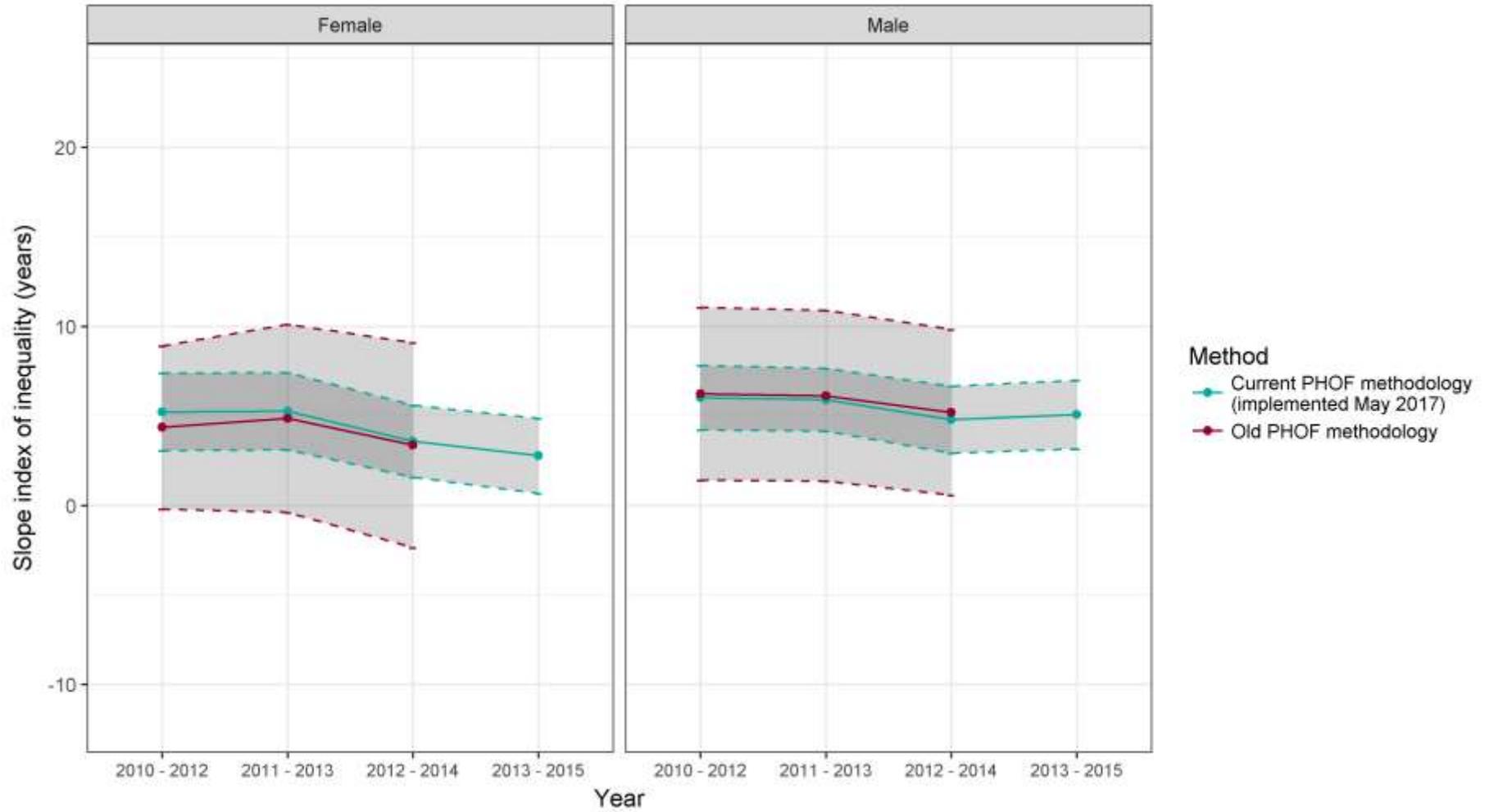
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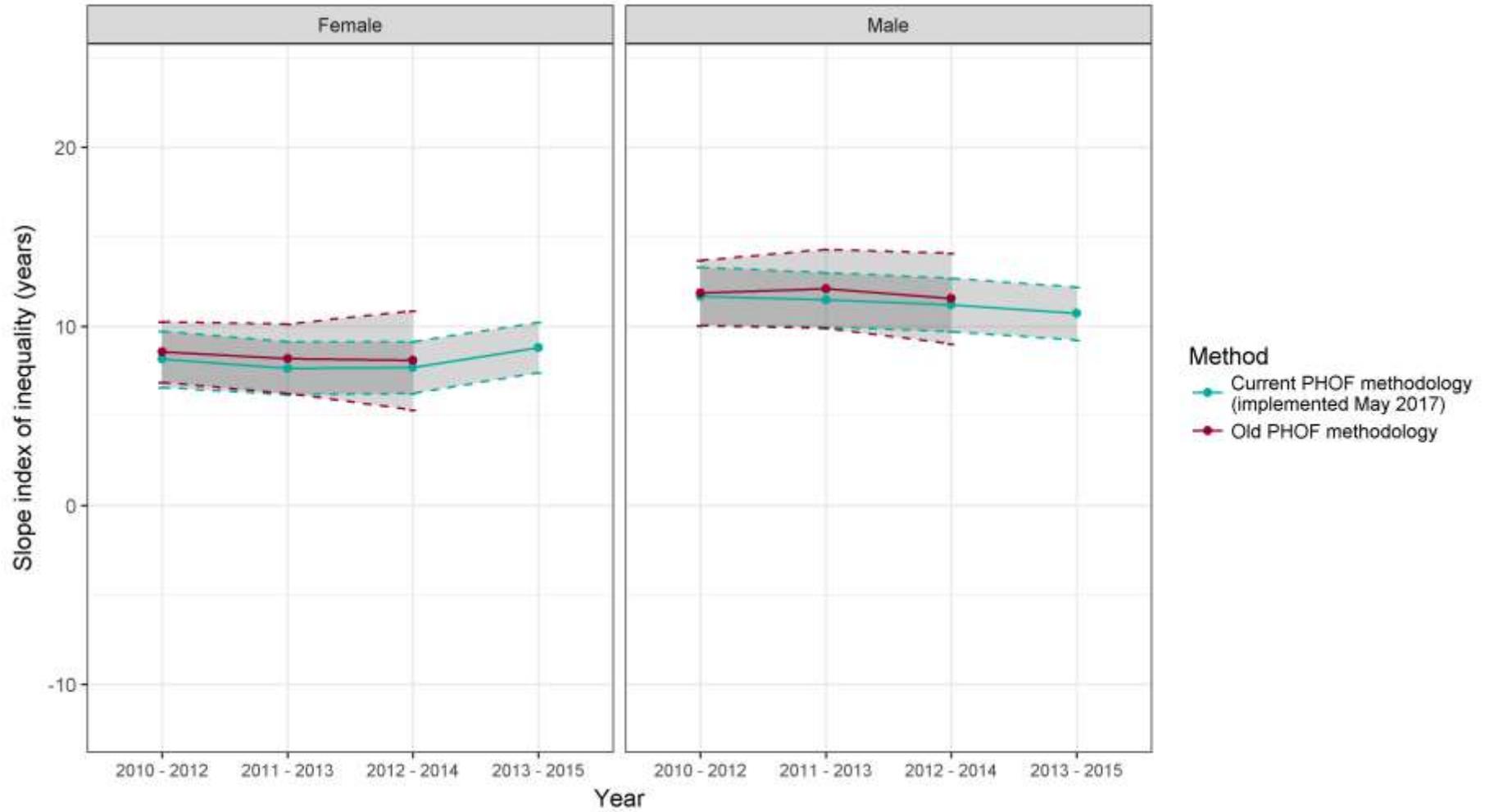
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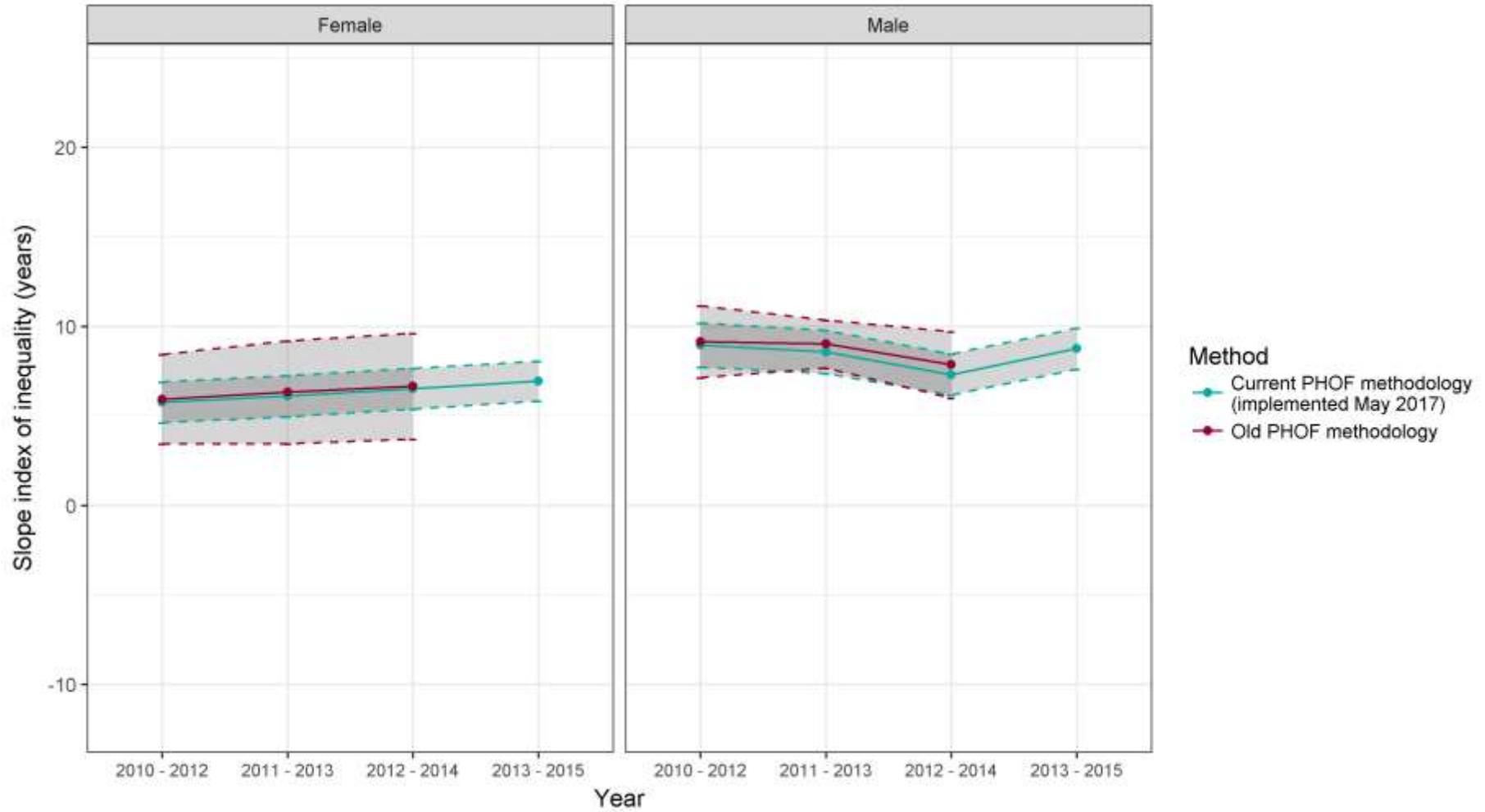
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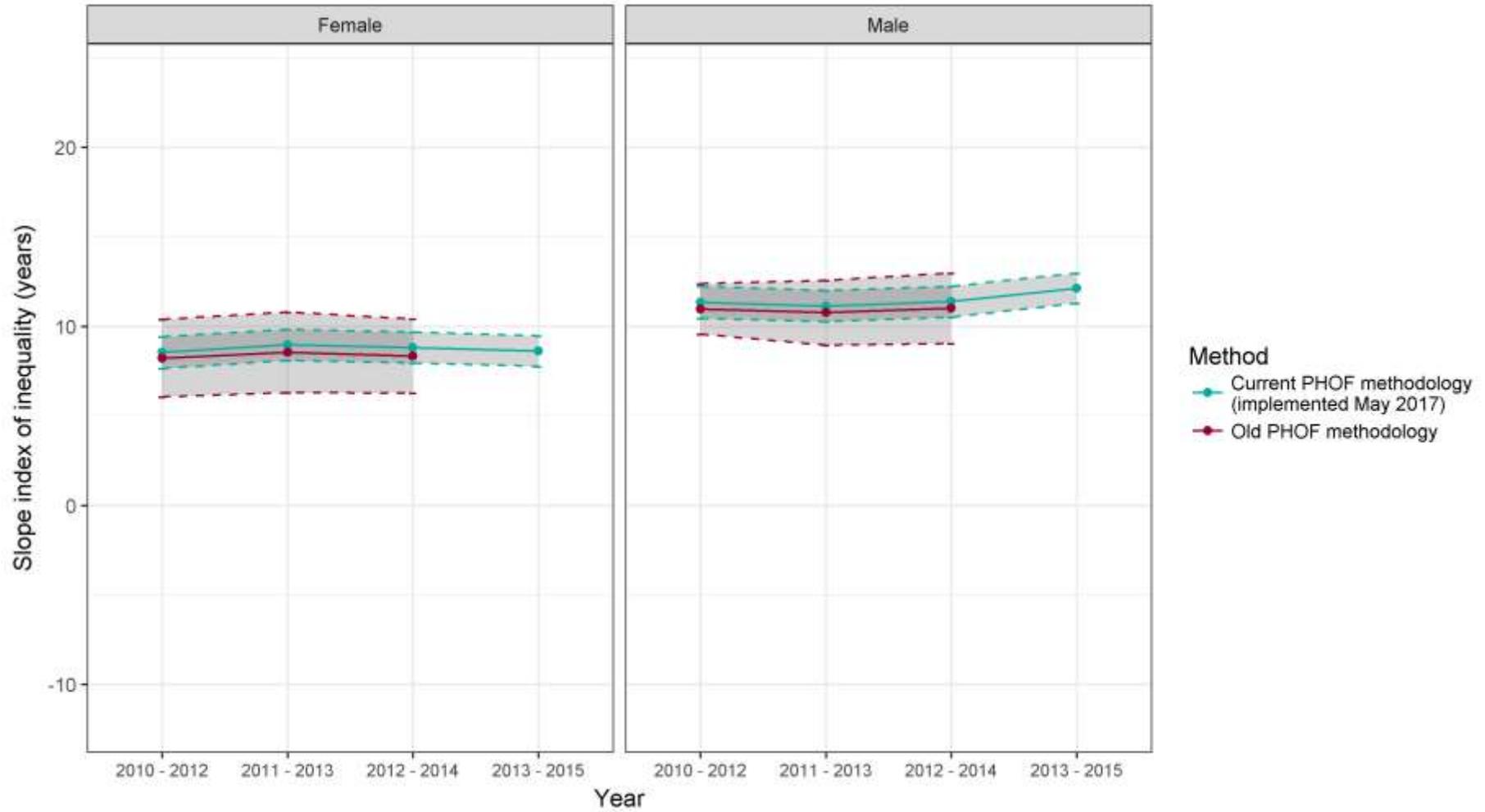
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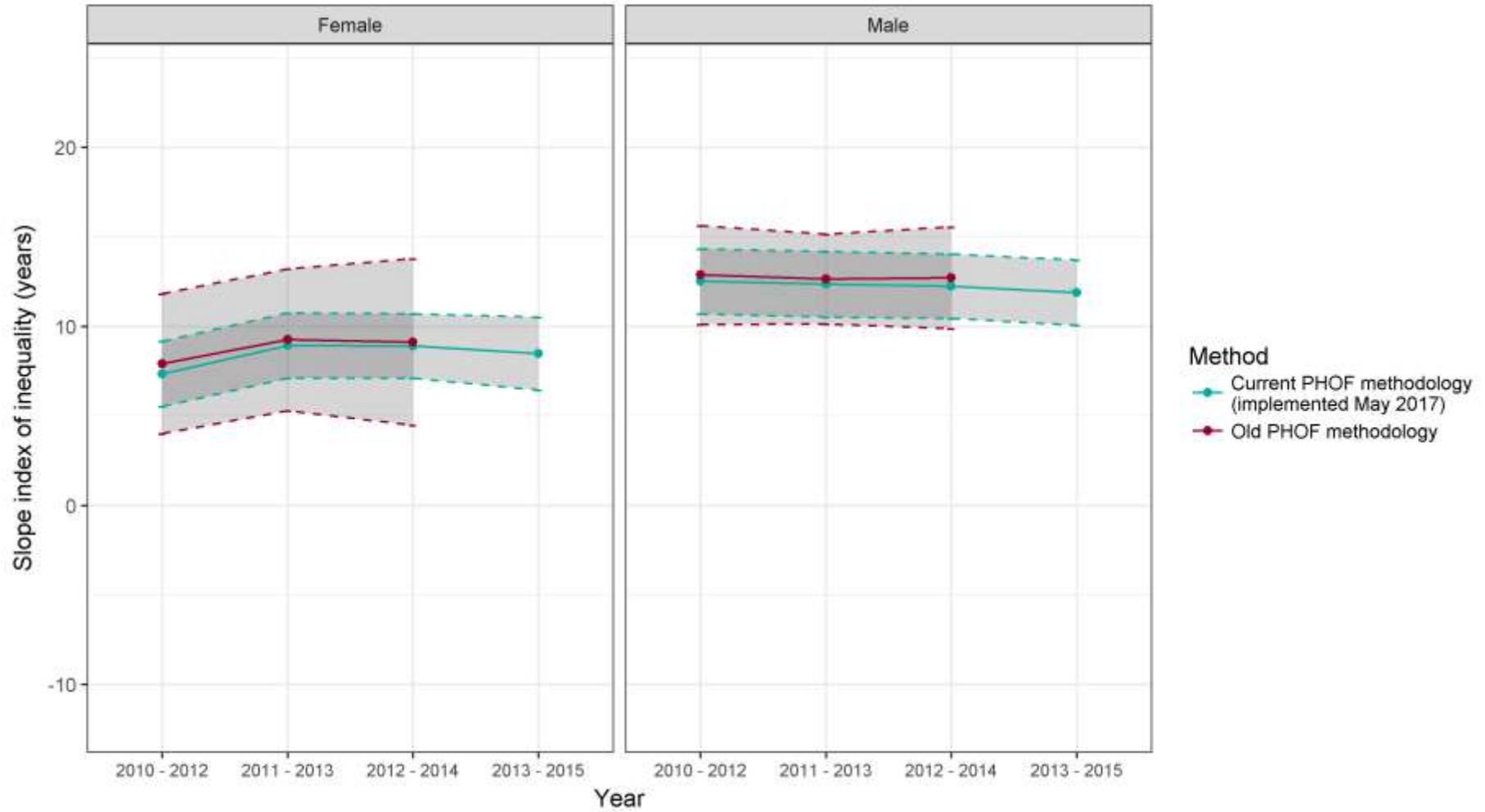
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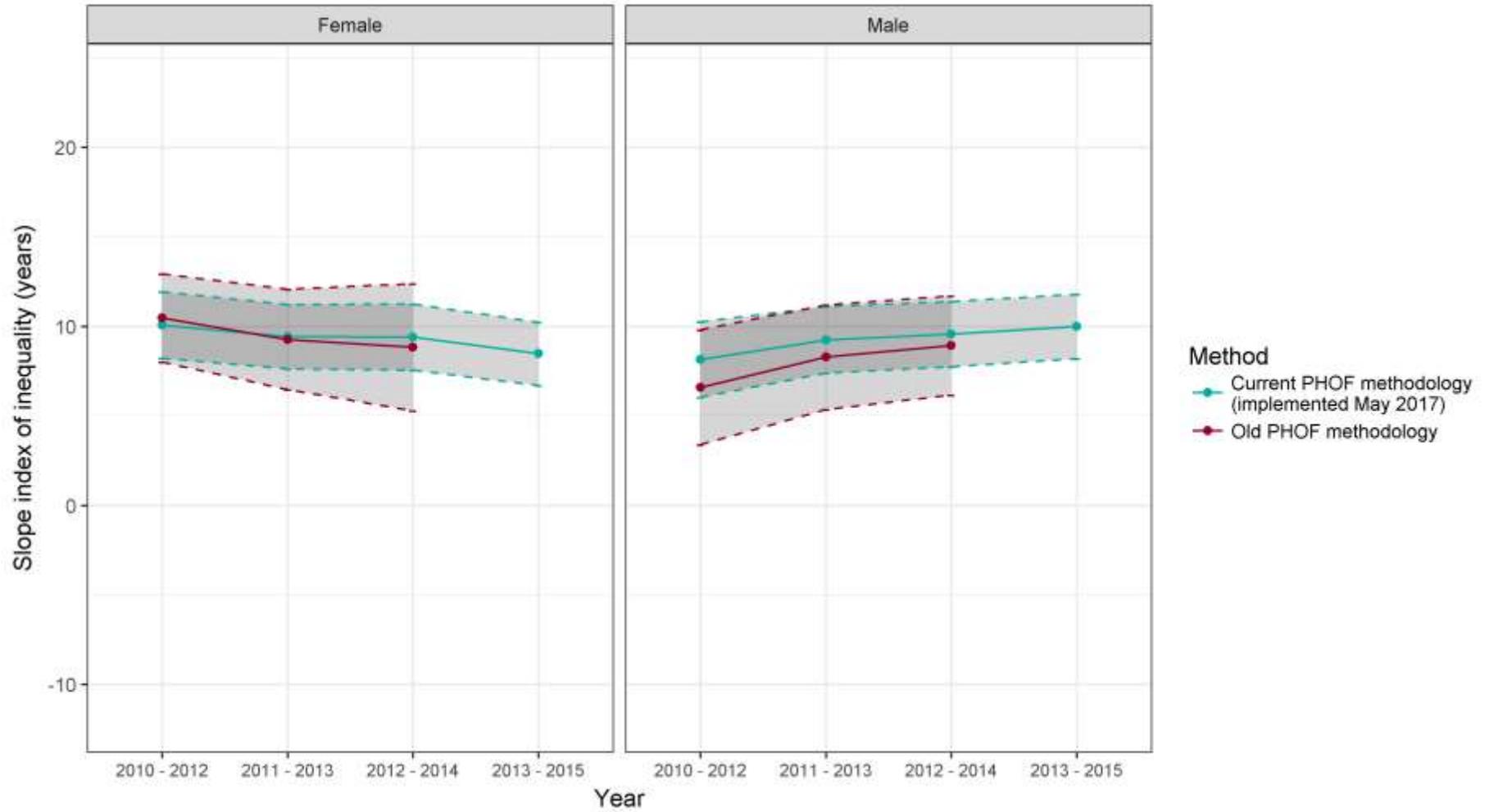
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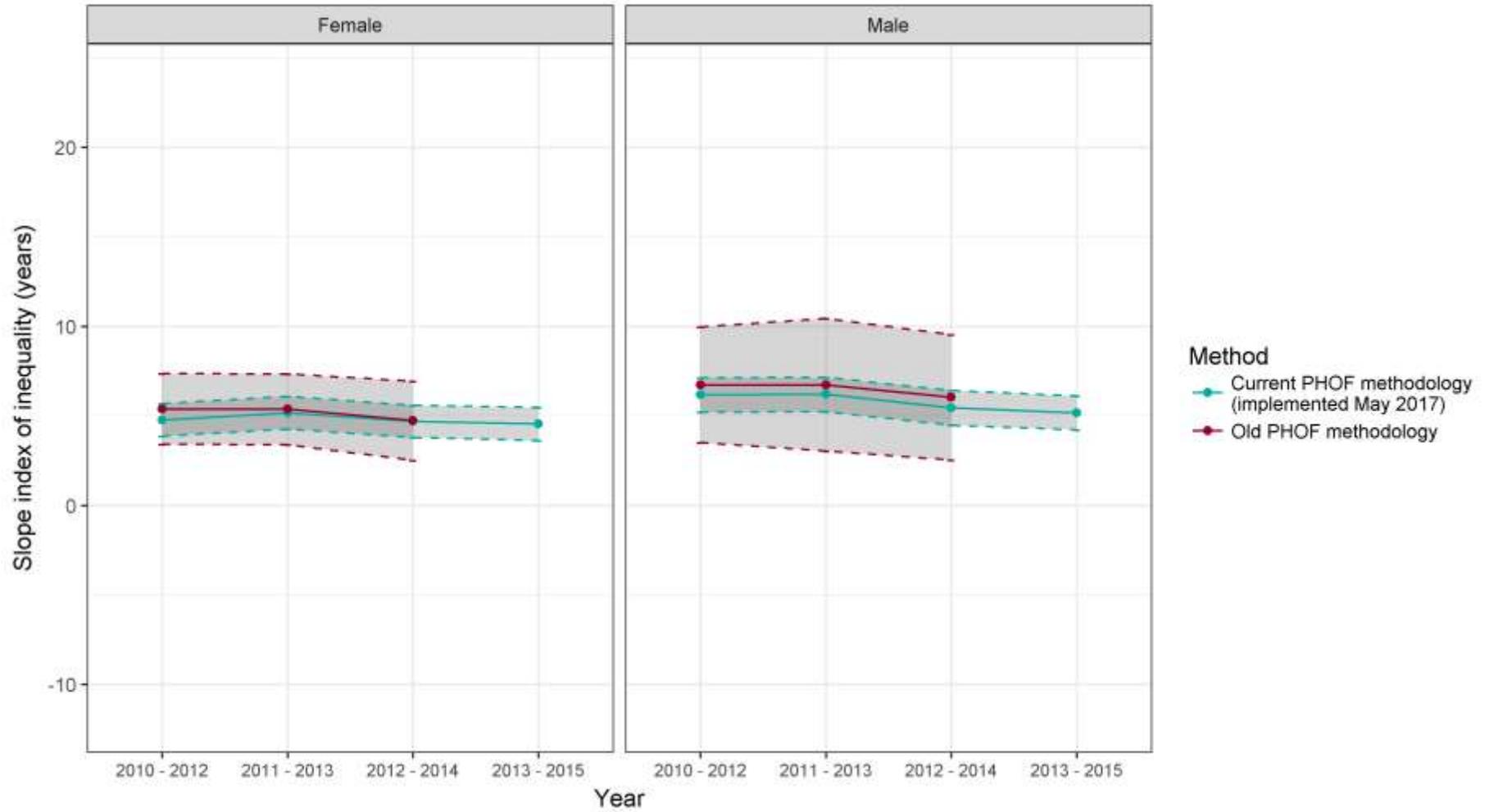
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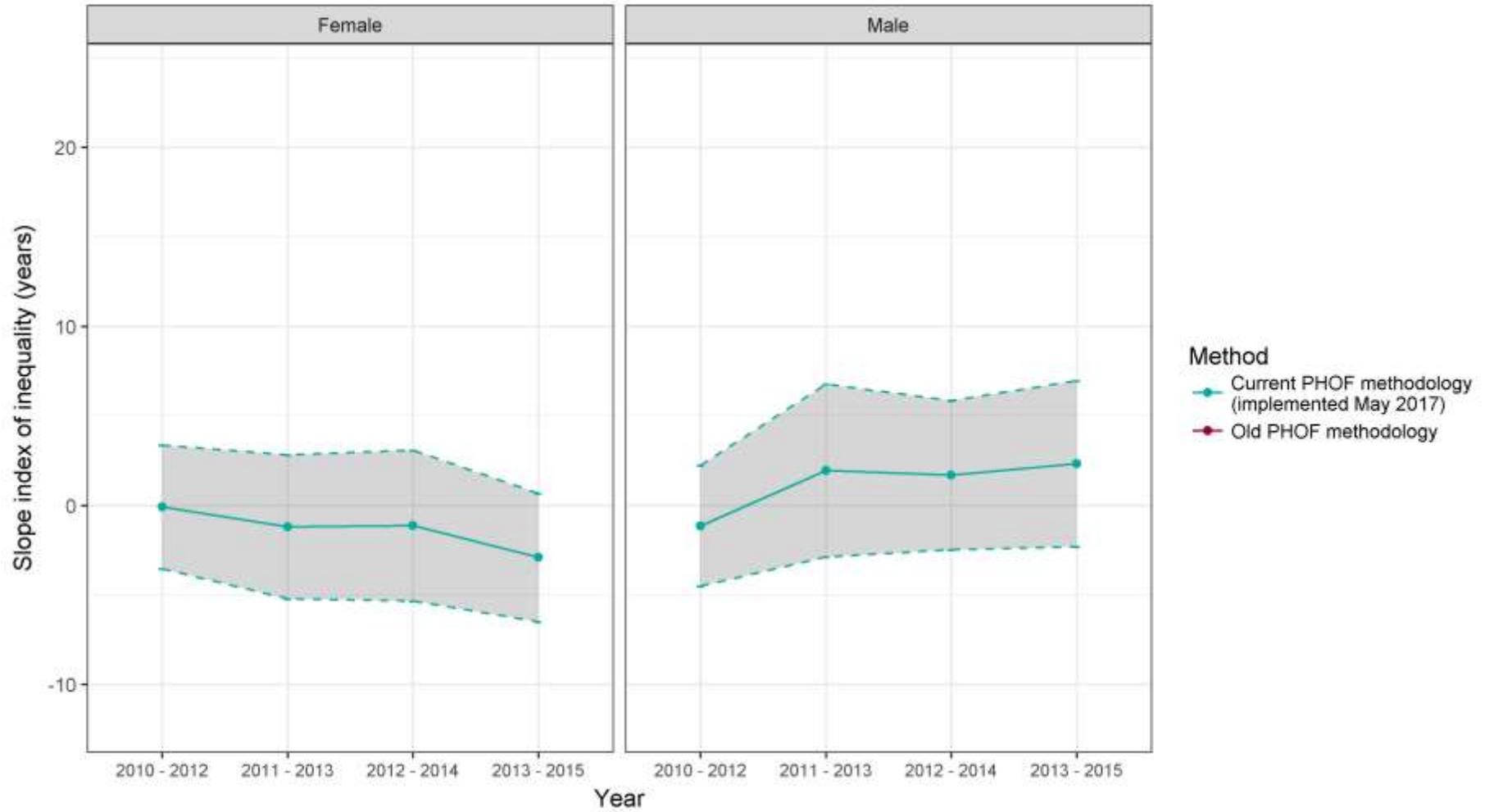
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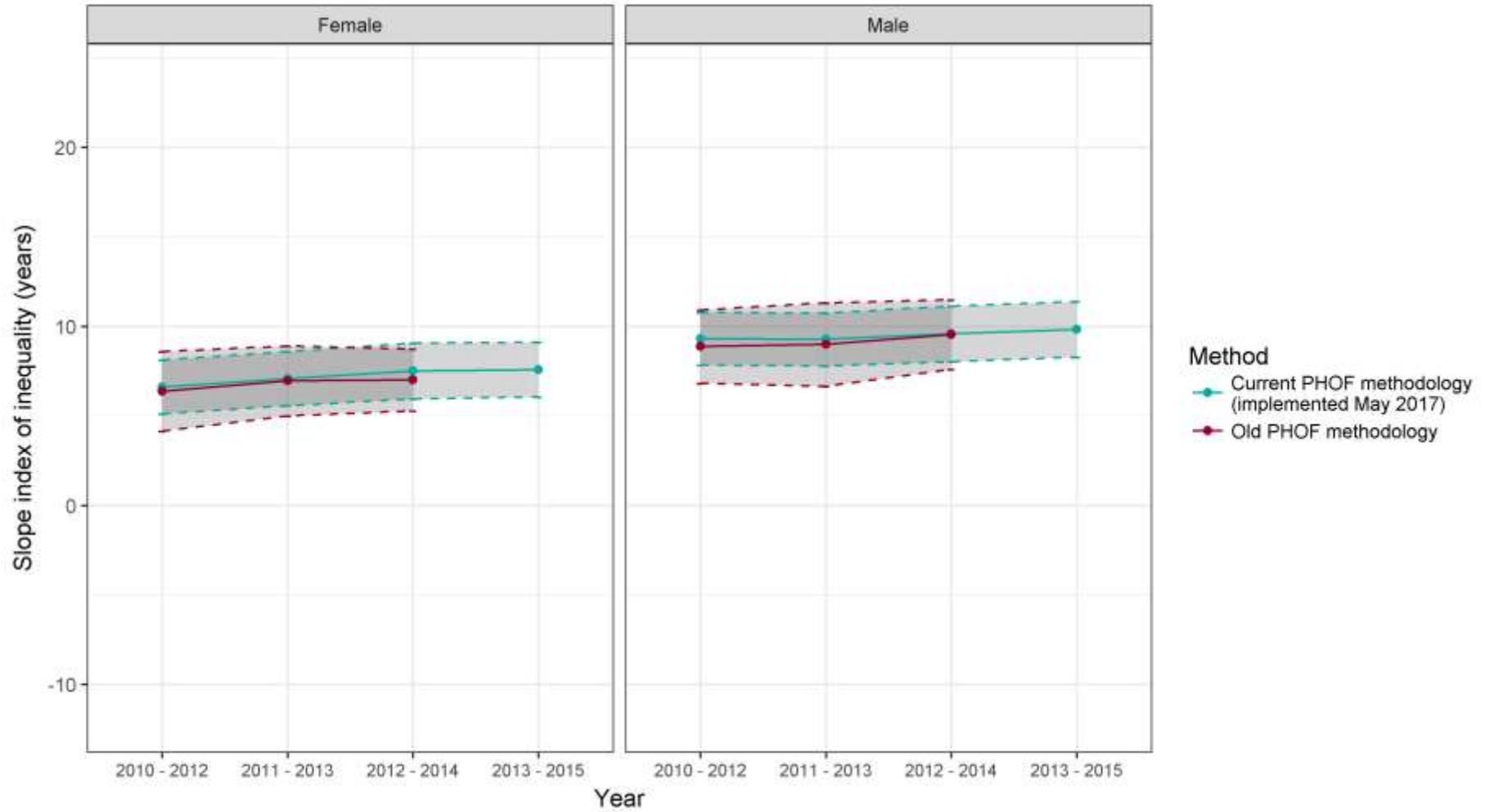
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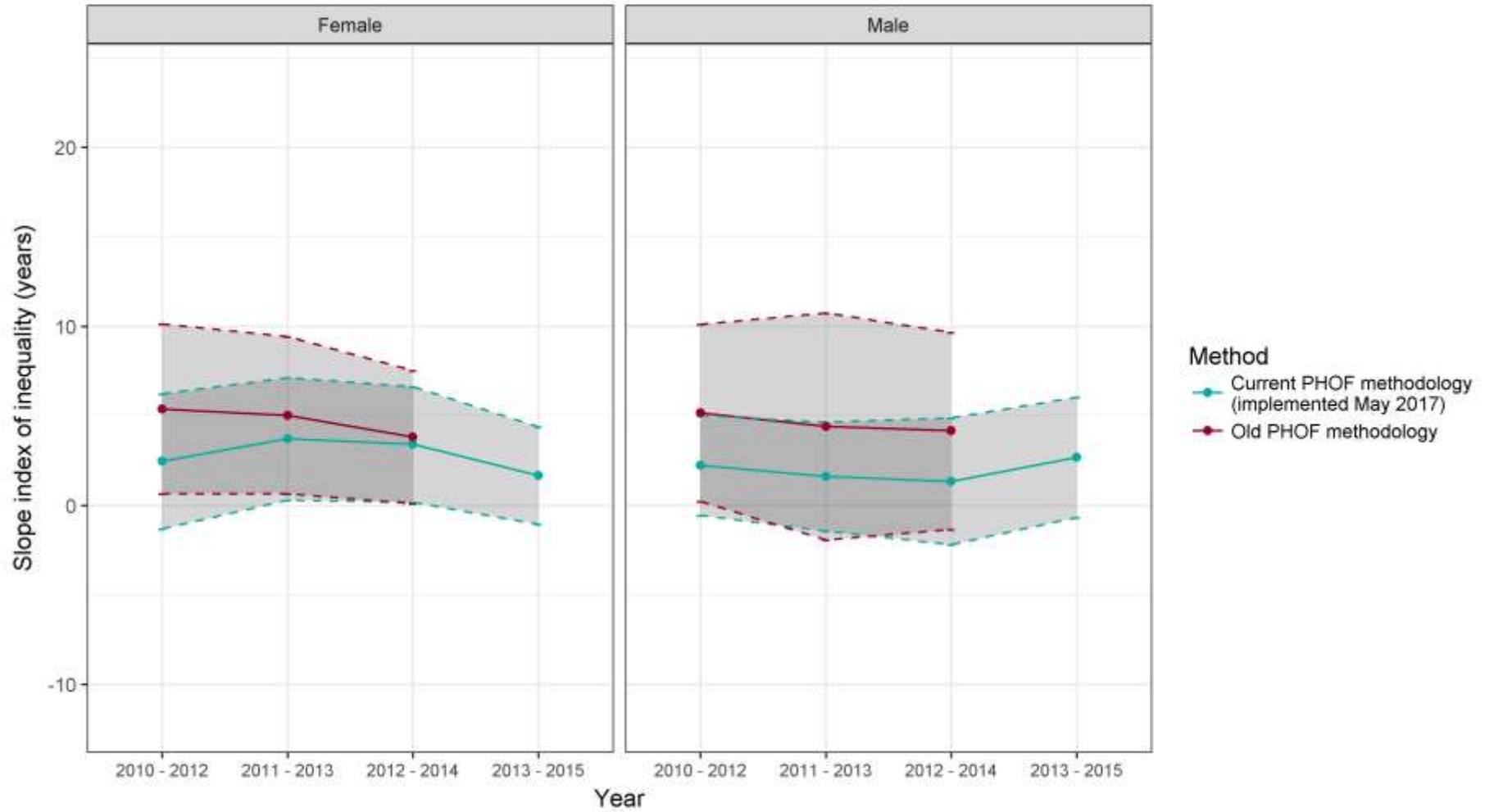
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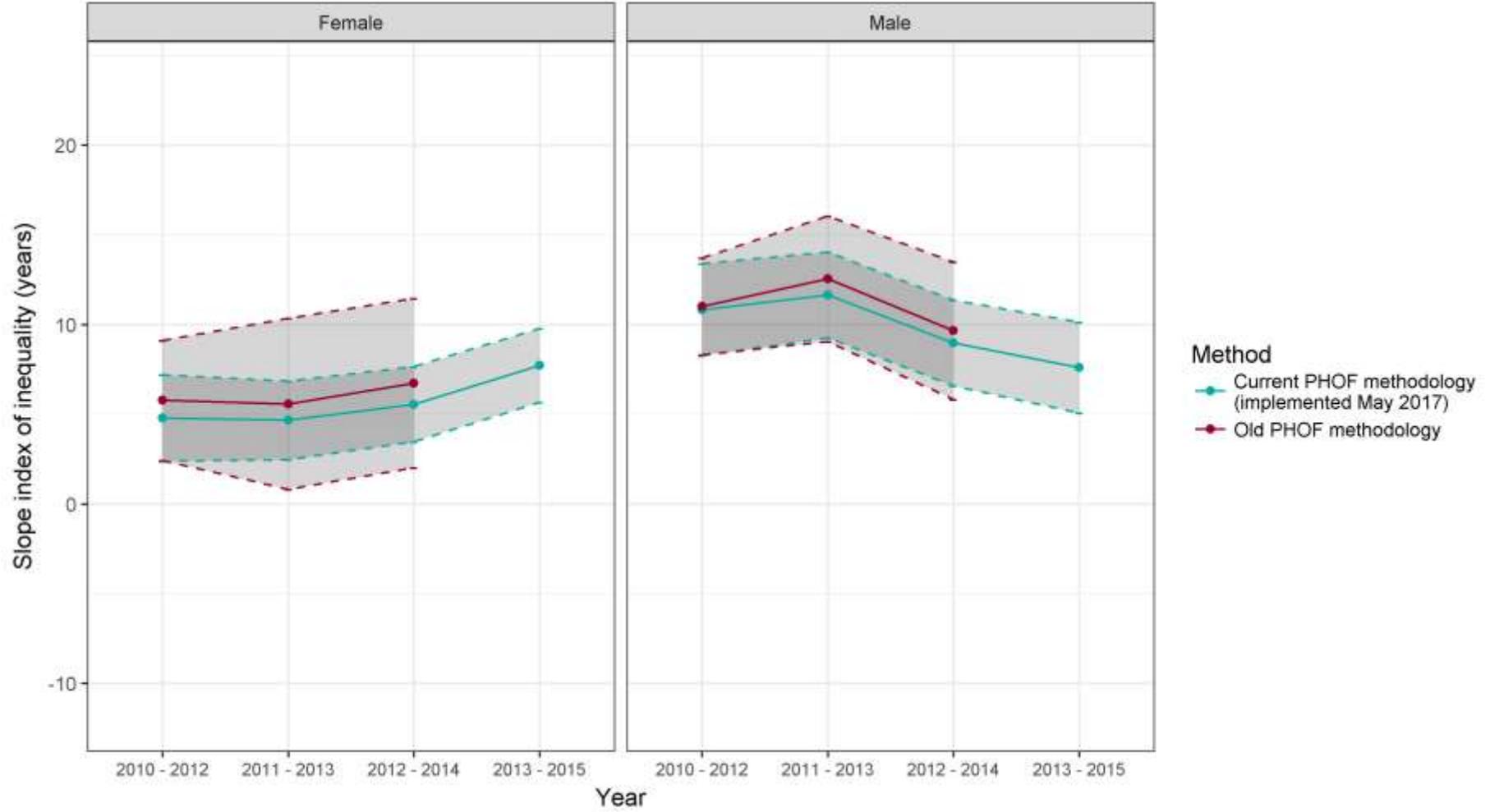
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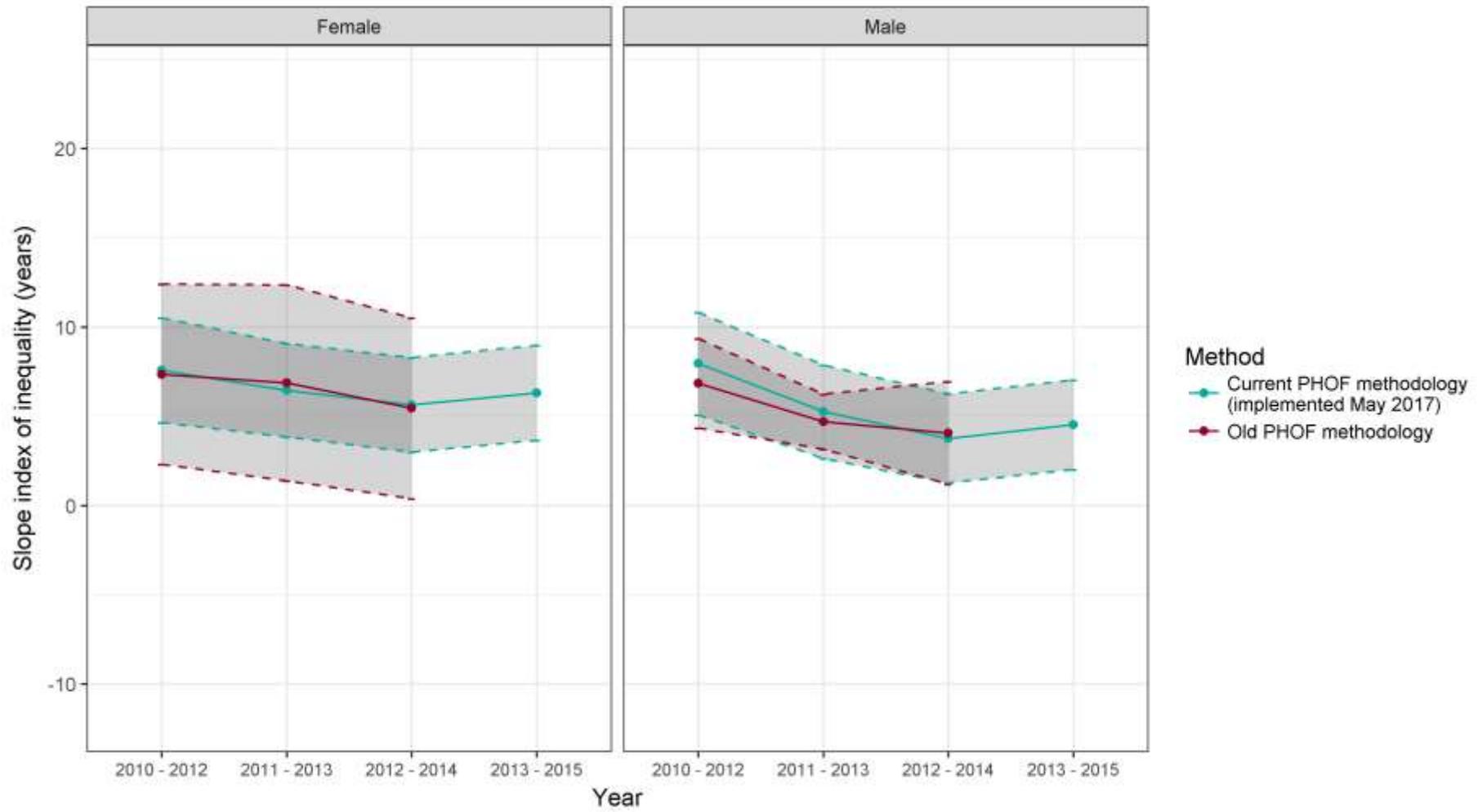
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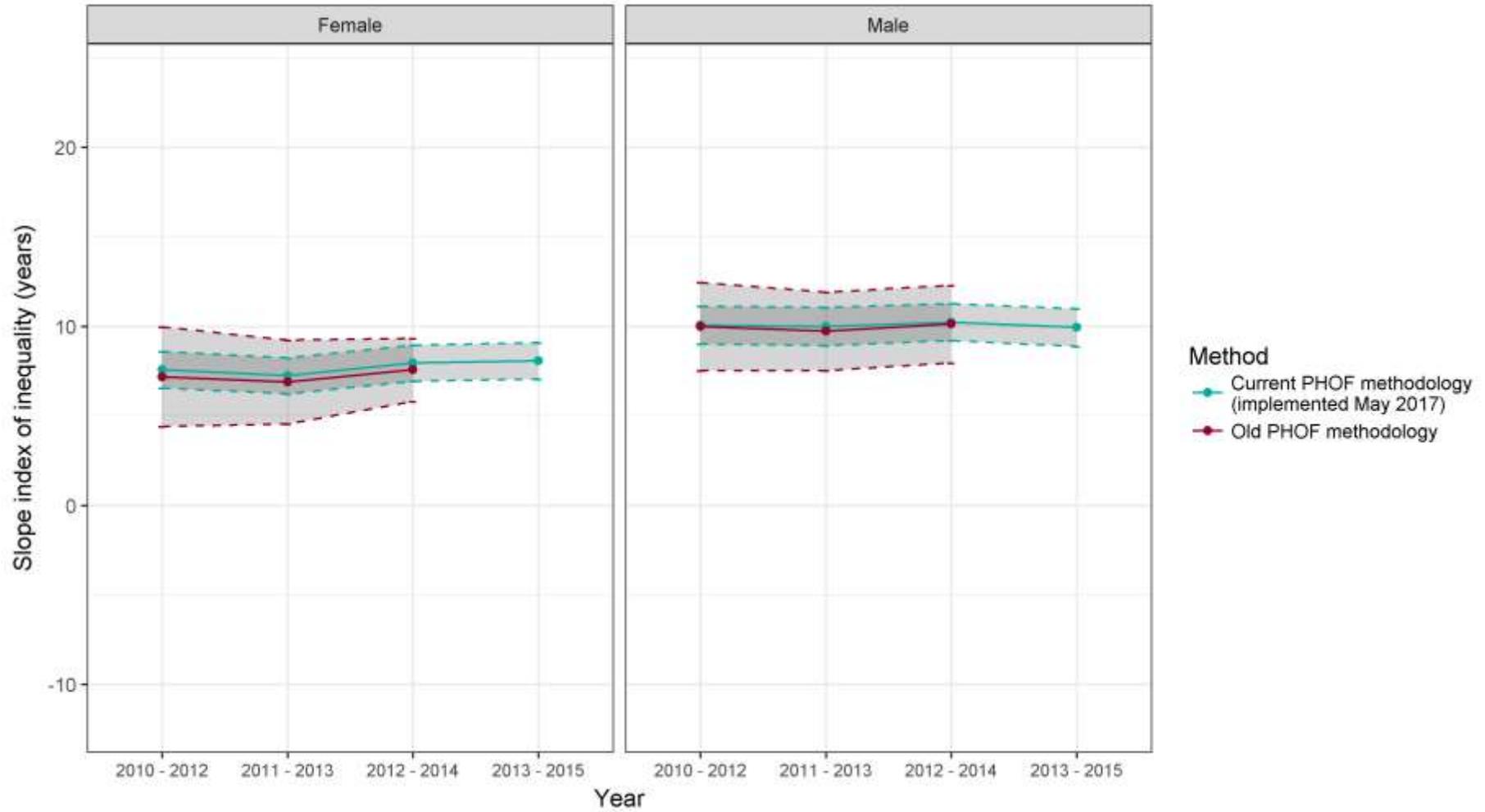
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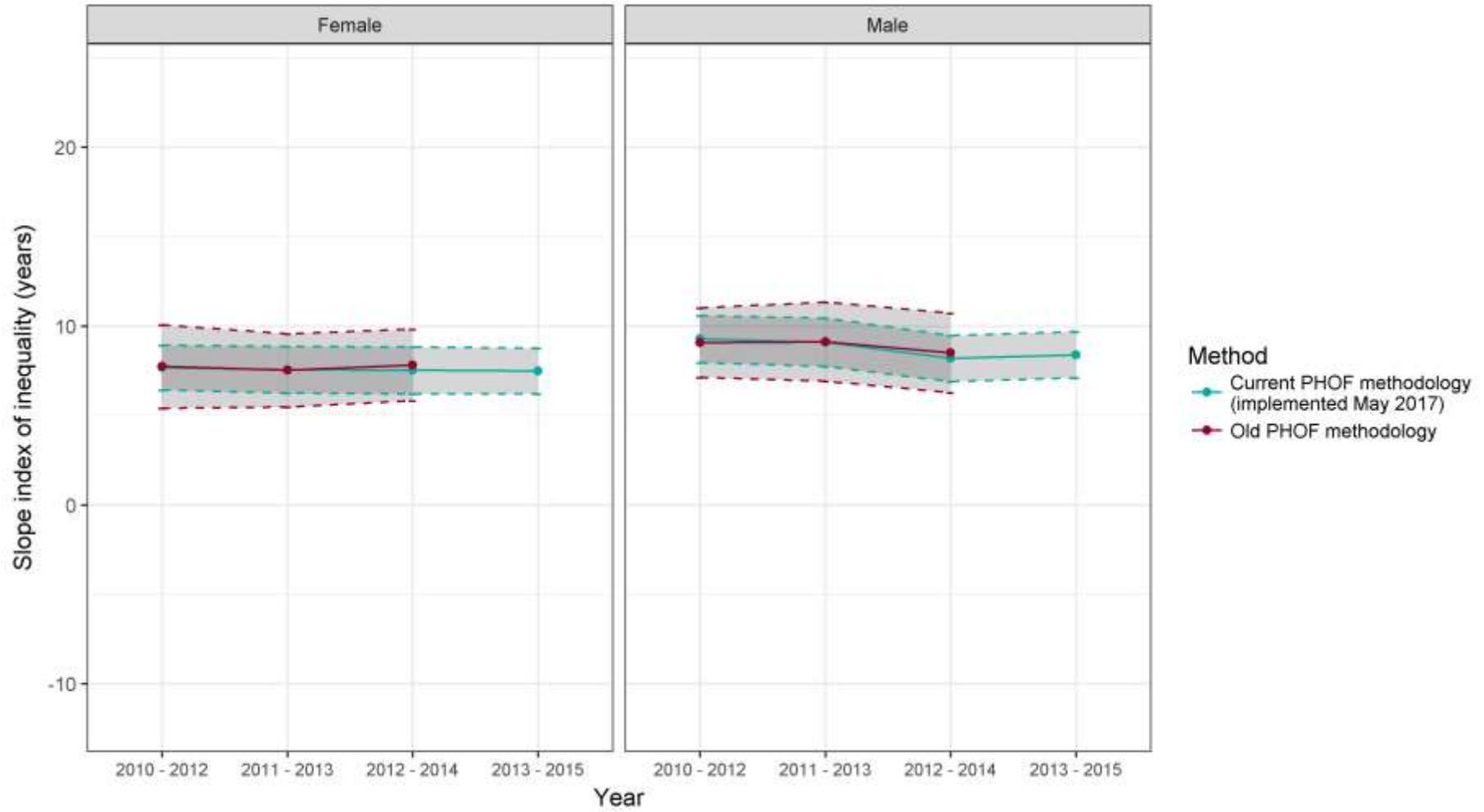
Selby



## Sheffield



## Wakefield



York

