

HOW WELL ARE THE SUSTAINABLE DEVELOPMENT GOALS REPRESENTED IN OROFACIAL CLEFT RESEARCH? EVIDENCE FROM A CODED DATASET

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INTRODUCTION

Orofacial clefts (OFC) are among the most common congenital conditions, affecting over 8 million newborns annually. They have lifelong impacts—nutritional, educational, and psychosocial—requiring multidisciplinary approaches, which include surgical intervention in paediatric ages. In 2010, the World Health Organization passed a resolution to strengthen global responses to congenital conditions, aligning with the 2016 United Nations Sustainable Development Goals (SDGs) to be met by 2030.

OBJECTIVES

This paper aims to evaluate how well represented the SDGs are in OFC publications. Further, this research aimed to identify which goals are most mentioned by which income country group as per the World Bank (High, upper-middle, lower-middle and low income). This was done to potentially identify different priorities in research and oro-facial care in different economies. The ultimate objective of this paper is to encourage more oro-facial cleft-related research to focus on holistic sustainability, with the goal of improving patient care.

METHODS

A Python script developed by Elsevier was used to conduct a comprehensive keyword search and content analysis of OFC-related articles (1842-2024). The script inferred SDG themes from the content. The study focused on SDG mentions, thematic relevance, and World Bank country income classification. No date restrictions were utilised.

FIGURE 1

FIGURE 1: How are sustainable development goals related to cleft palate care?



TABLE 1

Table 1: Frequency of mention of Sustainable development themes in oro-facial clefts, per sustainable development goal.

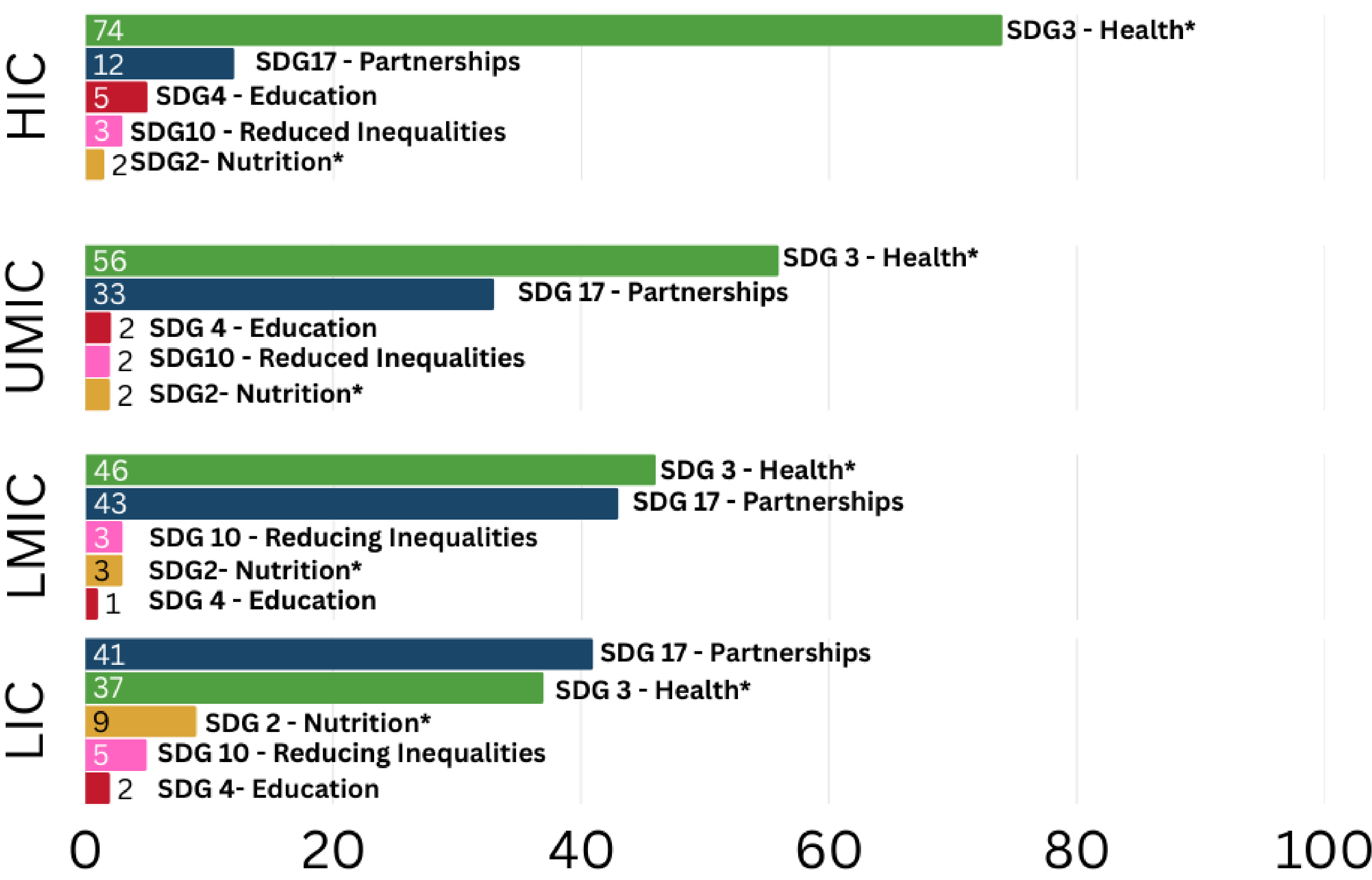
Frequency of Mentions per individual SDG

SDG Number	Mentions
SDG3 - Health	4,225
SDG17 - Partnerships	1,078
SDG4 - Education	211
SDG10 - Reduced inequalities	148
SDG2 - Nutrition	105
SDG16 - Peace, justice and strong institutions	45
SDG9 - Infrastructure and innovation	39
SDG6 - Clean water and sanitation	33
SDG11 - Sustainable cities	29
SDG5 - Gender equalities	29
SDG7 - Affordable and clean energy	27
SDG1 - No poverty	23
SDG8 - Economic growth and work	22
SDG15 - Life on land	19
SDG14 - Life below water	16
SDG12 - Responsible consumption and production	14
SDG13 - Climate action	3

- A total of 39176 total cleft papers.
- 14% mentioned SDG-related themes (5598) - distribution shown in Table 1.
- 6069 SDGs total mentions.
- SDG 3 (Good Health) and SDG 17 (Partnerships) were the most commonly mentioned goals.

FIGURE 2

Figure 2 shows the five most frequently mentioned SDGs for each country income group, expressed as a percentage of all authors per income group.



HIC = high income
UMIC = upper-middle income
LMIC = lower-middle income
LIC = low income, *= statistically significant

- Different income groups had different research priorities, when it comes to SDGs and clefts.
- As the countries' GDP decreases, so does the frequency of mention of SDG3-Health in publications ($p < 0.0001$). Instead, As the countries' GDP decreases, SDG2-Nutrition becomes more frequently mentioned ($p < 0.0001$).
- Of importance. Goal 16.9 (every birth must be registered) did not figure in the top mentioned goals. Registering births is important to register congenital presentations such as cleft.

DISCUSSION AND LIMITATIONS

- A small percentage of cleft publications focuses on sustainability in broad terms.
- Partnerships become more fundamental as the GDP of income groups falls. Indeed, OFC care is often based on NGOs, particularly in LMICs.
- Supporting educational outcomes of children with clefts is a research priorities in more developed countries. However, education in this study also refers the education of the OFC MDT.
- Nutrition is a challenge in low income countries for children born with cleft.
- Some correlations with non human clefts were found, such as clefts in sea species. This is both a strength and a weakness.
- Thematic analysis only, not systematic review.
- Limitations with grouping together incredibly diverse countries.
- Limitations with including articles with abstracts written in English only.

CONCLUSION

These findings highlight how partnership, nutrition and education represent different OFC-related challenges and priorities based on country income. This can guide paediatric surgical care worldwide, with the objective of achieving the SDGs by 2030 – aiming to address diverse patients' needs globally through OFC care.

BIBLIOGRAPHY



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