Longitudinal analysis of early childhood stunting in low-resource settings

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Contents

Chapter 1

Overview

Recommended citation: Benjamin-Chung J, et al. 2020. Longitudinal analyses of early childhood stunting in low-resource settings. *Journal Name*. doi.

Add a description of what this book is

Chapter 2

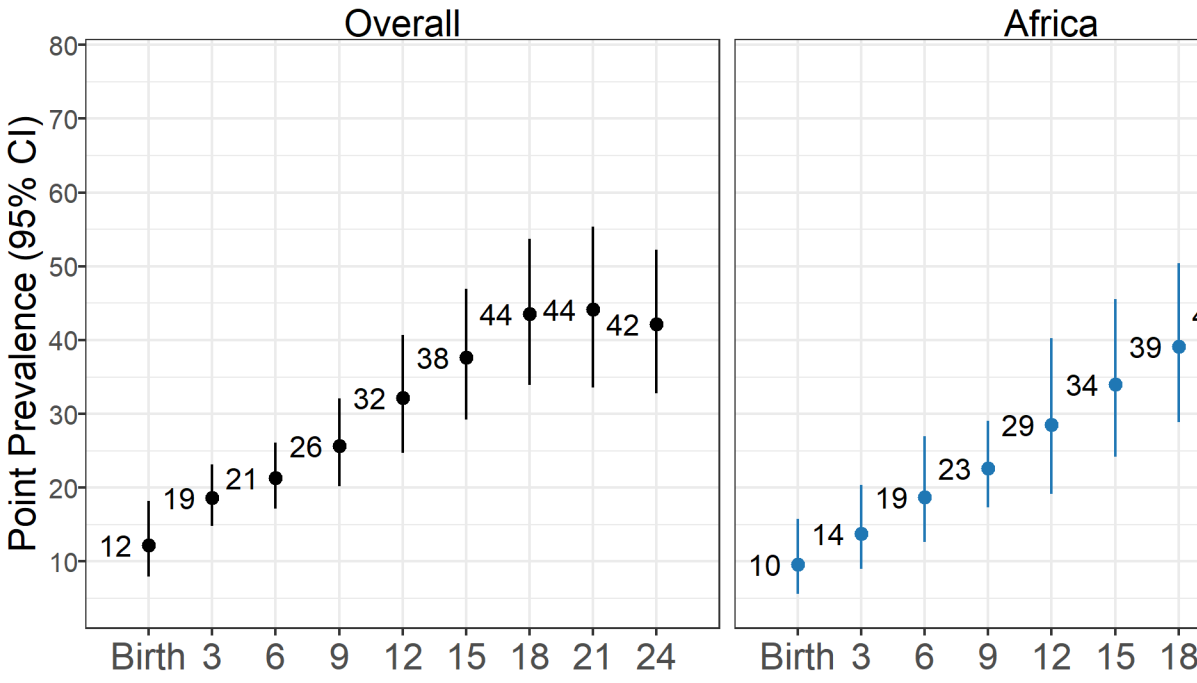
Sensitivity analysis using fixed effects

The primary analyses presented in this manuscript pooled across individual studies using random effects. Inferences about estimates from fixed effects models are restricted to only the included studies.[1] The random effects approach was more conservative in the presence of study heterogeneity, as evidenced by larger confidence intervals around each point estimates. Overall, the inference from results produced by each method was similar.

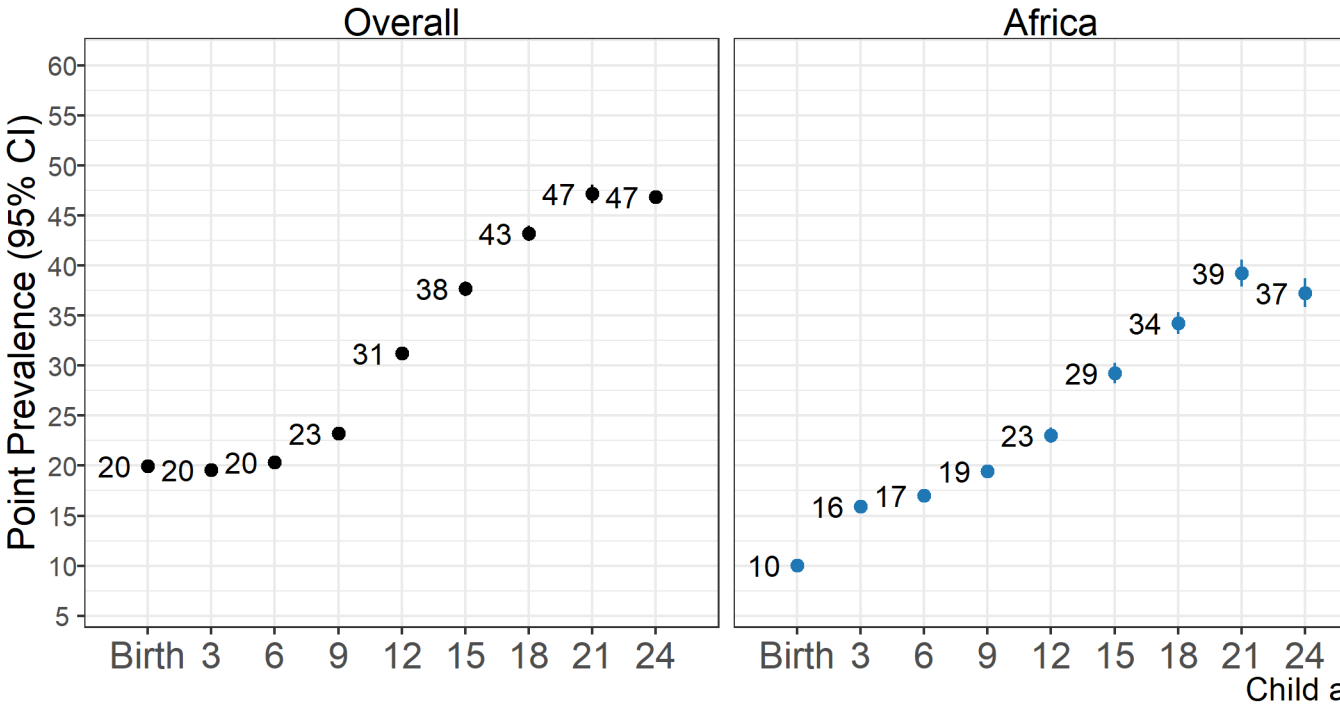
[1] Hedges, L. V. & Vevea, J. L. Fixed- and random-effects models in meta-analysis. Psychol. Methods 3, 486–504 (1998).

2.1 Age-specific prevalence

2.1.1 Random effects



2.1.2 Fixed effects



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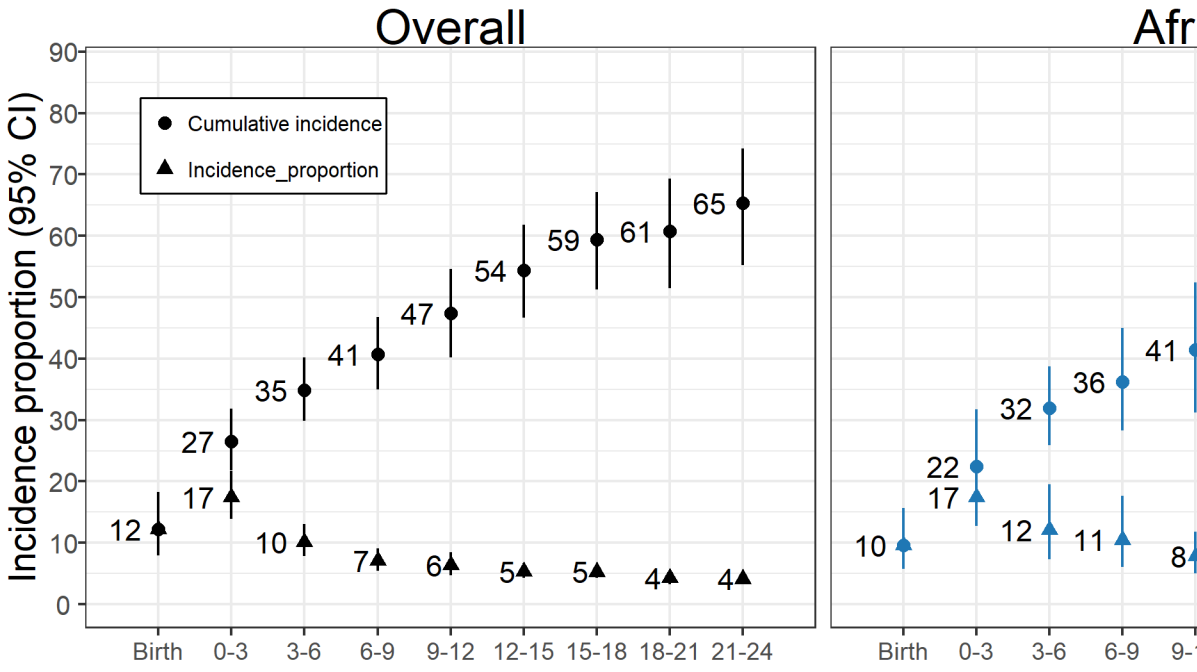
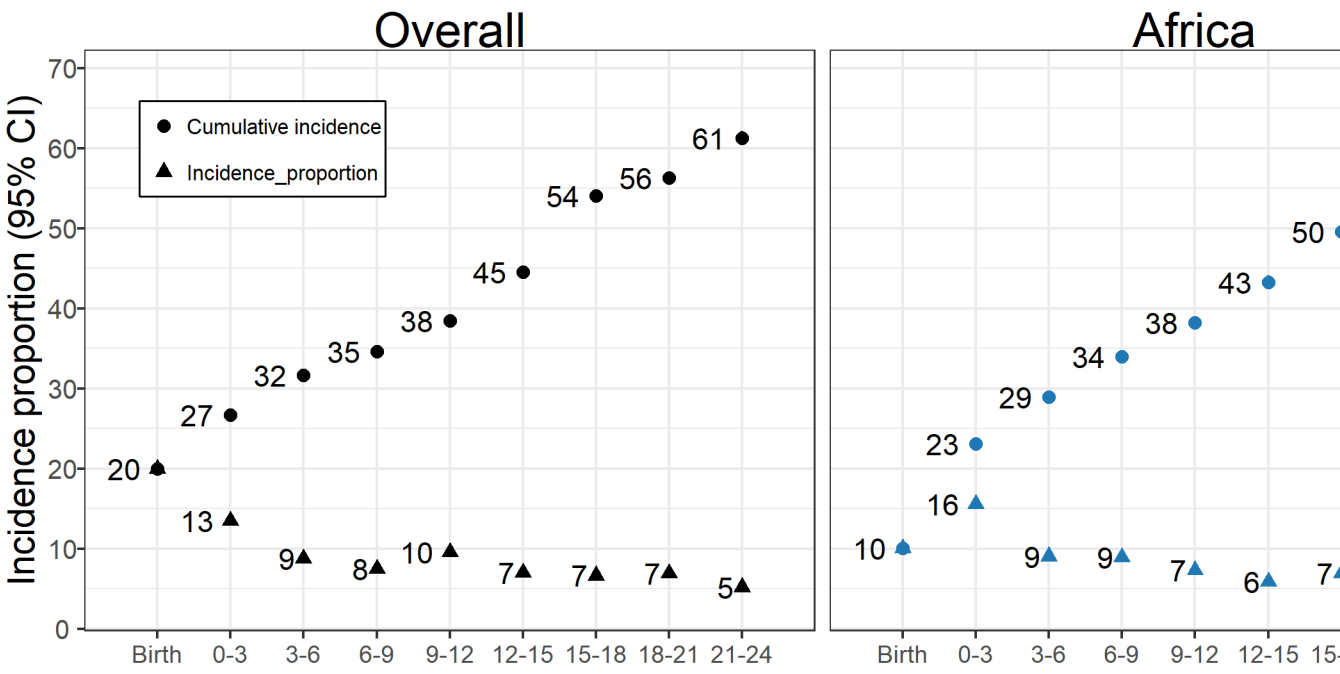
2.2 Age-specific incidence

2.2.1 Random effects



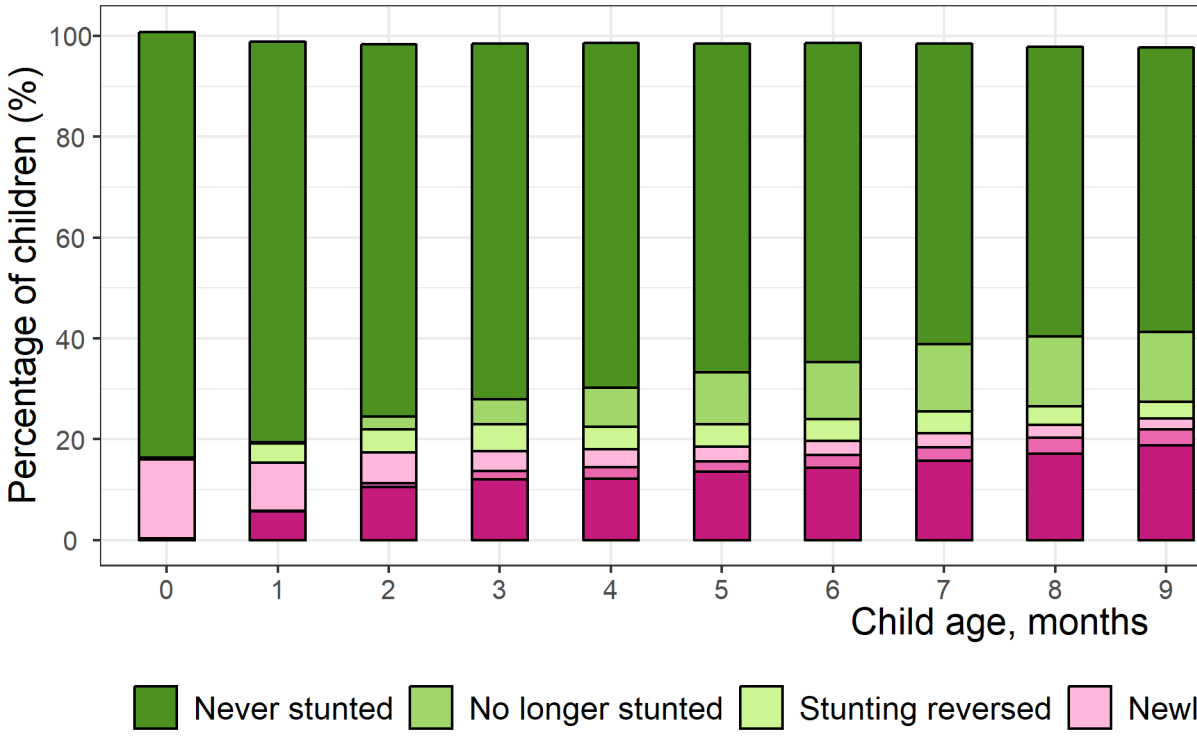
2.2.2 Fixed effects



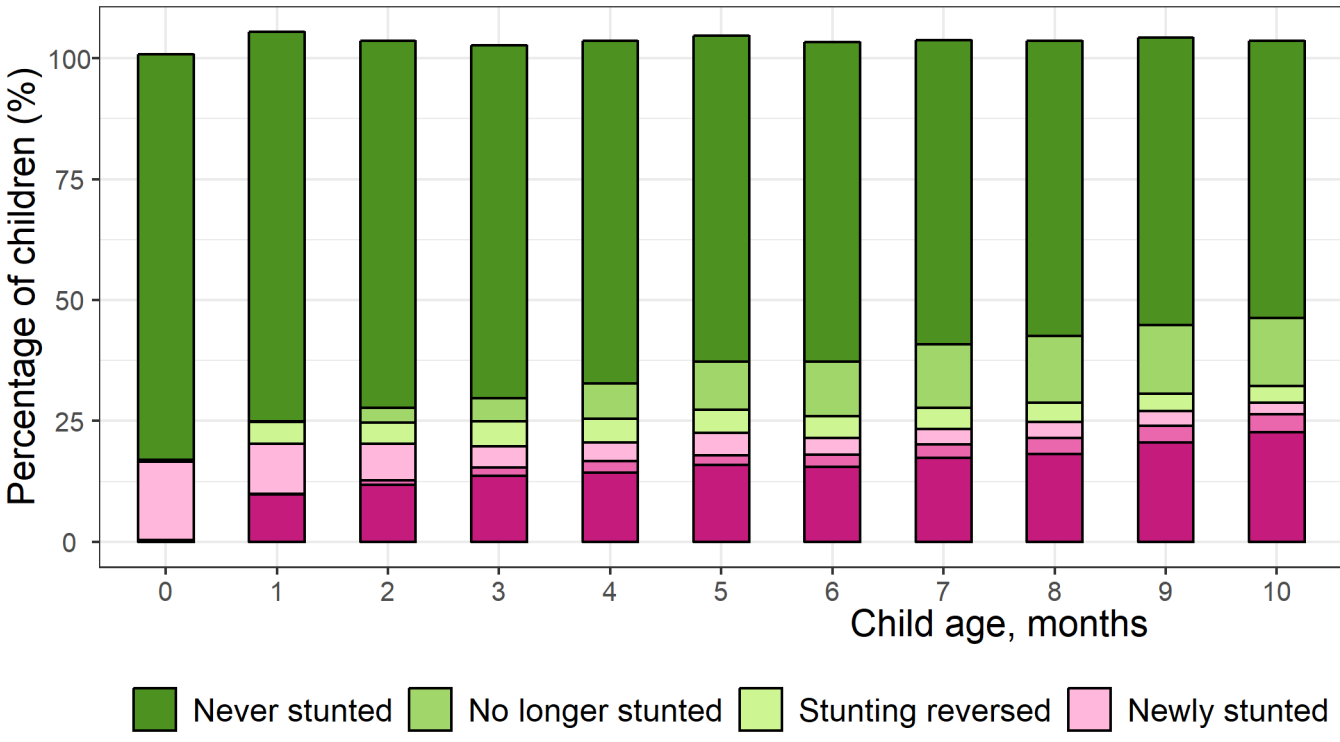
[ADD CAPTION]

2.3 Changes in stunting status by age

2.3.1 Random effects



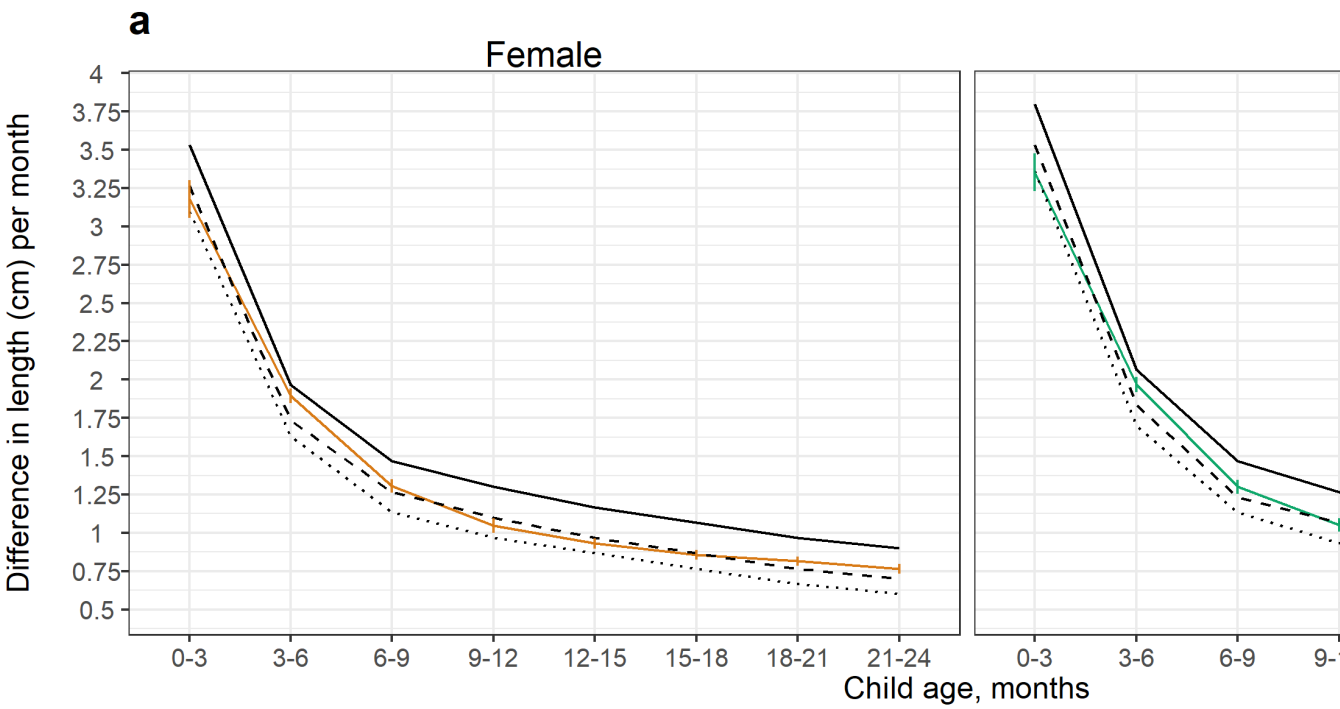
2.3.2 Fixed effects

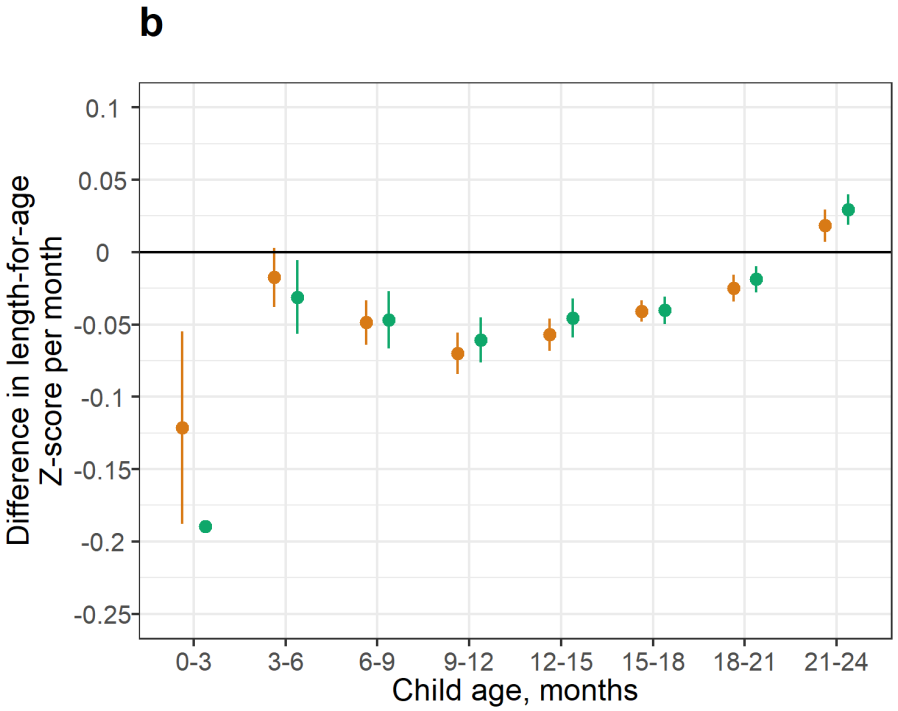


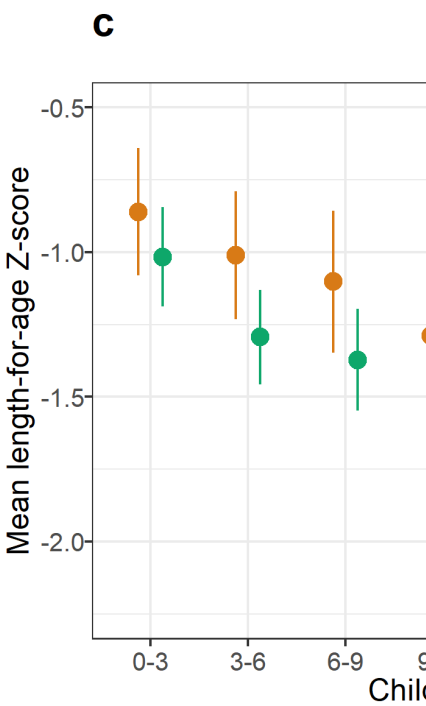
[ADD CAPTION]

2.4 Linear growth velocity

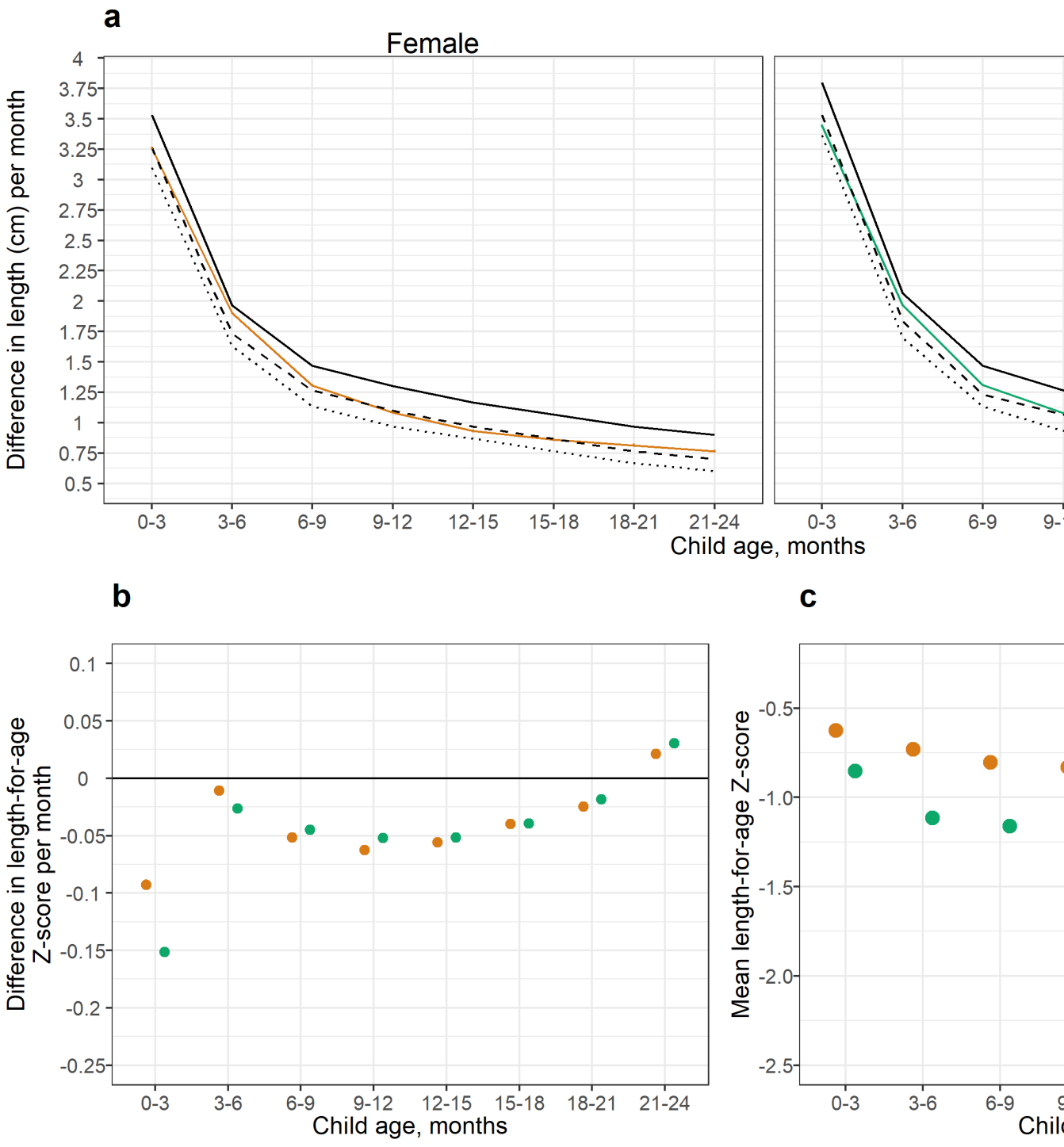
2.4.1 Random effects







2.4.2 Fixed effects



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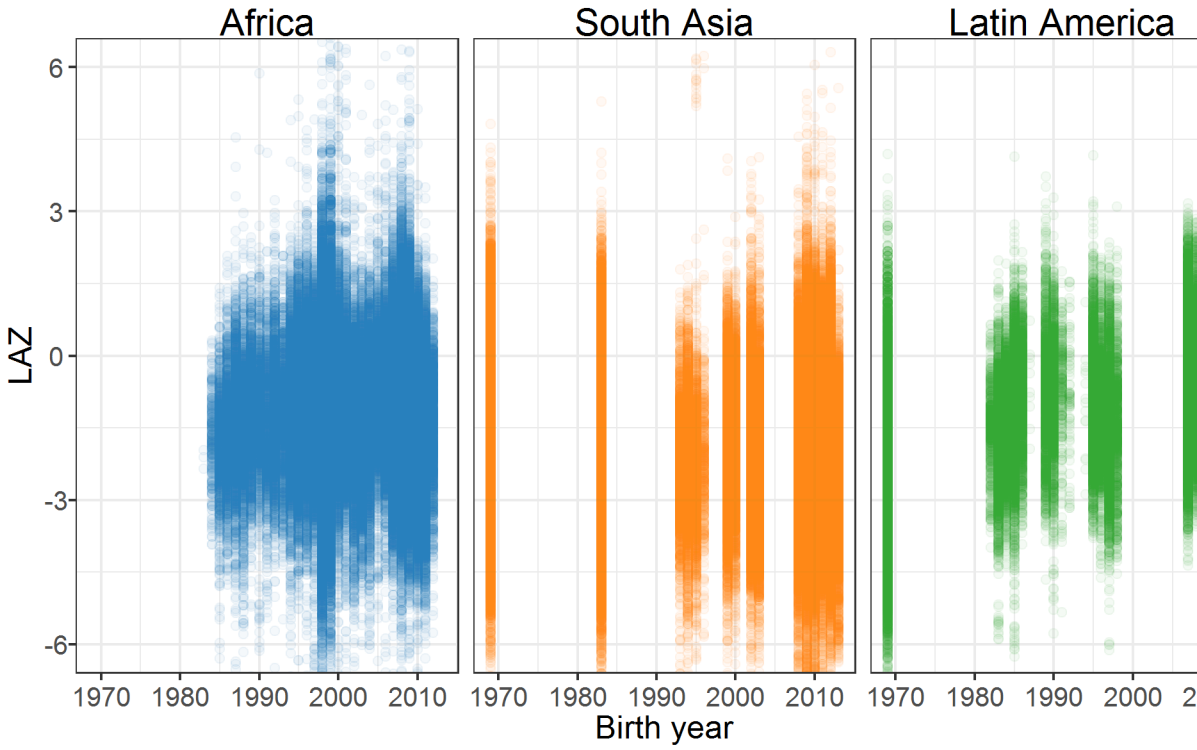
Chapter 3

Assessment of potential secular trends

This study included cohorts that measured child growth from 1969 to 2014. To assess potential secular trends, we plotted the mean length-for-age Z-score (LAZ) over time. The plot below shows the individual observations from included studies over this range of years. There does not appear to be a secular trend in LAZ.


Africa
South Asia
Latin America
LAZ
6
3
0
-3
-6
1970
1980
1990
2000
2010
Birth year

Chapter 4

Primary analyses excluding the PROBIT study

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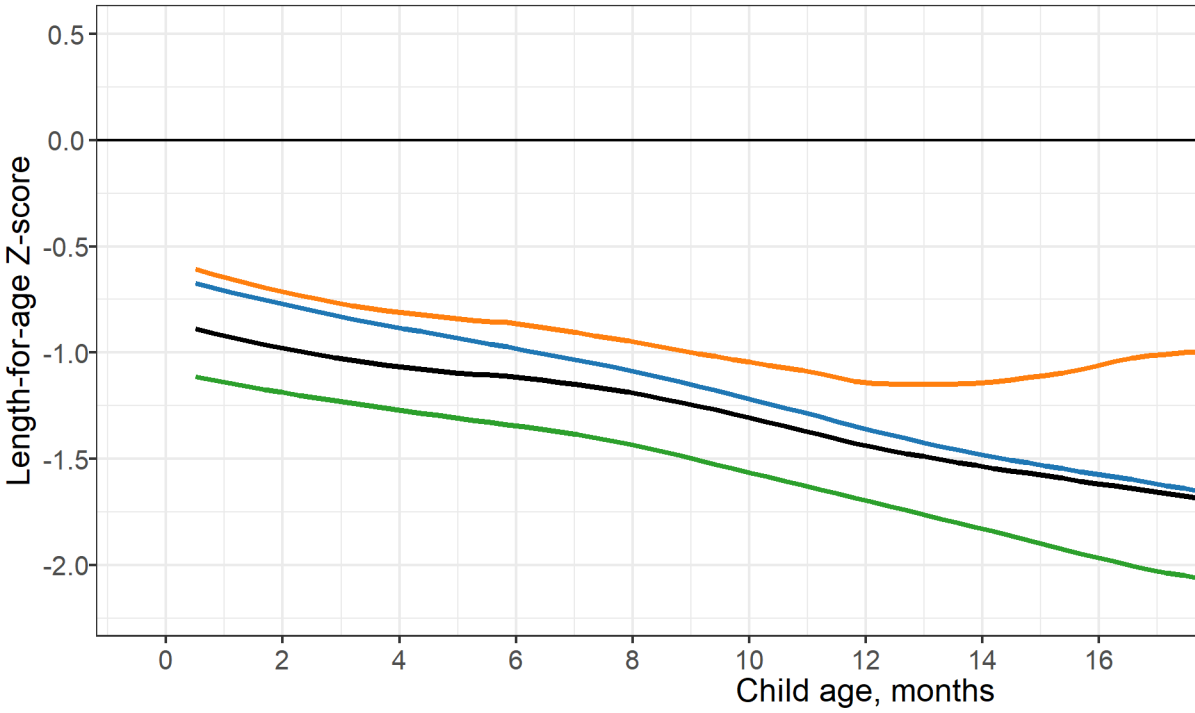
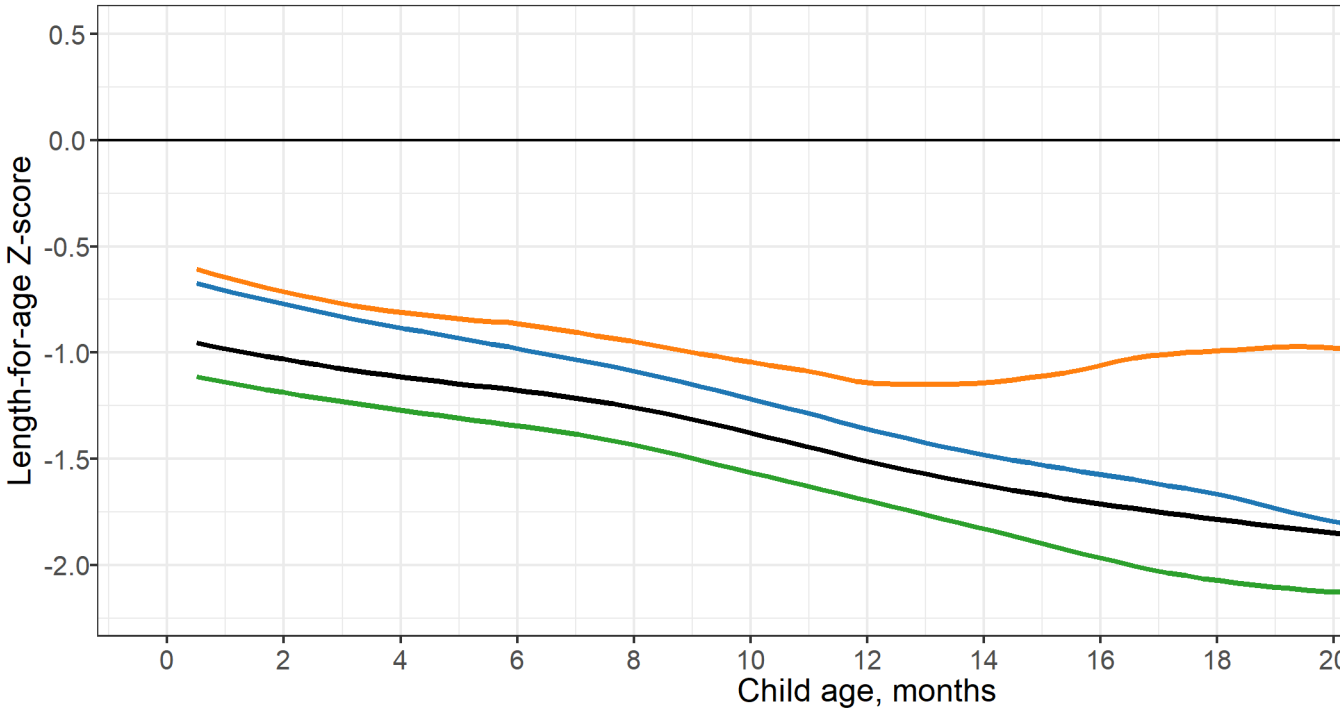
4.1 Mean length-for-age Z-score by age

4.1.1 Including PROBIT

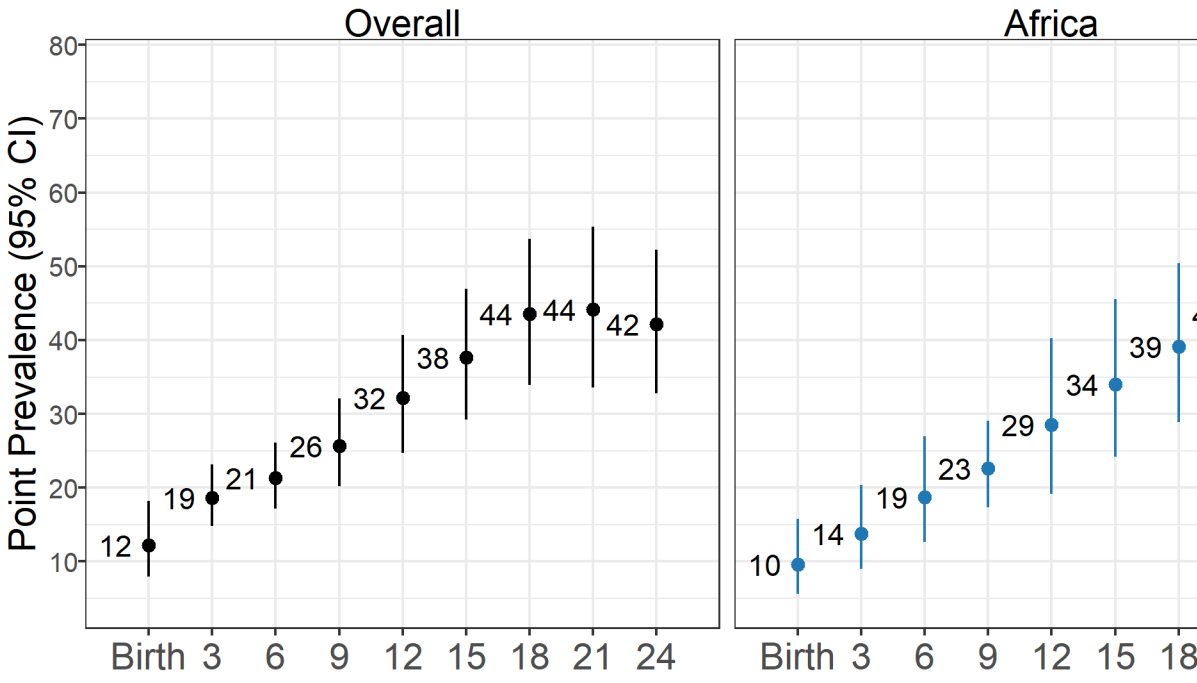


4.1.2 Excluding PROBIT

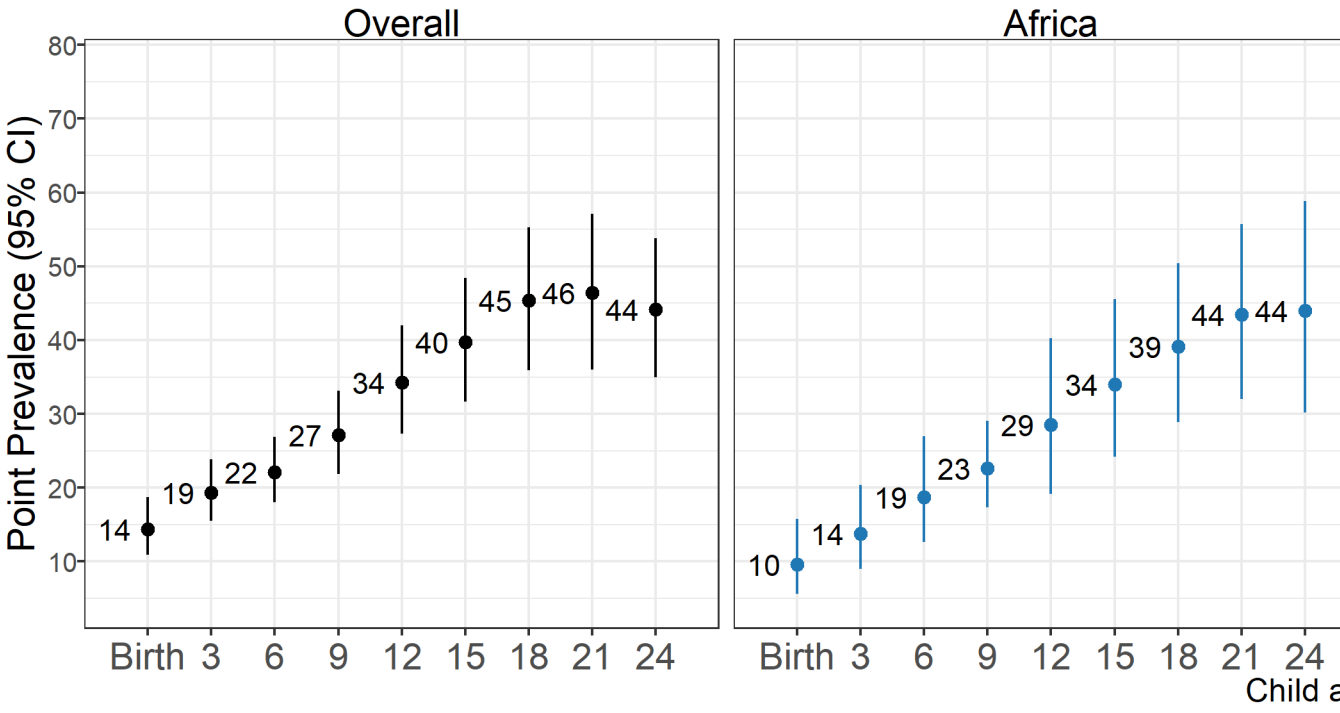


4.2 Age-specific prevalence

4.2.1 Including PROBIT

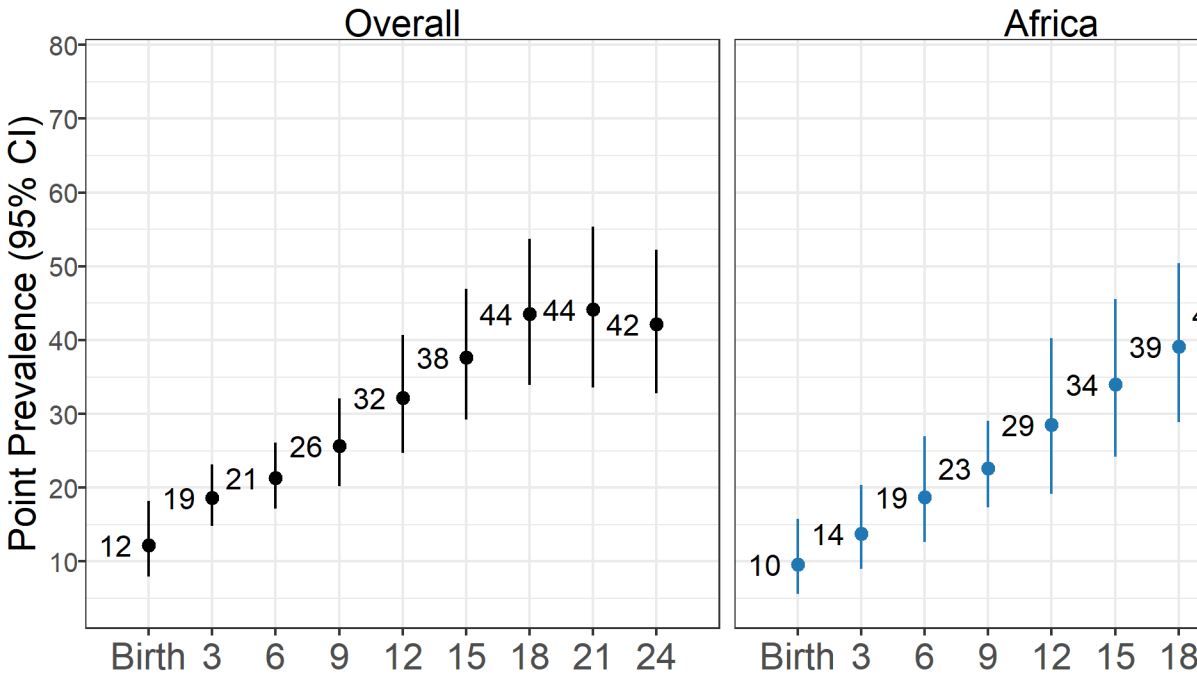


4.2.2 Excluding PROBIT

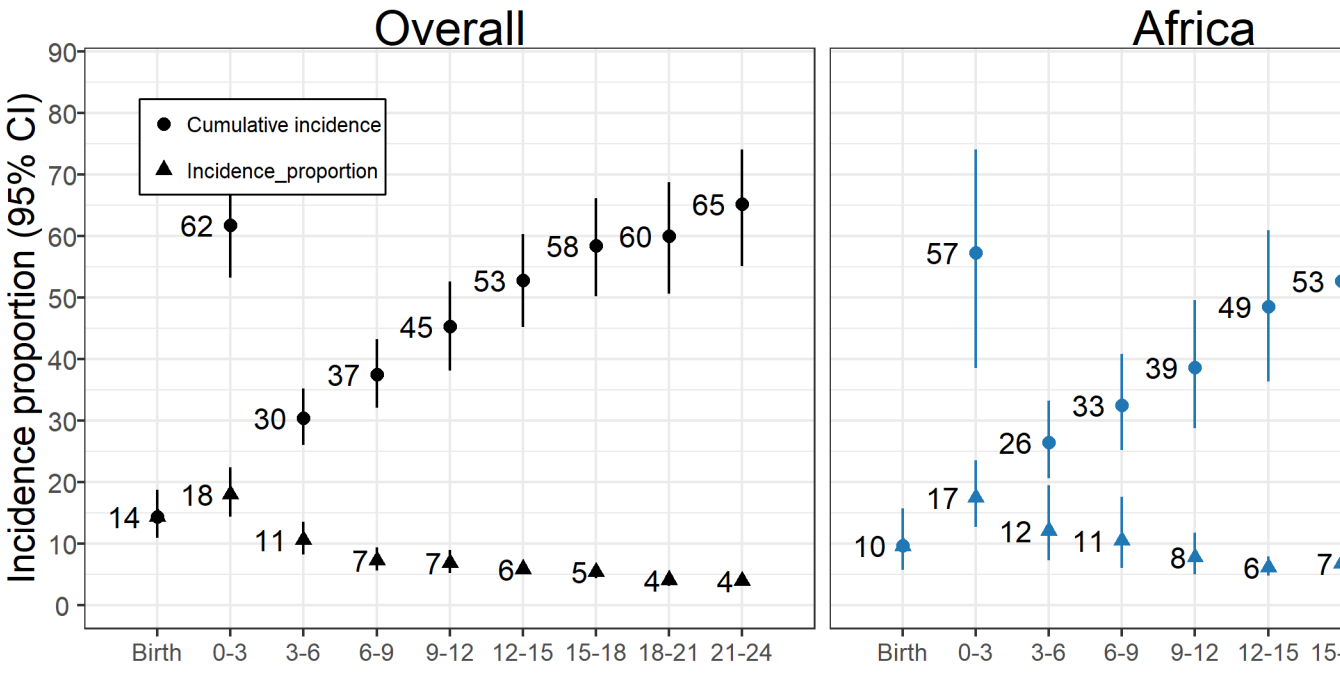


4.3 Age-specific incidence

4.3.1 Including PROBIT



4.3.2 Excluding PROBIT



Chapter 5

Severe stunting analyses

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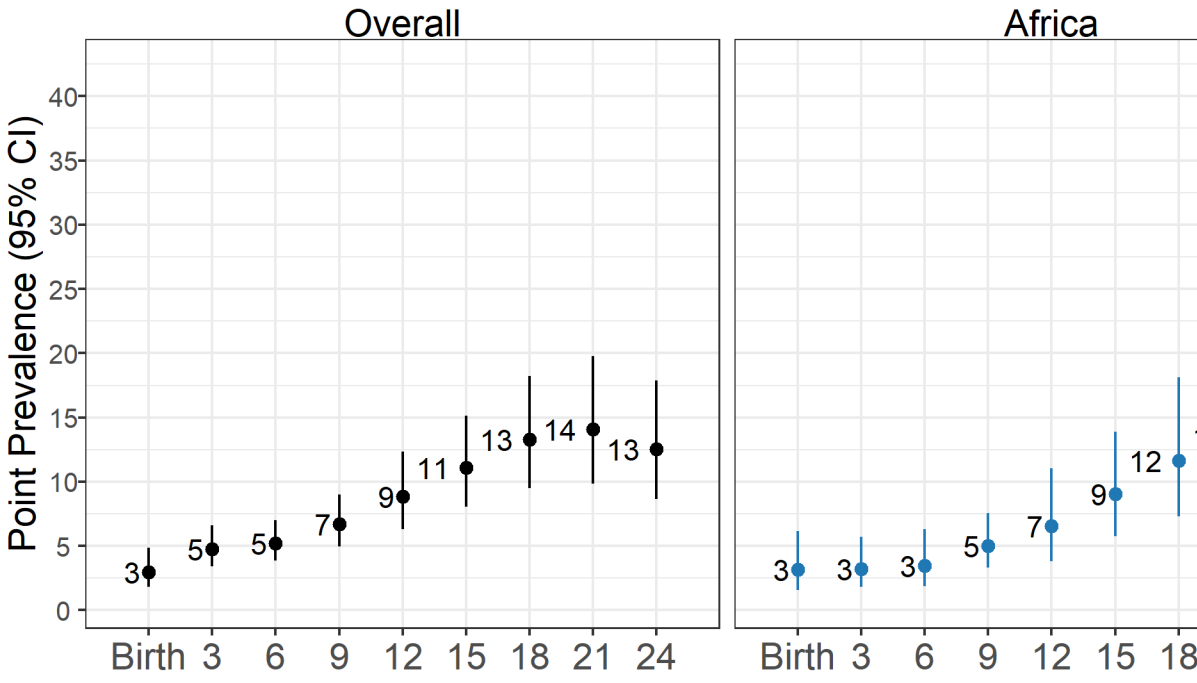
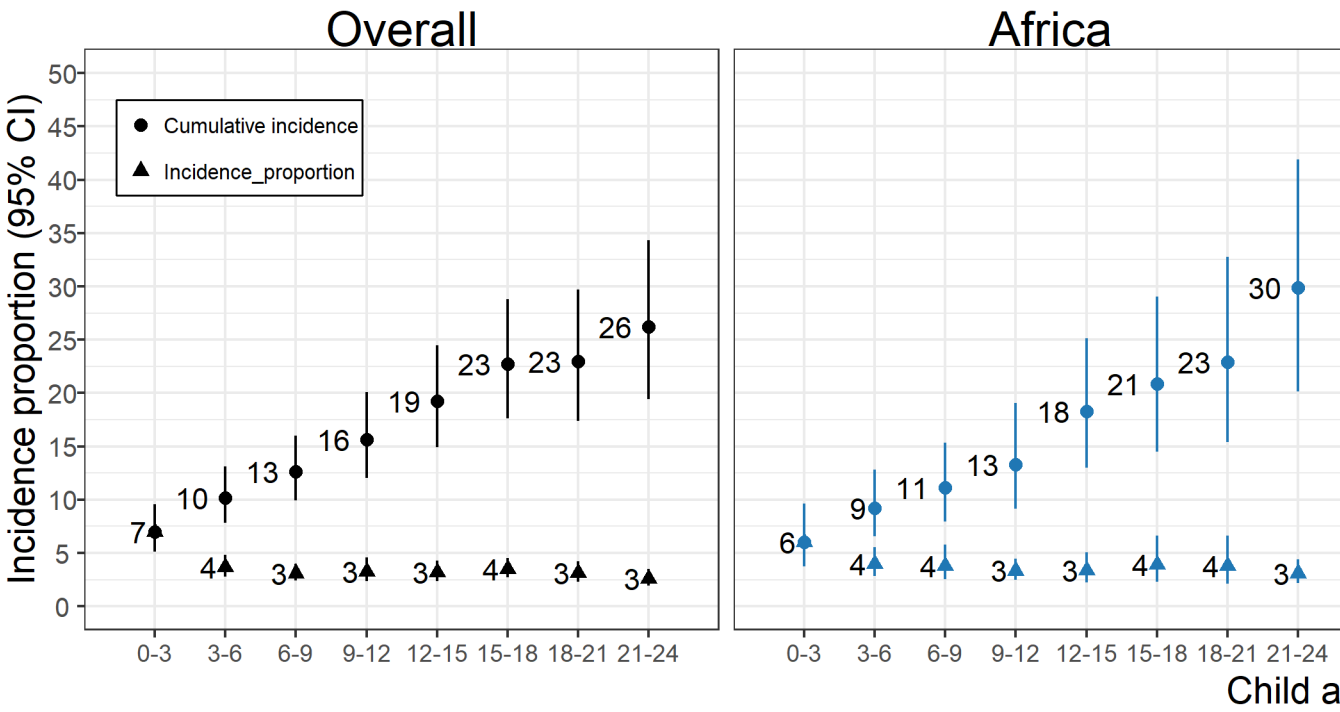
5.1 Age-specific severe stunting prevalence



5.2 Age-specific severe stunting incidence



Chapter 6

Analyses of gestational age

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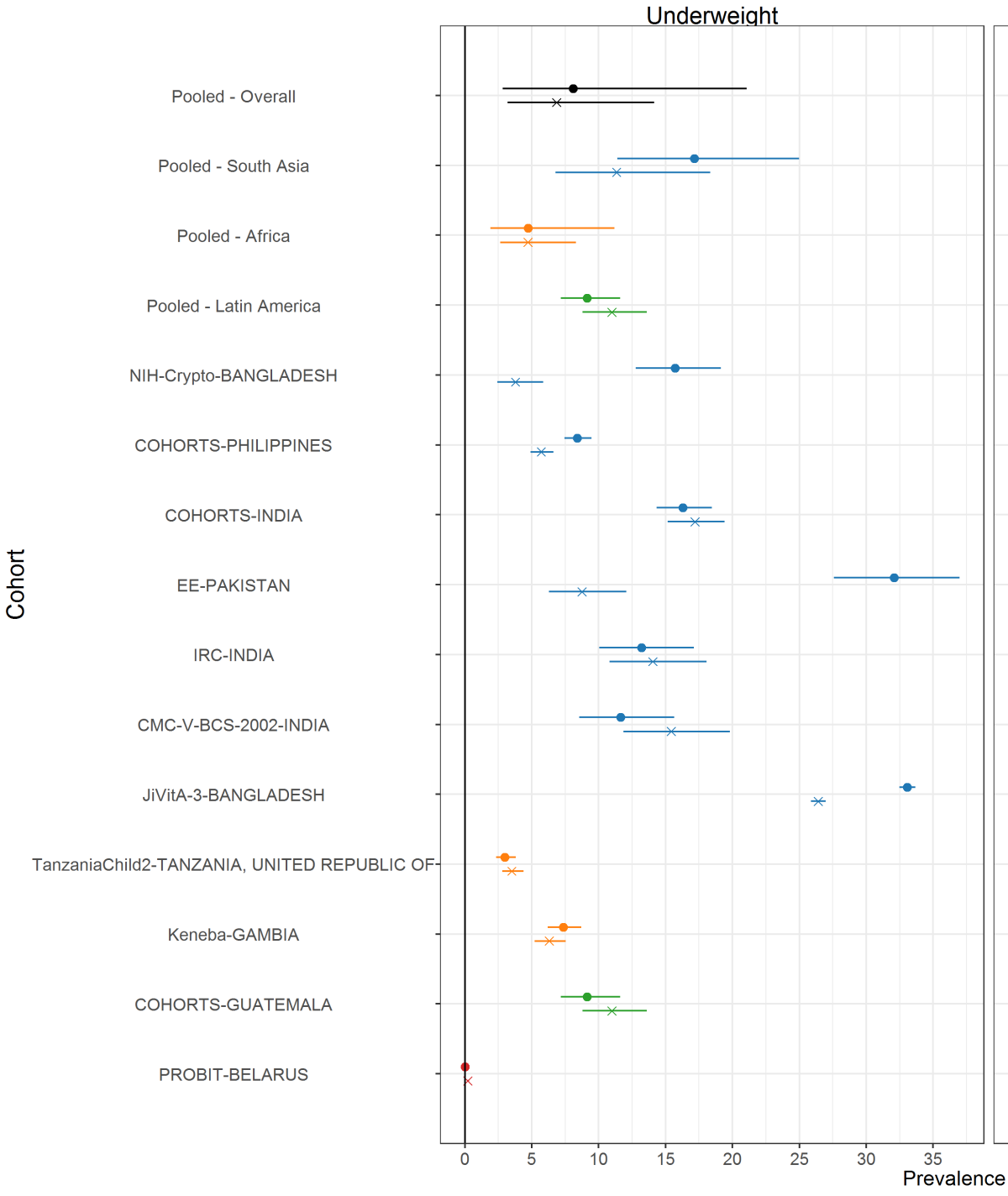
Underweight
Cohort
Pooled - Overall
Pooled - South Asia
Pooled - Africa
Pooled - Latin America
NIH-Crypto-BANGLADESH
COHORTS-PHILIPPINES
COHORTS-INDIA
EE-PAKISTAN
IRC-INDIA
CMC-V-BCS-2002-INDIA
JiVitA-3-BANGLADESH
TanzaniaChild2-TANZANIA, UNITED REPUBLIC OF
Keneba-GAMBIA
COHORTS-GUATEMALA
PROBIT-BELARUS
0
5
10
15
20
25
30
35
Prevalence

Chapter 7

Analyses of age at first measurement

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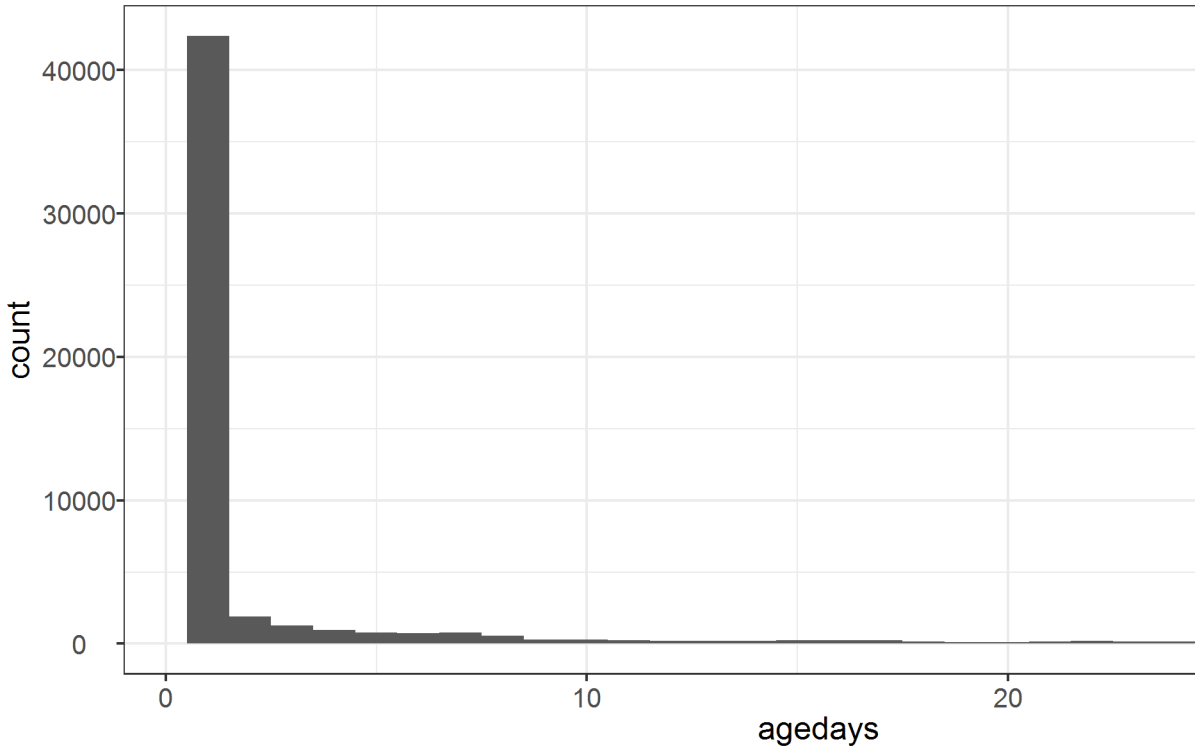
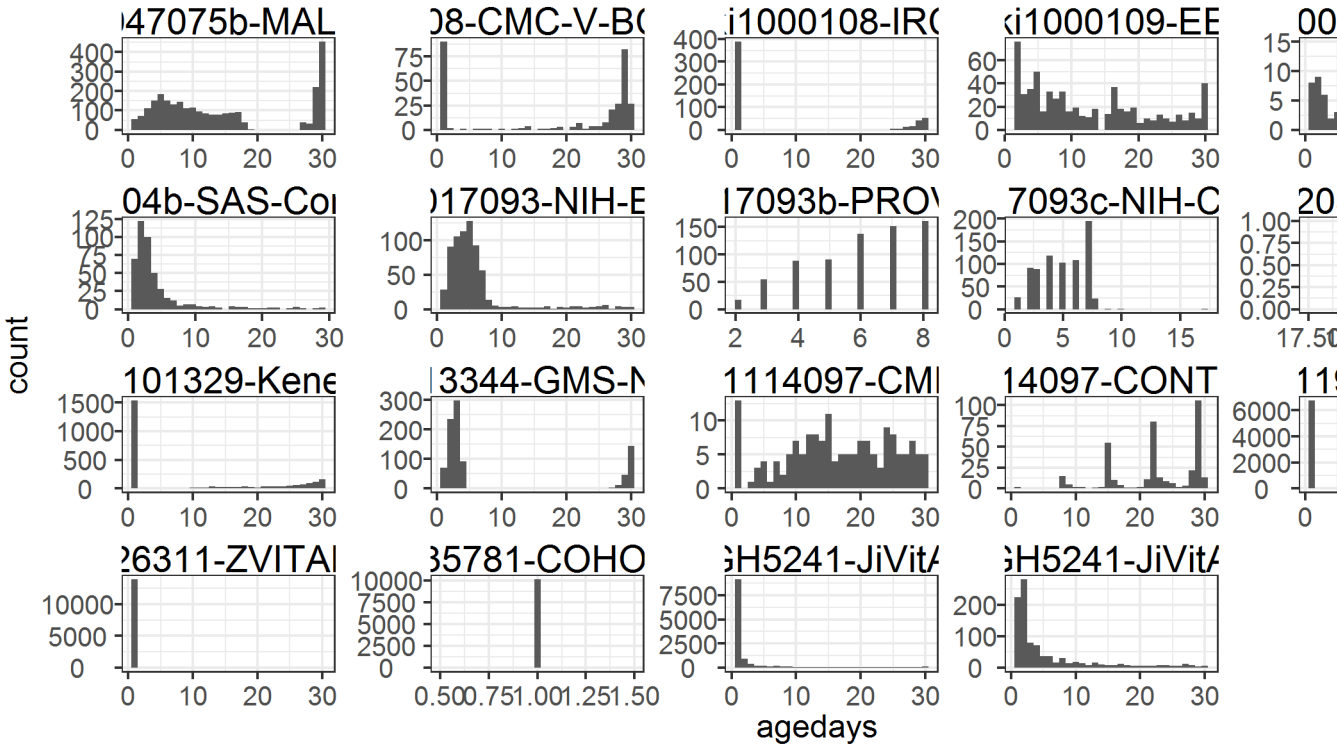
7.1 Histogram of age from 0-30 days

7.1.1 All cohorts

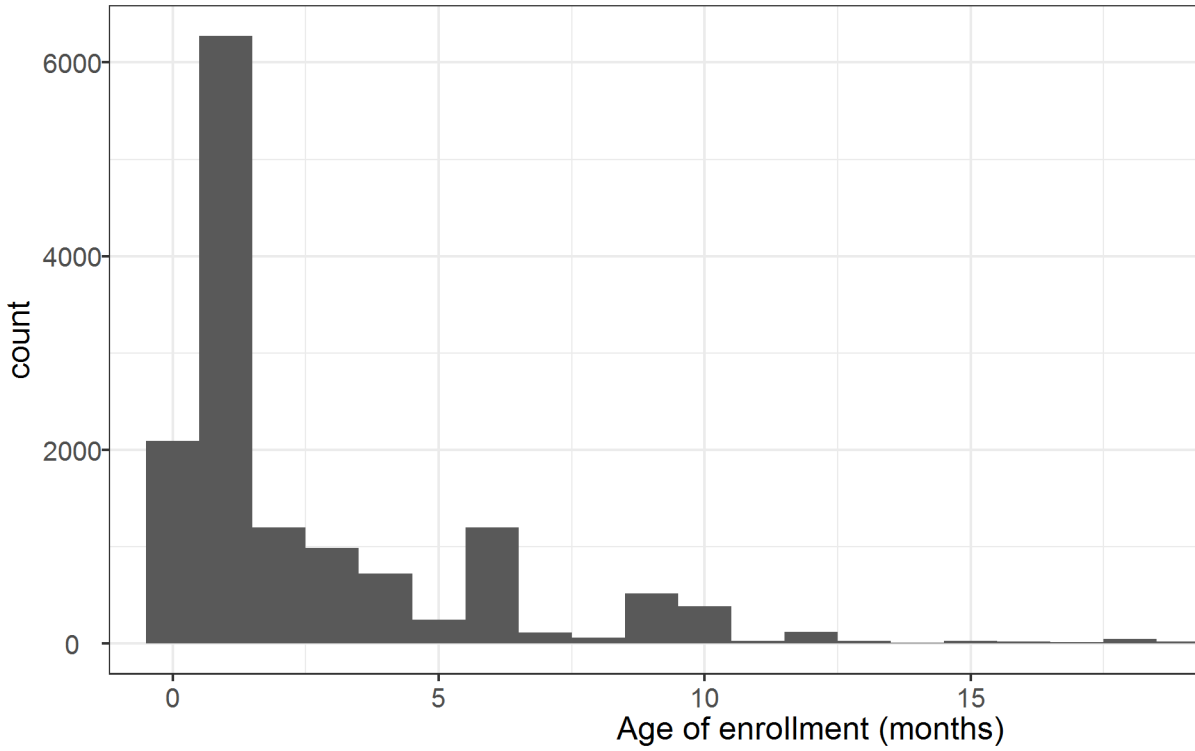


7.1.2 Cohort-stratified



7.2 Histogram of age at enrollment

7.2.1 All cohorts



7.2.2 Cohort-stratified