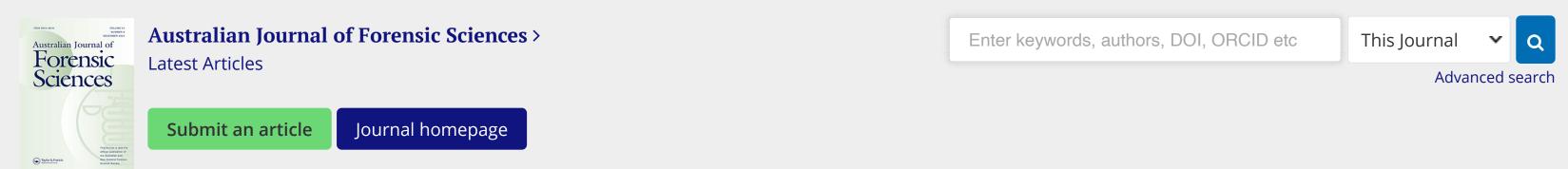


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Research Article

Assessing the accuracy of the anatomical method for stature estimation in White South African males

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ABSTRACT

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The anatomical method is considered the most accurate stature estimation method, however, research has concluded that the soft-tissue correction factors associated with this method may be sex- and population-specific. Therefore, this study aimed to evaluate the applicability of these soft-tissue correction factors for the estimation of stature in White South African males. Magnetic resonance imaging scans of 30 White South African male volunteers, between 21 and 59 years of age, were used to collect skeletal measurements of bones that contribute to total skeletal height. The soft-tissue correction factors

within the literature were subsequently applied to estimate the living stature of each individual. Paired t-tests were used to compare the accuracies of these estimates of living stature to the measured heights of the participants. Living stature was significantly underestimated using the soft-tissue correction factors of Fully (1956; 6.14 cm), Raxter and colleagues (2006; 4.80 cm), and Brits and colleagues (2017; 0.96 cm), and significantly overestimated by Bidmos and Manger (2012; 9.65 cm). Cloete's (2017) equation overestimated stature by 0.65 cm, however, this was not significant. These results suggest population-specific soft-tissue correction factors associated with stature estimation and, therefore, the newly derived stature estimation equations should be used to estimate stature of White South African males.



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Disclosure statement

No potential conflict of interest was reported by the author(s).

Additional information

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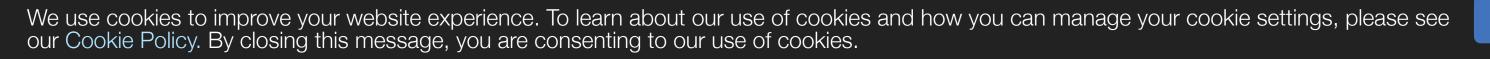
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