



## On the accuracy of perceived parental height in a native Amazonian society

Ankur M. Patel <sup>a</sup>, Ricardo A. Godoy <sup>a,\*</sup>, Craig Seyfried <sup>a</sup>,  
Victoria Reyes-García <sup>b</sup>, Tomás Huanca <sup>a</sup>, William R. Leonard <sup>c</sup>,  
Thomas W. McDade <sup>c</sup>, Susan Tanner <sup>d</sup>

<sup>a</sup> *Heller School for Social Policy and Management, Brandeis University, Waltham, MA 02454-9110, USA*

<sup>b</sup> *ICREA and Institut de Ciència i Tecnologia Ambientals, Universitat Autònoma de Barcelona, 08193 Bellaterra, Barcelona, Spain*

<sup>c</sup> *Department of Anthropology, Northwestern University, Evanston, IL 60208, USA*

<sup>d</sup> *Department of Anthropology, University of Georgia, Athens, GA 30602, USA*

Received 18 October 2006; accepted 18 October 2006

---

### Abstract

Studies of secular trends in adult height in rural pre-literate societies are likely to show no change owing to random measurement error in age. In such societies, adults lack birth certificates and guess when estimating their age. We assess the accuracy of perceived height of the same-sex parent to estimate secular trends. We tested the method among the Tsimane', a native Amazonian society of farmers and foragers in Bolivia. Subjects included 268 women and 287 men >20 years of age. Over half the sample reported inaccurately the height of their same-sex living parent, with a tendency to report no difference when, in fact, differences existed. Results highlight the pitfalls of using perceived parental height to examine secular trends in adult height among the Tsimane', though the method might yield accurate information in other societies. We discuss possible reasons for the low accuracy of Tsimane' estimates.

© 2006 Elsevier B.V. All rights reserved.

*JEL classification* : I12; I32; N33

*Keywords*: Anthropometrics; Tsimane'; Bolivia; Amazon; Indigenous populations; Height; Amerindians; Secular trends; Self-reported height

---

\* Corresponding author. Tel.: +1 781 736 2784/2770; fax: +1 781 736 2774.

*E-mail address*: [rgodoy@brandeis.edu](mailto:rgodoy@brandeis.edu) (R.A. Godoy).

## 1. Introduction

Because socioeconomic and political conditions during the first two decades of a person's life affect final adult height, and because adult height bears a positive association with many indicators of well-being (e.g., mortality, income), researchers have used secular trends in adult height to infer changes in population well-being (Bogin and Keep, 1999; Fogel, 2005; Godoy et al., 2006, in press; Komlos, 1998; Steckel and Rose, 2002). The study of secular trends in adult height in rural pre-literate societies poses a challenge because adults lack birth certificates and guess when estimating their age (Godoy et al., 2005). Random measurement error in age produces a greater likelihood of finding no secular change in adult height. Researchers working with contemporary rural pre-literate societies might be able to redress the attenuation bias by asking adults of different generations about the height of their same-sex parent. The method might be one of the few ways to obtain reliable estimates of secular trends in height in rural, pre-literate societies, particularly if there is selective mortality of shorter adults. The validity of the method hinges on how accurately adults report the height of their same-sex parent.

We focus on the same-sex parent for two reasons. First, the norm in studies of secular trends in height is for the analysis to be done separately for women and men because secular trends for women and men might diverge. Second, rural pre-literate societies have a strong sexual division of labor (Panter-Brick, 2002), so the accuracy of reports of parental height is likely greater between a daughter and her mother or between a son and his father because an offspring and her/his same-sex parents will likely spend more time together.

In this article, we contribute to a growing body of research on the accuracy of perceived anthropometric measures (Brenner et al., 2003; Ezzati et al., 2006; Goodman et al., 2000; LeJarraga et al., 1995; Ossiander et al., 2004; Strauss, 1999) and assess the accuracy with which adult offspring estimate the height of their same-parent. For the analysis, we use information from the Tsimane, a native Amazonian society of farmers and foragers in Bolivia.

In industrial nations perceived measures of anthropometric status matter because they lower the costs of doing surveys, but perceived measures may come at the cost of less accuracy. Ossiander et al. (2004) found a statistically significant, positive association between self-reported and measured height among 480 adult women in the state of Washington, USA. The regression coefficient of measured height against perceived height was 0.92. The association persisted after controlling for a woman's age and weight. Ezzati et al. (2006) used a larger, nationally representative random sample of 1.3 m people from the USA to compare measured and self-reported height and found evidence that people over-estimated their height. Drawing on data from the National Health and Nutrition Examination Survey and the Behavioral Risk Factor Surveillance System for 1988–1994 and 1999–2002, Ezzati et al. found that both women and men 20–44 years of age over-reported their height, with men over-reporting by a larger amount than women.<sup>1</sup> After 44 years of age, the difference in the bias between women and men disappeared. Except for older people, all other subjects reported higher height during telephone interviews than during face-to-face interviews.<sup>2</sup> LeJarraga et al. (1995) studied 82 mothers and 62 fathers attending a private high-status and a public pediatric clinic in the city of Buenos Aires, Argentina. Researchers measured the height of each parent, asked each to report their own height, and asked mothers to report the height of fathers. Researchers found that mothers and fathers

<sup>1</sup> The authors only provide graphical analysis so we could not assess the size of the bias.

<sup>2</sup> The study by Ezzati et al. (2006) meshes with earlier studies that also found a tendency to over-estimate height across the life cycle (cited in LeJarraga et al., 1995, p. 165).

Download English Version:

<https://daneshyari.com/en/article/5057483>

Download Persian Version:

<https://daneshyari.com/article/5057483>

[Daneshyari.com](https://daneshyari.com)