

LONGITUDINAL ANALYSIS OF PUBLICATION TRENDS IN CLEFT PALATE AND LIPS (OROFACIAL CLEFTS): A CODED DATASET APPROACH OVER 180 YEARS

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INTRODUCTION

Disparities in research are widespread. Limited funding and publishing opportunities often restrict representation from low and middle-income countries (as per the World Bank), while gender inequalities further exacerbate the imbalance. These challenges highlight the need for a diverse academic landscape in research. In this context, we explored these disparities within the field of orofacial cleft (OFC) to examine whether this field too, is affected by a lack of diverse representation.

AIMS

This paper aimed to measure inequalities in OFC research by examining publications from 1842 to 2024 and advocate for a more equitable and inclusive scholarly environment in the field of OFC. This is done with the ultimate aim of giving adequate representations to diverse patient needs and researchers' perspectives globally.

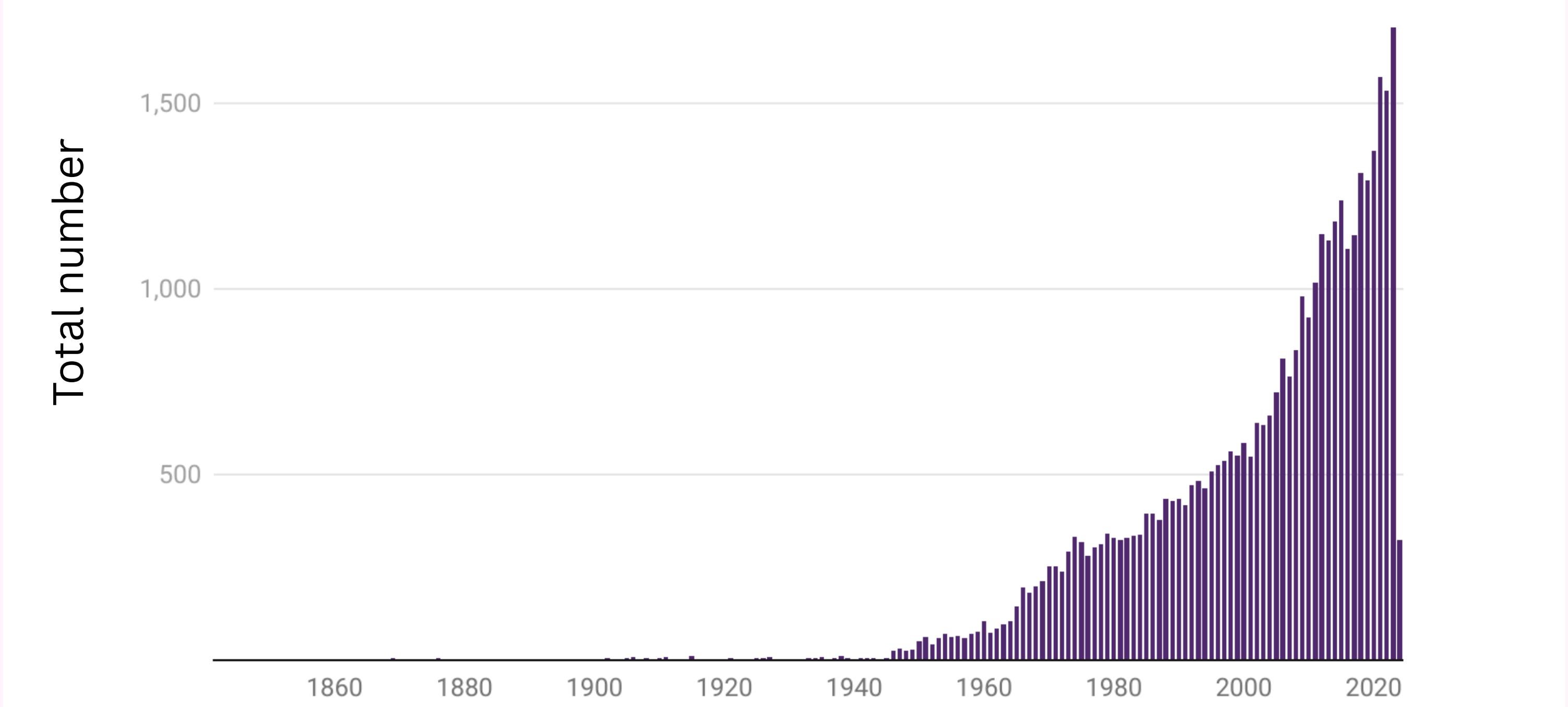
METHODS

This analysis examined articles published in Elsevier journals, using a Python script developed by the ICSR Elsevier Lab. The selection process involved a comprehensive keyword search, followed by a detailed evaluation of factors including the journal of publication, geographical trends (such as the most prolific countries, regions and country income groups as per the World Bank), as well as author gender data. Gender was inferred using a validated technique developed by Elsevier.

RESULTS (1) - GENERAL TREND

- A total of 39176 articles met the inclusion criteria, spanning publications from 1842 to 2024 (graph 1).
- Publication numbers grew exponentially after 1950.
- Only 22% of these articles published since 2000 are open access.

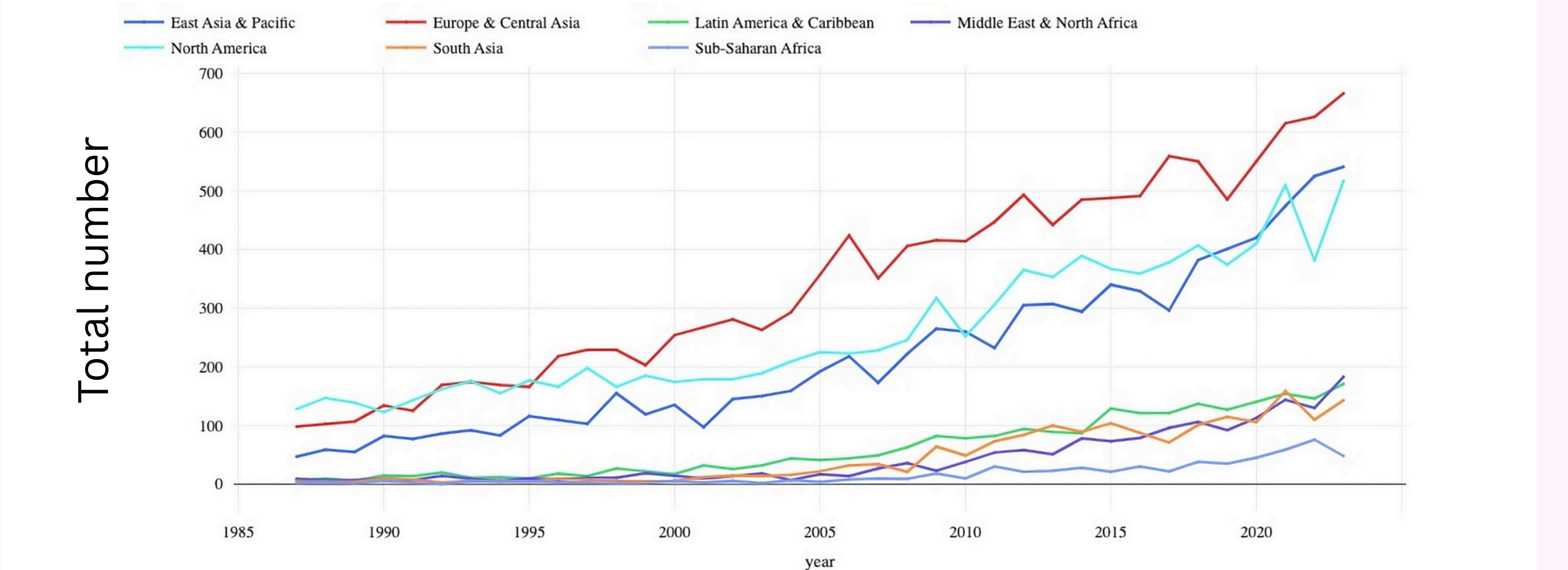
GRAPH 1: OFC PUBLICATION OUTPUT THROUGH THE YEARS



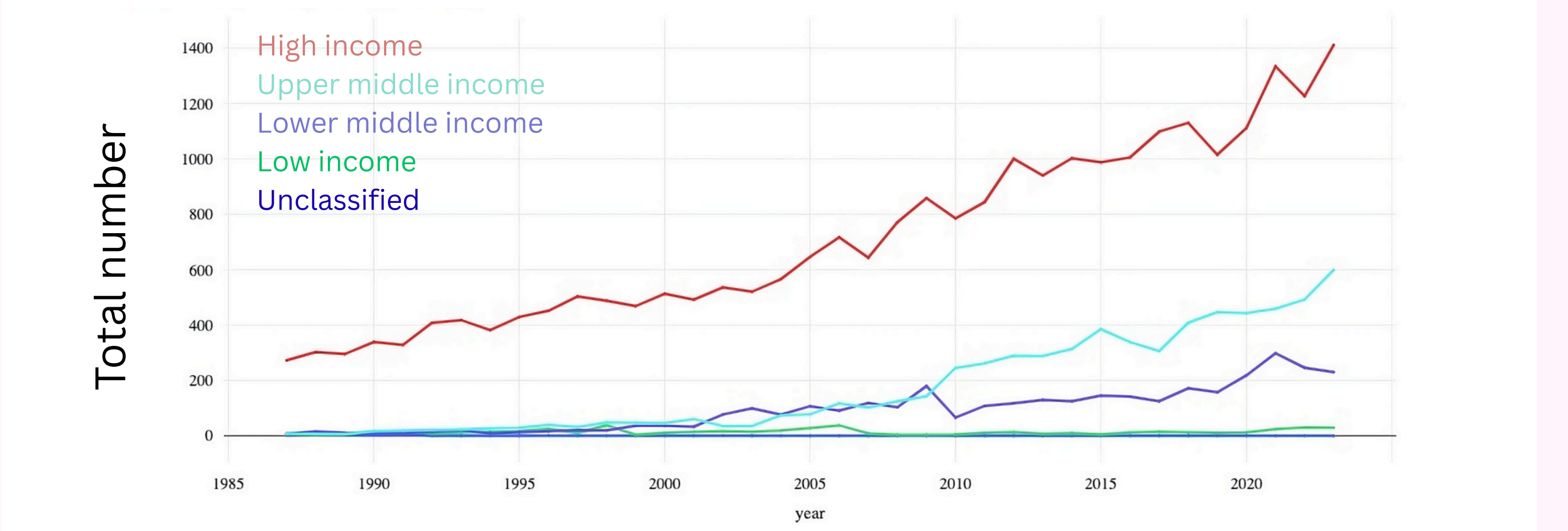
RESULTS (2) - GEOGRAPHICAL ANALYSIS

- Publication numbers are increasing for all regions, but Europe, North America and East Asia and Pacific continue to lead the research efforts (graph 2).
- Publication numbers are increasing for all country income groups - high income (HIC), upper and lower middle income (UMIC, LMIC) - but remain few for low income countries (graph 3).

GRAPH 2: OFC PUBLICATION PER REGION



GRAPH 3: OFC PUBLICATION PER INCOME COUNTRY



RESULTS (3) - LEADERSHIP POSITIONS IN INTERNATIONAL COLLABORATIONS

- There were 1963 papers with two or more authors, published as a result of cross-income country collaborations in our Scopus corpus.
- These typically feature a more equitable distribution of authorship between HICs and LMICs.
- However, there is a significant gap between senior author (SA) positions, when it comes to different income groups (table 1), with LMIC (low and middle-income countries) authors being almost half the number of HIC senior authors.

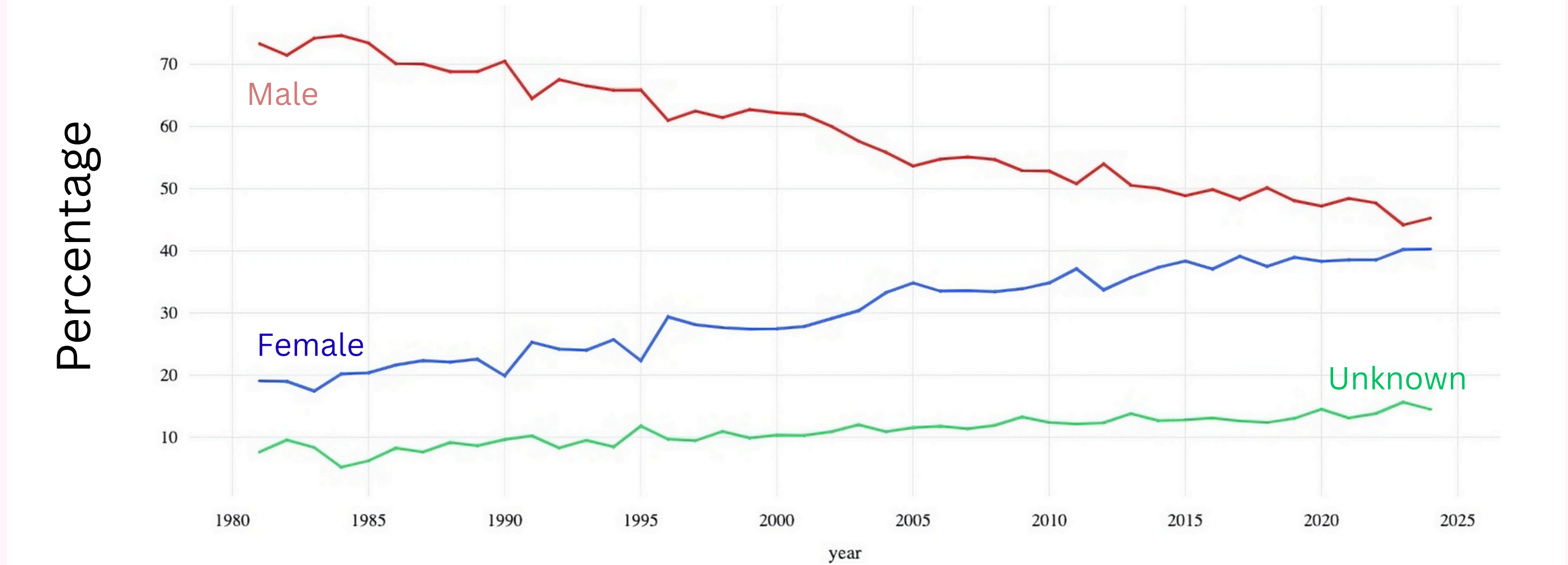
TABLE 1: AUTHORS PER COUNTRY INCOME GROUP

First Author (FA)	Percentage (FA)	Last Author (LA)	Percentage (LA)
HIC First Author	41	HIC last author	60
LMIC First Author	46	LMIC last author	34
HIC & LMIC First Author	13	HIC & LMIC last author	6

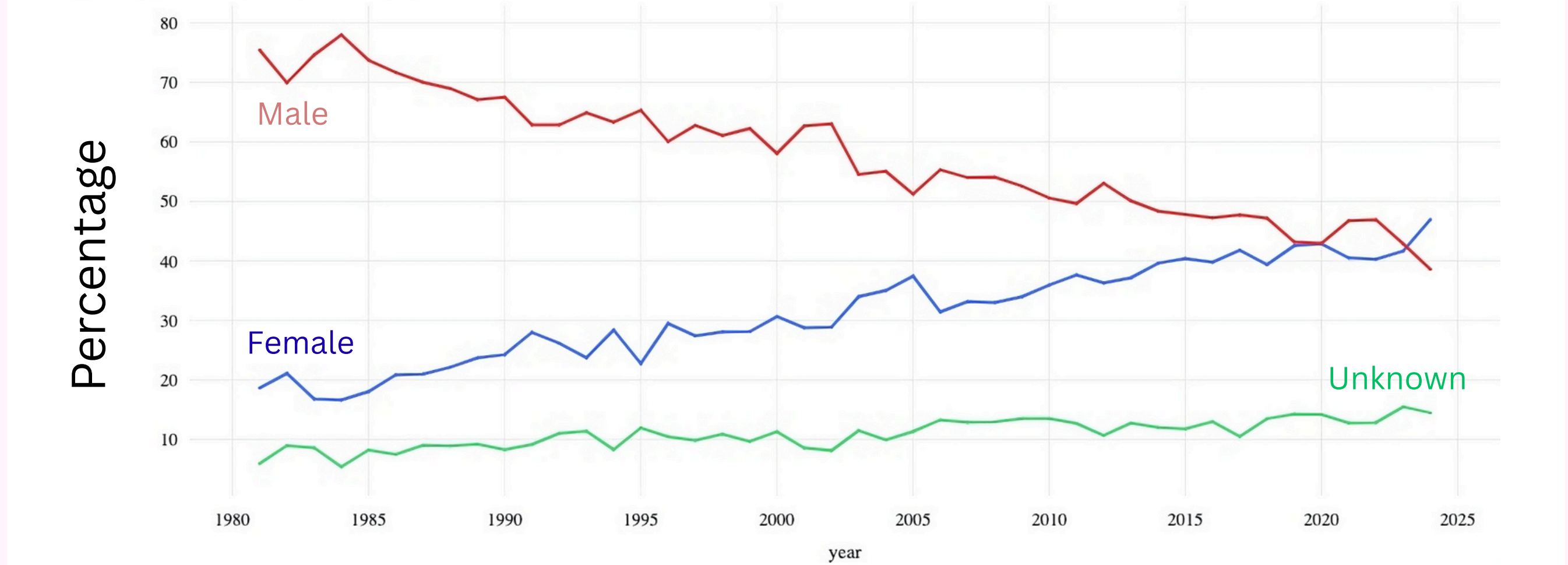
RESULTS (4) - GENDER ANALYSIS

- While there appears to be a significant improvement in gender representation amongst authors, zooming in there is persistent gap between male and female SA. This means leadership positions in OFC research are still difficult to access for female researchers.
- However, female authors are accessing first authorship (FA) positions more easily and have recent overtaken their male counterparts.

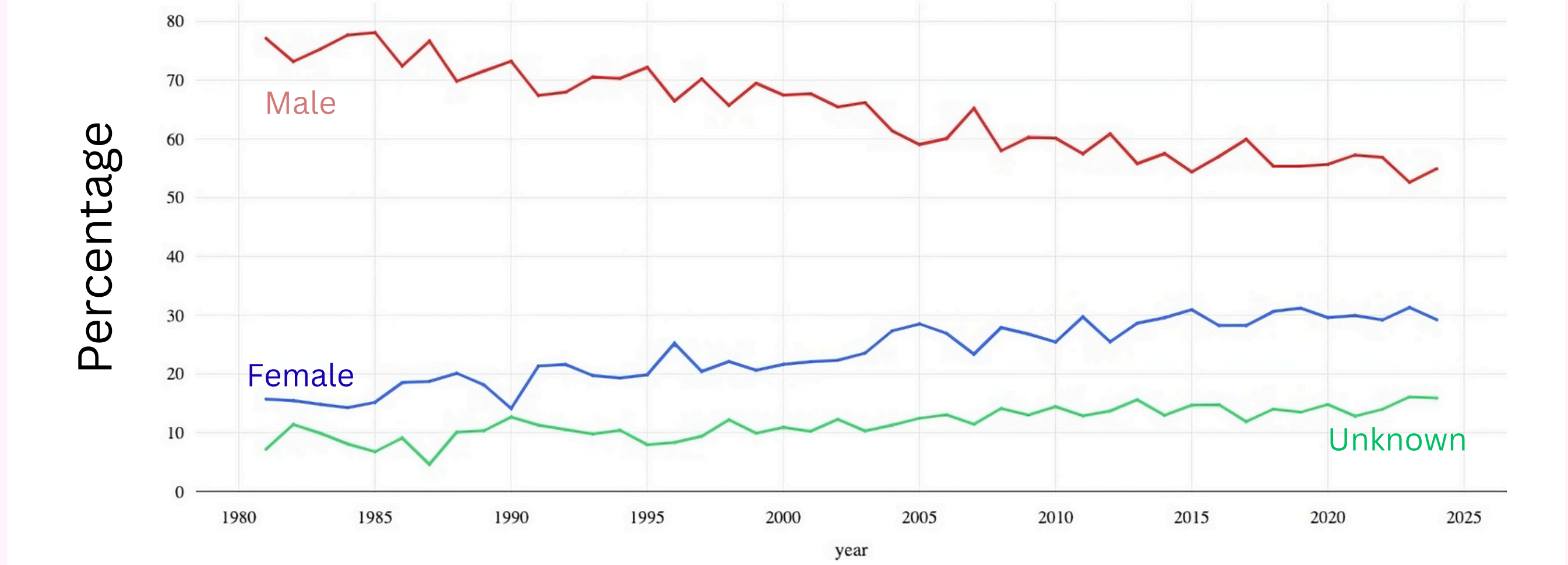
GRAPH 4A: GENDER OF ALL AUTHORS BY YEAR



GRAPH 4B: FIRST AUTHOR GENDER BY YEAR



GRAPH 4C: LAST AUTHOR GENDER BY YEAR



CONCLUSION

While inequalities in cleft palate research persist, progress has been made in gender representation and the global distribution of research output, particularly when it comes to gender. A stronger international effort is needed to ensure continuous improvement in fostering a more inclusive cleft research culture across continents, income groups, gender representation and more.

BIBLIOGRAPHY

