

## **Bridging disciplines: the need for collaboration in anthropometric research in Nepal**

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Anthropometric studies are conducted in Nepal with commendable diligence, contending limited resources. Anthropometry has broad applications across multiple disciplines. In medicine, it provides standard reference values for specific populations or demographic groups.<sup>1</sup> In forensic science, it is an indispensable tool for personal identification and estimation of age, sex, stature, and ancestry.<sup>2</sup> Rehabilitation medicine applies anthropometry to generate precise body measurements for designing prosthetics and assistive devices, thereby enhancing comfort, functionality, and patient outcomes.<sup>3</sup> Similarly, in public health and nutrition, anthropometric indicators are widely employed to assess growth, health status, and disease risk.<sup>1,2,4</sup>

Given wide-ranging applications of anthropometry, it presents plenty of opportunities for interdisciplinary collaboration. In Nepal, most studies rely on manual measurements; however, integrating imaging technologies such as X-ray, CT, and MRI could substantially improve accuracy. Furthermore, collaboration among anatomists, forensic experts, public health professionals, rehabilitation specialists, and community stakeholders could yield more comprehensive outcomes and extend the clinical relevance of anthropometric research. Interdisciplinary collaboration of this kind may also enhance its visibility and broader impact of research, thereby increasing its chances to secure research grant.

Taking into account Nepal's diverse population, further studies are needed with sampling strategies that ensure adequate community representation to generate more representative data. This would enhance the applicability of findings, and strengthen the scientific foundation for future research. These studies hold the potential to establish reference values for the Nepalese population and contribute to national datasets of lasting relevance.

In conclusion, anthropometry in Nepal possesses considerable untapped potential. Realizing this requires the generation of robust, impactful, and contextually relevant data through community-based studies and interdisciplinary collaboration.

## **REFERENCES**

1. Casadei K, Kiel J. Anthropometric Measurement. [Updated 2022 Sep 26]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan. [Cited 2025 March 3]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK537315/>
2. Cardoso H.F.V, Marinho L, Albanese J. The relationship between cadaver, living and forensic stature: A review of current knowledge and a test using a sample of adult Portuguese males. *Forensic Science International*. 2016;258:55-63. <https://doi.org/10.1016/j.forsciint.2015.10.012>.
3. Mahajan N, Saravanan P, Menold J. Simulating the Effects of Anthropometry on the Contralateral Limb of Transtibial Amputees. *Proceedings of the International Symposium on Human Factors and Ergonomics in Health Care*. 2021;10(1): 76-82. <https://doi.org/10.1177/2327857921101031>
4. Wang M, Song Y, Zhao X, Wang Y, Zhang M. Utilizing Anthropometric Measurements and 3D Scanning for Health Assessment in Clinical Practice. *Physical Activity and Health*. 2024;8(1):182–196.