Regional variation in weight-for-height z-scores and surface area/body mass ratio of Chilean children from birth to 3 years of age

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© 2018 Wiley Periodicals, Inc. Objective: The objectives of the study were to see how much of the variation in weight-for-height z-scores (WHZ) and surface area/body mass ratio (SA/mass) were associated with regional (county) differences including mean temperature. Subjects and methods: Longitudinal data were obtained from routine medical check-ups on 8,373 children from nine counties across Chile. WHZ and SA/mass were calculated from weight and height from birth to 3-years old at 6 monthly intervals. County of birth was used as an independent variable after controlling for sociodemographic factors. Sequential repeated-measures ANOVAs were used to analyze the changes in WHZ and SA/mass over the seven measurements from birth to 3 years of age. Simple and partial Pearson correlations were calculated between WHZ and annual mean temperature and between SA/mass and annual mean temperature after controlling for socioeconomic factors. Results: County of birth was significantly (p < 0.001) ass