

Interethnic variations in pelvic floor thickness in relation to bony dimensions in South African women: on computed tomography scans

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Abstract

Objective. To explore the relationship between pelvic floor thickness and bony pelvic outlet, in nulliparous and multiparous women of black and white South African (SA) ethnic group groups. **Design.** Quantitative retrospective analysis of computerised tomography (CT) scans. **Setting.** Academic Hospital and University in Pretoria, SA. **Population/sample.** Black and white women of SA ethnic groups. **Methods.** A total of 125 CT scans were sampled from a tertiary hospital in Pretoria South Africa, where 50 belonged to SA white women and 75 to SA black women. The data was reconstructed with Mevislab software to measure pelvic floor thicknesses and bony parameters. Statistical analyses were performed using Paleontological Statistics Comparisons (PAST). **Main outcome measures.** Variations were observed in pelvic floor thicknesses and bony parameters measured in SA women, which varied according to ethnic group, age and parity. **Results.** Greater bony dimensions (except anteroposterior pelvic outlet) were found in white compared to black women. A thicker pelvic floor was noted in black compared to white women. Some bony dimensions increased with parity. Pelvic floor thickness became thinner with increasing parity and age in both ethnic groups. **Conclusion.** There existed an interethnic variation in pelvic floor thickness and bony dimensions, where white women presented with thinner pelvic floor and greater bony pelvic dimensions when compared to black women.

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