

Comparison of Growth in Children 6 to 59 Months of Age According to Birth Order: Insights From the National Family Health Survey-4 India

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Research

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Abstract

Background

Undernutrition continues to be a major public health problem throughout the world. The present study aimed to understand the prevalence and determinants of undernutrition in India and determine what extent it differs by birth order, other child level, maternal and socioeconomic factors.

Methods

This study used information from a total weighted sample of 128859 mothers from India National Family Health Survey 4. Univariate and Multivariate logistic regression were used to investigate the association between undernutrition with birth order, other child level, maternal and socio-economic factors. Three models were constructed for the study, model 1 as univariate, model 2 adjusting with birth order and socioeconomic predictors and model 3 adjusting with all the predictors included in the study.

Results

The prevalence of stunting, underweight and wasting were 37.9, 34.0 and 20.7 respectively. The mean age of children was 2.4 years (standard deviation 1.3) of which majority were second order birth (33.6%), males (54.5%), anemic (58.9%) and normal birth weight (87.2%). All three models showed that higher birth order was a strong predictor of a child being stunted and underweight after adjusting for potential confounders. Children with lower wealth quintiles, anemia, male, low birth weight and vaginal delivery had higher odds of being stunted, wasted and underweight in model-3 adjusted analysis.

Conclusion

The findings from this study provide an important interaction between birth order and child undernutrition status in India. However, further longitudinal studies are required to establish such cause-effect relationship between birth order and undernutrition.

Full Text

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Figures

Stunting, wasting and underweight

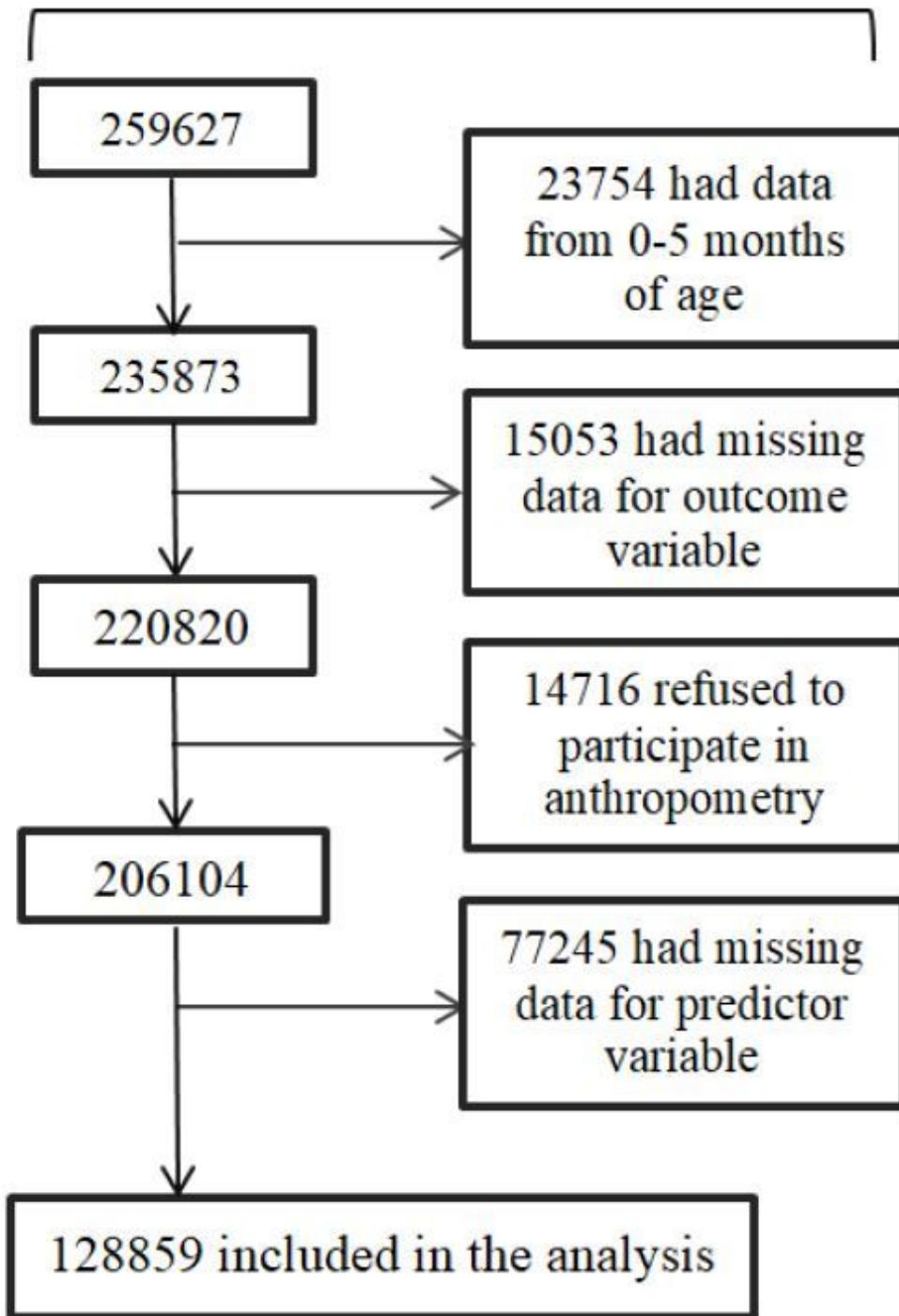


Figure 1

Sample selection

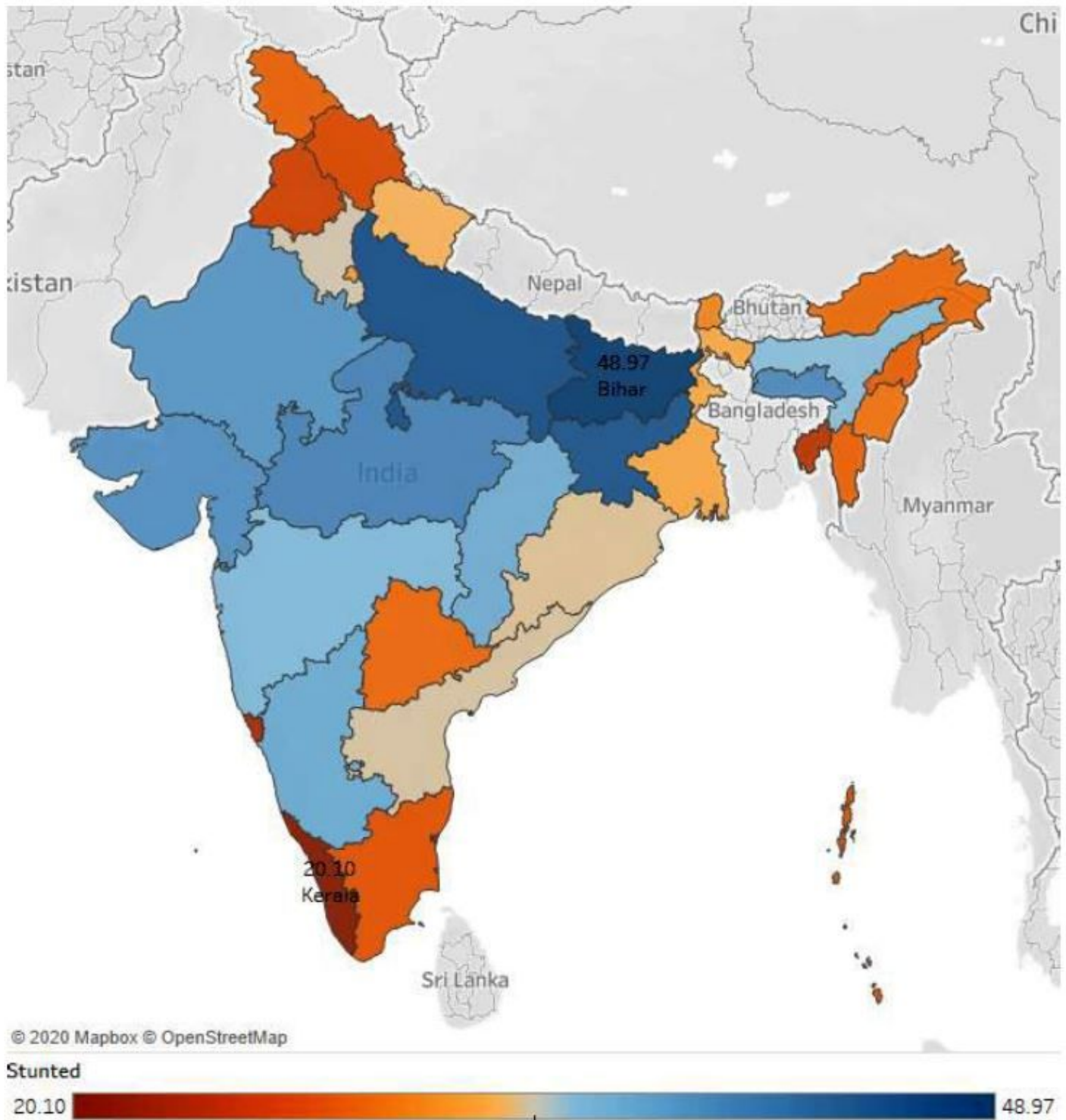


Figure 2

State-wise prevalence of stunting among children aged 6-59 months from NFHS-4 survey Note: The designations employed and the presentation of the material on this map do not imply the expression of any opinion whatsoever on the part of Research Square concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. This map has been provided by the authors.

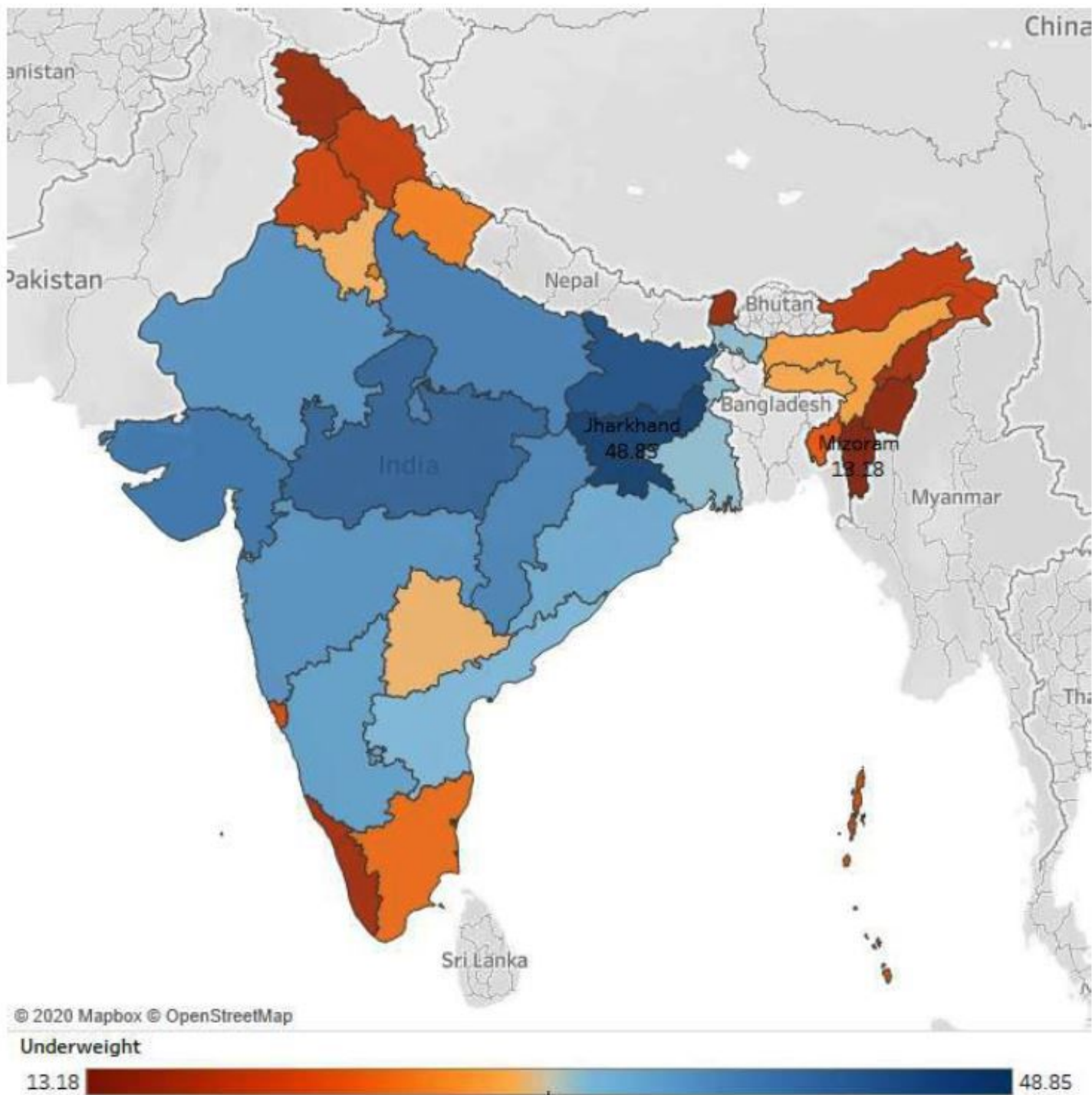


Figure 3

State-wise prevalence of underweight among children aged 6-59 months from NFHS-4 survey Note: The designations employed and the presentation of the material on this map do not imply the expression of any opinion whatsoever on the part of Research Square concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. This map has been provided by the authors.

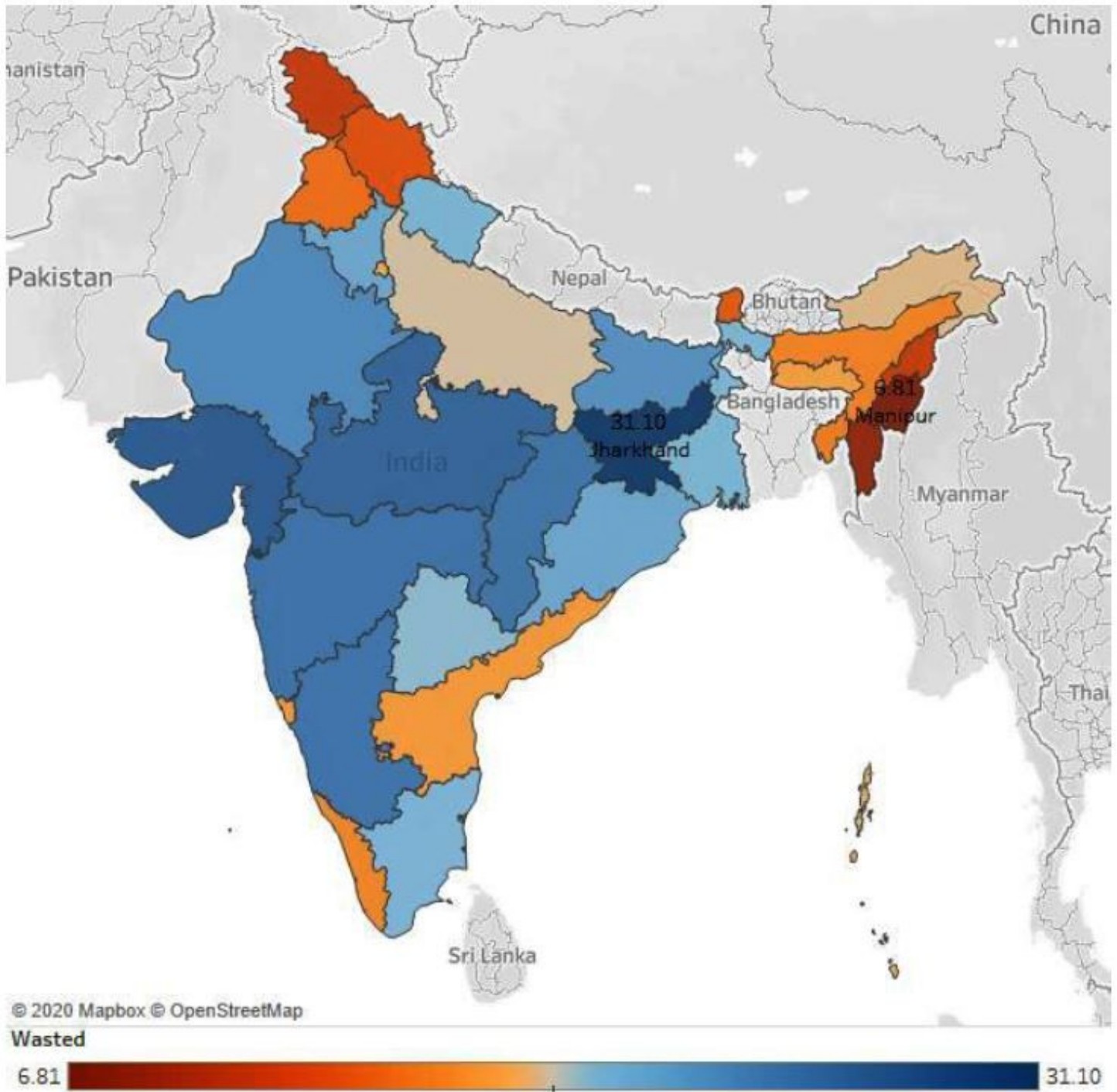


Figure 4

State-wise prevalence of wasting among children aged 6-59 months from NFHS-4 survey Note: The designations employed and the presentation of the material on this map do not imply the expression of any opinion whatsoever on the part of Research Square concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. This map has been provided by the authors.